

Performance Measure 73: Analysis Verification

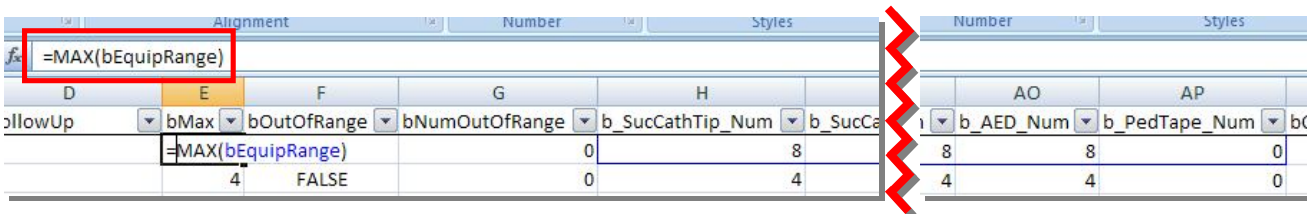
It is good practice to verify the accuracy of your analysis so that you can be confident in your results, especially because the Performance Measure results will be reported to the Federal EMSC Program. NEDARC suggests double checking your preliminary results and your final results after all follow-up/data cleaning resolutions are incorporated. If possible, NEDARC recommends that an independent person reviews your analysis prior to submitting your results to the Electronic Handbook (EHB).

These instructions assume that the cleaning and analysis for the Performance Measure 73 EHB entry is completed. Please refer to the [PM 73 Analysis](#) handout to review analysis steps and variable definitions. The purpose of these instructions is to verify the PM 73 EHB analysis results.

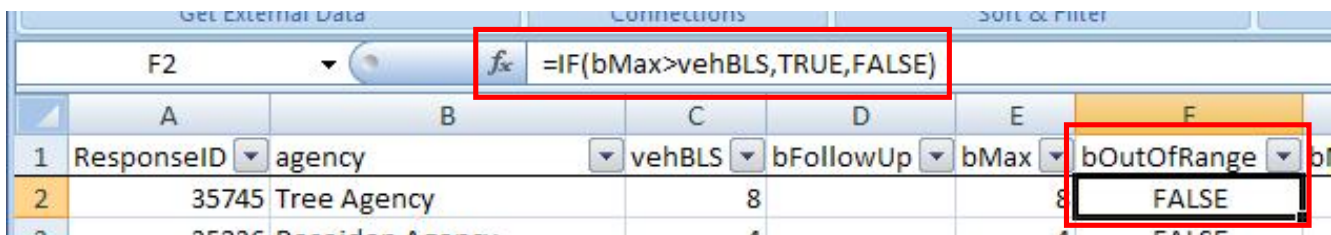
I. Verify PM 73 BLS Results:

1. PM 73 BLS Values Out of Range

- a. Go to the *BLS_Equipment* tab of your dataset. Clear all filters.
- b. Verify that you have defined *bEquipRange* and *bMax* correctly. Double-click the cell in row 2 of the *bMax* column and do the following checks.
 - Check that **=MAX(bEquipRange)** appears in the *formula bar* next to the *fx* button.
 - Because you double-clicked in the cell, and because *bEquipRange* is part of the formula, Excel outlines the BLS equipment range with a blue box. Check that the outlined section is in row 2 and starts in the *b_SucCathTip_Num* column and ends in the *b_PedTape_Num* column. Press the *Esc* key to exit this cell.



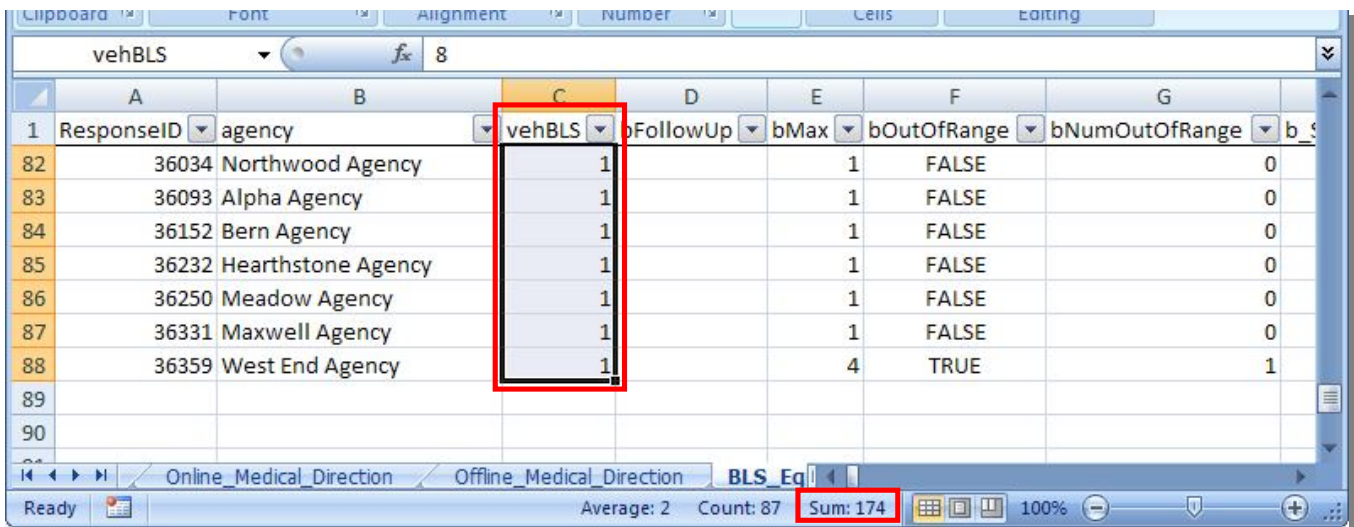
- c. Do these same checks (above) for the cell in the last row of data in the *bMax* column and for at least one other cell in the *bMax* column.
- d. Verify that you have defined *bOutOfRange* correctly. Click on the cell in row 2 of the *bOutOfRange* column, checking that **=IF(bMax>vehBLS,TRUE,FALSE)** appears in the *formula bar*. Do this same type of check for the last cell and at least one other cell in the *bOutOfRange* column.



- e. Filter on **bOutOfRange=TRUE**. If this filter returns any records, there is at least one value in the equipment range (**b_SucCathTip_Num** through **b_PedTape_Num**) that is greater than the value in **vehBLS** for that record. That means the data is still not clean. Any record where **bOutOfRange=TRUE** requires follow-up. If the out of range values cannot be resolved, these records should be removed from the **BLS_Equipment** tab of your dataset. Refer to the **PM 73 Analysis** handout for instructions on how to remove these records.

2. PM 73 BLS Denominator

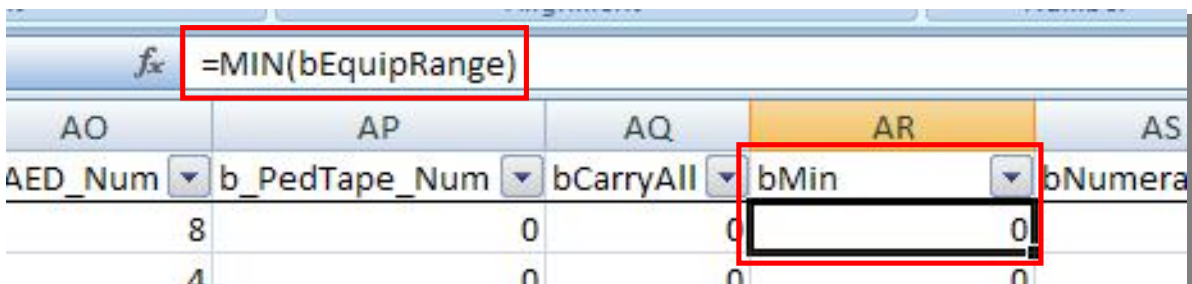
- a. Clear all filters.
- b. Select all of the cells of data in the **vehBLS** column beginning with row 2 and ending with the last row of data. Along the bottom of the Excel Window the Sum of the values in the selected cells should appear. If it does not, right-click on the *Status Bar* (located at the bottom of the Excel window beneath the worksheet tabs) and check *Sum*.



- c. What is the Sum? _____ (Note: this is your PM 73 BLS denominator.)

3. PM 73 BLS Numerator

- a. Clear all filters.
- b. Select the cell in row 2 of the **bMin** column and check that **=MIN(bEquipRange)** appears in the *formula bar* next to the *fx* button. Do this same check for the cell in the last row of data in the **bMin** column and for at least one other cell in the **bMin** column.



- c. Select the cell in row 2 of the **bNumerator** column and check that the MIN function appears in the *formula bar* next to the *fx* button and that it refers to the values in row 2 of the **bCarryAll** and **bMin** columns. Do this same check for the cell in the last row of data in the **bNumerator** column and for at least one other cell in the **bNumerator** column. The formula should look the same except that the row reference in the formula should change. Also, spot-check a few rows of data to make sure the value in the **bNumerator** column is always equal to the smaller (minimum) of the values in the **bCarryAll** and **bMin** columns.

	AO	AP	AQ	AR	AS	equipComments
1	b_AED_Num	b_PedTape_Num	bCarryAll	bMin	bNumerator	
2	8	0	0	0	0	
3	4	0	0	0	0	

- d. Select all of the cells of data in the **bNumerator** column beginning with row 2 and ending with the last row of data. Along the bottom of the Excel Window the Sum of the values in the selected cells should appear.

	AO	AP	AQ	AR	AS	equipComments
80	1	0	0	0	0	We would carry all of the equipment you asked :
81	1	1	1	0	1	
82	1	1	1	0	1	
83	1	1	1	0	1	
84	1	0	0	0	0	
85	1	1	1	0	1	
86	0	1	0	0	0	We also have one unit that doesn't transport pat
87	1	1	1	0	1	
88	1	0	0	0	0	
89						
90				BLSNumerator	27	
91				BLSDenominator	174	
92				BLSPercent	15.5%	
93						
94						

Status Bar: Average: 0.310344828 Count: 87 Sum: 27

e. What is the Sum? _____ (Note: this is your PM 73 BLS numerator.)

4. Calculate and record PM 73 BLS percentage: _____

II. Verify PM 73 ALS Results:

1. PM 73 ALS Values Out of Range

- a. Go to the *ALS_Equipment* tab of your dataset. Clear all filters.
- b. Verify that you have defined *aEquipRange* and *aMax* correctly. Double-click the cell in row 2 of the *aMax* column and do the following checks.
 - Check that **=MAX(aEquipRange)** appears in the *formula bar* next to the *fx* button.
 - Because you double-clicked in the cell, and because *aEquipRange* is part of the formula, Excel outlines the ALS equipment range with a blue box. Check that the outlined section is in row 2 and starts in the *a_SucCathTip_Num* column and ends in the *a_ETTube8_Num* column. Press the *Esc* key to exit this cell.
- c. Do these same checks (above) for the cell in the last row of data in the *aMax* column and for at least one other cell in the *aMax* column.
- d. Verify that you have defined *aOutOfRange* correctly. Click on the cell in row 2 of the *aOutOfRange* column, checking that **=IF(aMax>vehALS,TRUE,FALSE)** appears in the *formula bar*. Do this same type of check for the last cell and at least one other cell in the *aOutOfRange* column.
- e. Filter on *aOutOfRange=TRUE*. If this filter returns any records, there is at least one value in the equipment range (*a_SucCathTip_Num* through *a_ETTube8_Num*) that is greater than the value in *vehALS* for that record. That means the data is still not clean. Any record where *aOutOfRange=TRUE* requires follow-up. If the out of range values cannot be resolved, these records should be removed from the *ALS_Equipment* tab of your dataset. Refer to the **PM 73 Analysis** handout for instructions on how to remove these records.

2. PM 73 ALS Denominator

- a. Clear all filters.
- b. Select all of the cells of data in the *vehALS* column beginning with row 2 and ending with the last row of data. Along the bottom of the Excel Window the Sum of the values in the selected cells should appear. If it does not, right-click on the *Status Bar* (located at the bottom of the Excel window beneath the worksheet tabs) and check *Sum*.
- c. What is the Sum? _____ (Note: this is your PM 73 ALS denominator.)

3. PM 73 ALS Numerator

- a. Clear all filters.
- b. Select the cell in row 2 of the **aMin** column and check that **=MIN(aEquipRange)** appears in the *formula bar* next to the *fx* button. Do this same check for the cell in the last row of data in the **aMin** column and for at least one other cell in the **aMin** column.
- c. Select the cell in row 2 of the **aNumerator** column and check that the MIN function appears in the *formula bar* next to the *fx* button and that it refers to the values in row 2 of the **aCarryAll** and **aMin** columns. Do this same check for the cell in the last row of data in the **aNumerator** column and for at least one other cell in the **aNumerator** column. The formula should look the same except that the row reference in the formula should change. Also, spot-check a few rows of data to make sure the value in the **aNumerator** column is always equal to the smaller (minimum) of the values in the **aCarryAll** and **aMin** columns.
- d. Select all of the cells of data in the **aNumerator** column beginning with row 2 and ending with the last row of data. Along the bottom of the Excel Window the Sum of the values in the selected cells should appear.
- e. What is the Sum? _____ (Note: this is your PM 73 ALS numerator.)

4. Calculate and record PM 73 ALS percentage: _____

III. Compare these verification results with the results from your main analysis. If all preparing, cleaning and analysis steps were properly followed, the numerator and denominator numbers should be the same in the verification steps as what you produced in the main analysis steps. Any differences that you find should be investigated and resolved. If you find any differences, you can try to identify the problem by:

1. Reviewing the formulas used in the main analysis.
2. Repeating the main analysis steps.
3. Repeating the verification steps (in this handout).
4. Asking someone else to review your work.
5. Asking someone else to follow both analysis methods and compare their results with your results.

Also, please don't hesitate to contact your NEDARC rep if you have further analysis questions or need help with any of the steps above.