

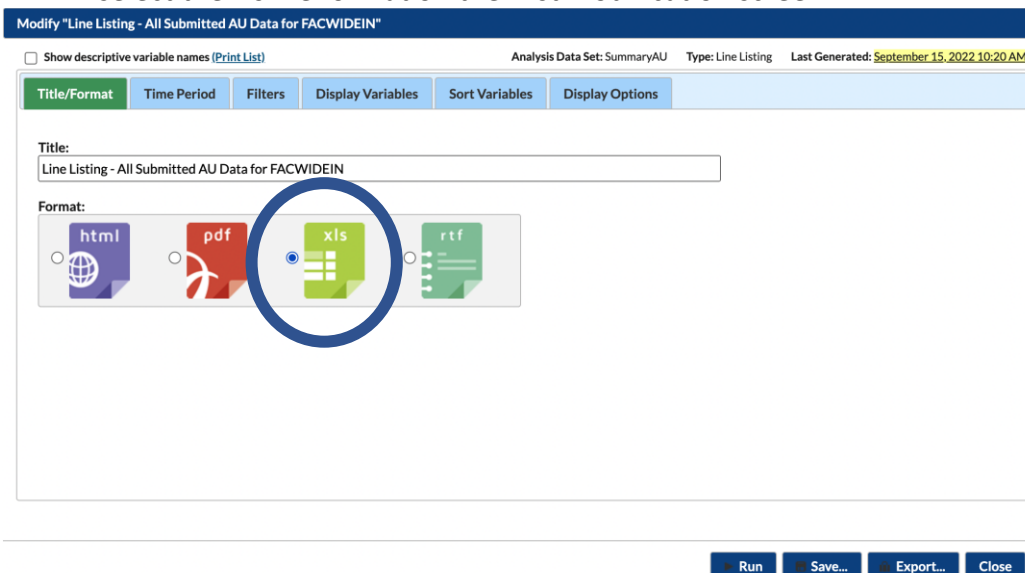
## Agent Use by Route of Delivery

Description- These instructions will demonstrate how to modify the Antimicrobial Use Line List Report to calculate the proportion of antimicrobial use is by a given route. These instructions will build on the information contained in this [Quick Reference Guide](#) for using the AU Line List, but will provide different instructions for modifying the report.

For this example, you will be determining the percentage of fluoroquinolones that were administered via the intravenous and digestive routes. You would like the data on a monthly basis for all of calendar year 2021.

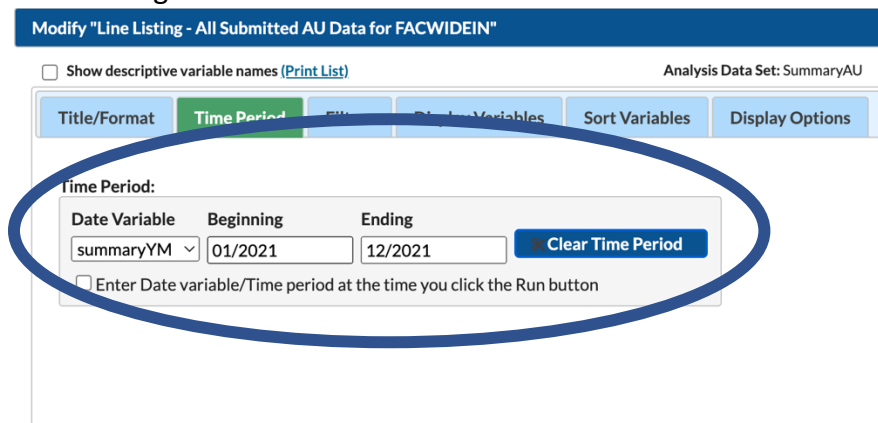
## Modifying the Report

1. Since you will need to further modify the report after extracting the data from NHSN, select the xls file format on the first modification screen.



The screenshot shows the 'Modify "Line Listing - All Submitted AU Data for FACWIDEIN"' interface. At the top, there is a header bar with the title and a 'Show descriptive variable names (Print List)' checkbox. Below the header, there are several tabs: 'Title/Format', 'Time Period', 'Filters', 'Display Variables', 'Sort Variables', and 'Display Options'. The 'Title/Format' tab is active. Under the 'Format' section, there are four icons representing different file formats: 'html', 'pdf', 'xls', and 'rtf'. The 'xls' icon is circled in blue. At the bottom of the interface, there are four buttons: 'Run', 'Save...', 'Export...', and 'Close'.

2. On the Time Period tab, select the date variable of summaryYM and enter the desired range of months:



The screenshot shows the 'Modify "Line Listing - All Submitted AU Data for FACWIDEIN"' interface. At the top, there is a header bar with the title and a 'Show descriptive variable names (Print List)' checkbox. Below the header, there are several tabs: 'Title/Format', 'Time Period', 'Filters', 'Display Variables', 'Sort Variables', and 'Display Options'. The 'Time Period' tab is active. Under the 'Time Period' section, there is a 'Date Variable' dropdown menu set to 'summaryYM', a 'Beginning' date field set to '01/2021', and an 'Ending' date field set to '12/2021'. A 'Clear Time Period' button is also visible. At the bottom, there is a checkbox labeled 'Enter Date variable/Time period at the time you click the Run button'.

- For this export, add location and location type to the display variables tab. To do this, highlight each variable on the left side of the window and select the "selected" button to move the variables to the right column

Modify "Line Listing - All Submitted AU Data for FACWIDEIN"

Show descriptive variable names ([Print List](#)) Analysis Data Set: SummaryAU Type: Line Listing Last Generated: [September 15, 2022 10:20 AM](#)

Title/Format Time Period Filters **Display Variables** Sort Variables Display Options

Display Variables:

Available Variables:

- createDate
- createUserID
- drugDescription
- drugIngredient
- location
- locationType
- locCDC
- locLabel
- modifiedDate
- modifyUserID
- OID
- orgLoc
- RateDaysPresent
- scriptDate
- scriptID

Selected Variables:

- orgID
- summaryYM
- drugIngredientDesc
- antimicrobialDays
- numDaysPresent
- numAdmissions
- im\_Count
- iv\_Count
- digestive\_Count
- respiratory\_Count

Up Down Undo

Run Save... Export... Close

Modify "Line Listing - All Submitted AU Data for FACWIDEIN"

Show descriptive variable names ([Print List](#)) Analysis Data Set: SummaryAU Type: Line Listing Last Generated: [September 15, 2022](#)

Title/Format Time Period Filters **Display Variables** Sort Variables Display Options

Display Variables:

Available Variables:

- category
- CCN
- class
- createDate
- createUserID
- drugDescription
- drugIngredient
- locCDC
- locLabel
- modifiedDate
- modifyUserID
- OID
- orgLoc
- RateDaysPresent
- scriptDate

Selected Variables:

- orgID
- summaryYM
- drugIngredientDesc
- antimicrobialDays
- numDaysPresent
- numAdmissions
- im\_Count
- iv\_Count
- digestive\_Count
- respiratory\_Count
- location
- locationType

Up Down Undo

To get easier data to work with, go to the Display Options tab and select OrgID to sort by

Modify "Line Listing - All Submitted AU Data for FACWIDEIN"

Show descriptive variable names ([Print List](#)) Analysis Data Set: SummaryAU Type: Line Listing Last Generated: [September 15, 2022 10:20 AM](#)

Title/Format Time Period Filters Display Variables Sort Variables **Display Options**

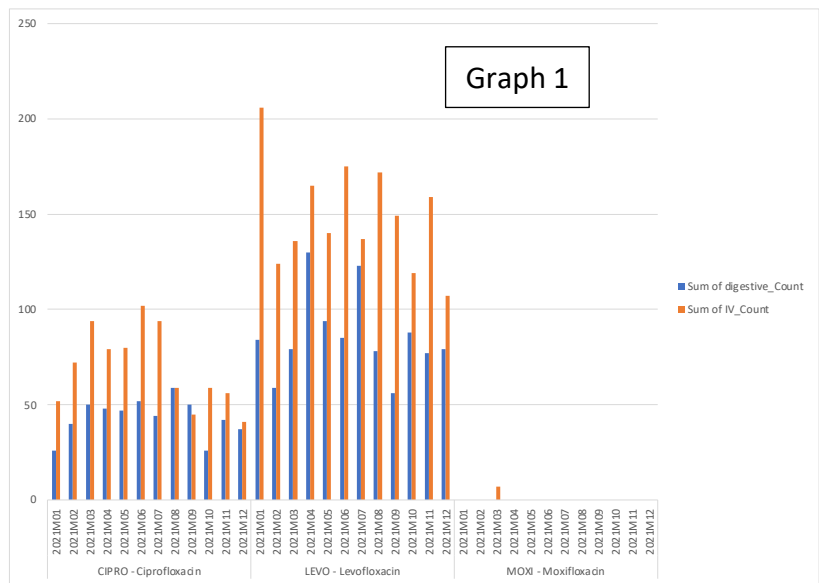
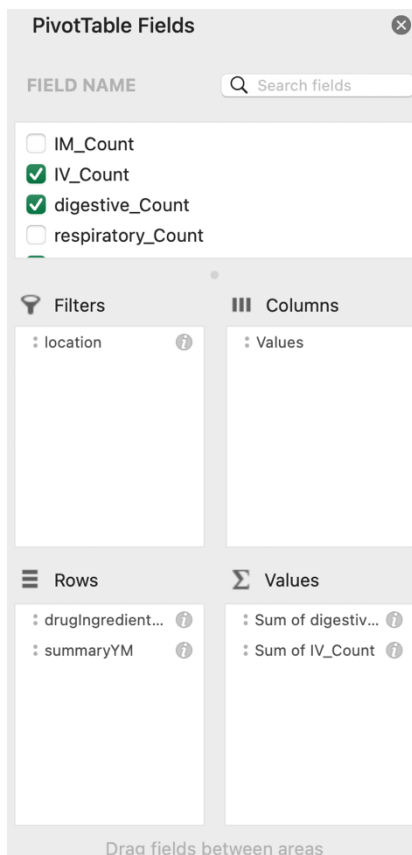
Line Listing Options:

Page by variable: orgID

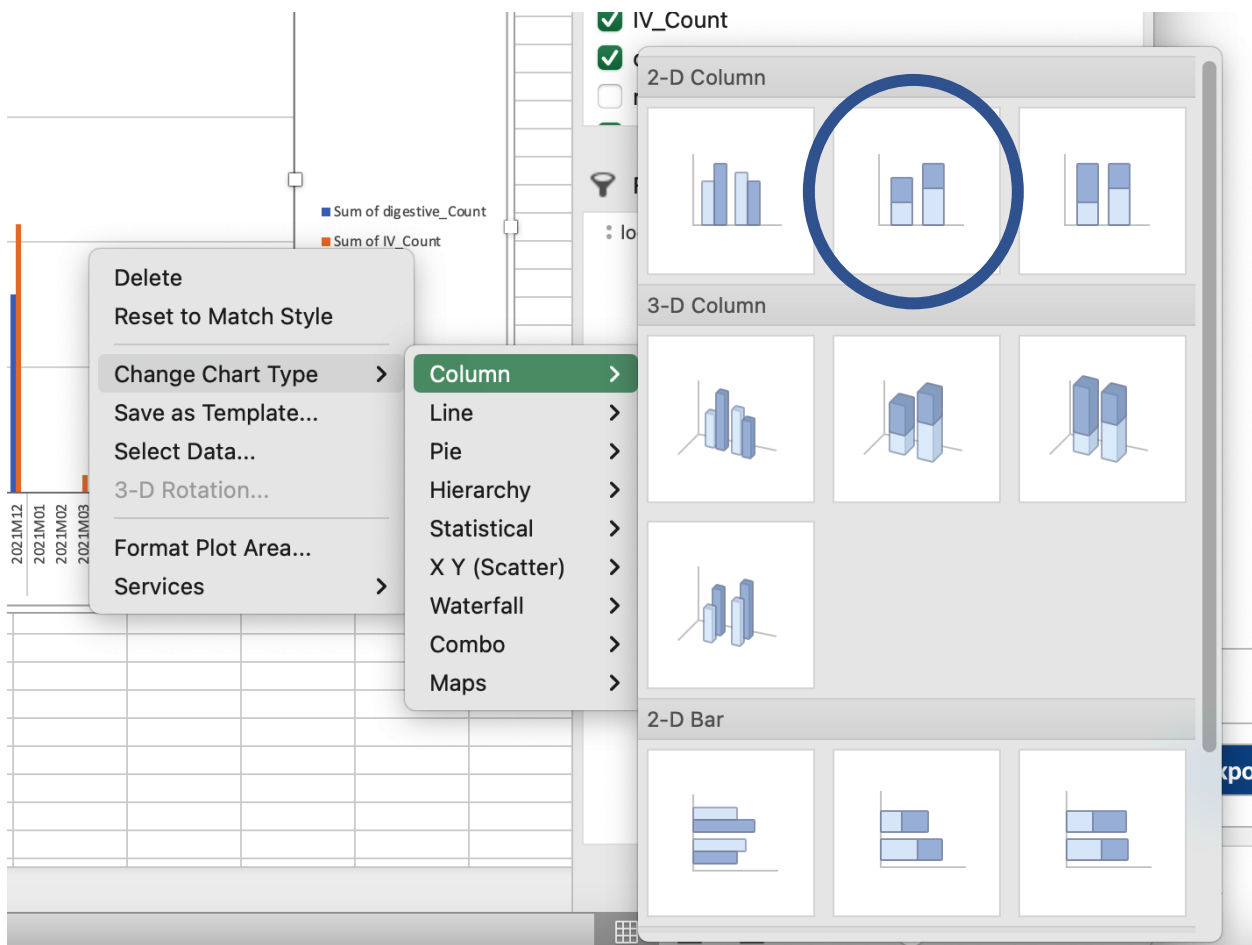
- Run the query and an XLS file will download to your computer. (Tip: look in the downloads folder or the bottom banner of your browser)
- Open the file in Excel™. To avoid losing data as you work, save the file to your computer and change the file type from CSV to an Excel document type of your choosing.
- To work with the data, insert a PivotChart. Simply place your cursor in any cell within your spreadsheet and select Insert>PivotChart. From here we have a few options on the visualization you can prepare.

**Option 1: Show digestive vs IV administration as stacked bar charts.**

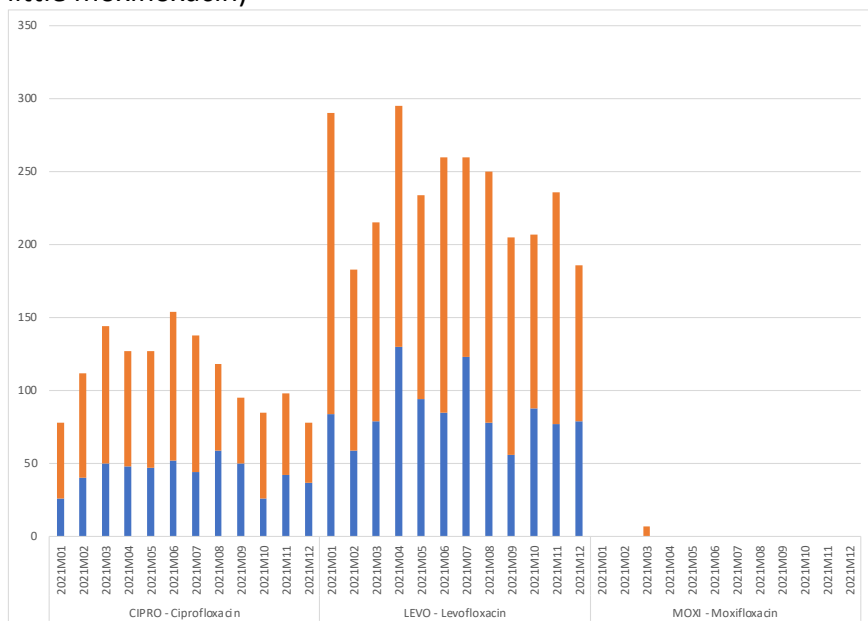
Using these parameters in your PivotChart, you should produce a graph like Graph 1 (note, for this graph, location was filtered to only FACWIDEIN:



To format as stacked bars, simply right click anywhere within the chart and the following options should appear. Select: Change Chart Type>Column> The Stacked Bar Chart (this example uses the middle option in the top row, but any stacked bar option is acceptable.



Now your output should appear like this (please not in this example, the hospital used very little moxifloxacin)



Date Prepared: April 7, 2023

## Option 2: Calculate percentage of total antimicrobial days were digestive (or route of choice)

This option requires you to add a calculation within the PivotChart which is not difficult to do. The steps are as follows:

Use these parameters in the PivotChart- please note to only include the digestive route administrations at this time. Then, put your cursor in any box in the pivot table showing your data (1). And select the Pivot Table Analyze Tab in Excel™ (2), select the fields, items & sets option (3) and then then indicate you want a calculated field (4).

The screenshot shows an Excel spreadsheet with a PivotTable and a PivotChart. The PivotTable has 'location' as the filter and 'drugingredientDesc' as the row labels. The PivotChart is a bar chart showing the sum of digestive counts for each drug. The PivotTable Analyze tab is selected, and the 'Fields, Items, & Sets' task pane is open. The 'Calculated Field' option is highlighted in the task pane. The PivotTable Fields task pane is also visible, showing the selected fields.

In the calculated field tab, you will take the following steps:

1. Name your field

The first screenshot shows the 'Insert Calculated Field' dialog box with the 'Name' field set to 'Field1'. The second screenshot shows the 'Insert Calculated Field' dialog box with the 'Name' field set to 'Percentage Digestive Administrations' and the 'Formula' field set to '= (digestive\_Count/antimicrobialDays)'. A blue arrow points from the first screenshot to the second.

2. Select the variables to include in the formula. In this example, you want to divide the number of digestive administrations by the total number of antimicrobial days and then multiple by 100 to obtain the percentage.

Now, your data table will include the additional calculated row and you can create charts using this data.

