Percent of Patient Admissions receiving a Specific Antimicrobial

Description: These instructions will demonstrate how to calculate the percent of total admissions receiving a particular antimicrobial. These instructions will build on information using the Quick Reference Guides for <u>Antimicrobial Use Line List</u>

	Specific Antimicrobial admissions
% Patient Admissions receiving Specific Antimicrobial =	Total Admissions

BEFORE YOU GET STARTED: Calculating the percentage of admissions who received the specific antimicrobial will require you to acquire your own data (i.e., NOT from NSHN) on the number of admissions per month receiving the antimicrobial of interest. This can be done by working with your local data and/or informatics analyst.

For this example, you will be determining the percent of patient admissions to your facility who received IV vancomycin. You would like the data on a monthly basis for all of calendar year 2021.

Manipulating the Data

 Finding the denominator for this calculation, or finding the total monthly admission can be obtained through NHSN. Follow the steps through the Quick Reference Guide for AU-ORG-LineList to export your data into Excel. Below is an example of how you can set your Filters before exporting.

Modify "Lin	e Listing - All Submitted A	U Data for F/	CWIDEIN"											
🗍 Show de	Show descriptive variable names (Print List) Analysis Data Set: SummaryAU Type: Line Listing Last Generated: April													
Title/For	rmat Time Period	Filters	Display Variables	Sort Variables	Display Options									
Addition	nal Filters: Show		Clear											
AND	OR						Add group							
~	ND OR						Add rule							
	location v	equal 🗸	FACWIDEIN - Fa	cility-wide Inpatient	t (FacWIDEIn) 🗸		Delete							
	drugIngredientDesc 💙	equal 🗸	VANC - Vancomy	ycin	~		Delete							

Run

Save...

Export...

Close

2. Once exported into Excel, the data should look something like the following:

6	.	• ∂ ·	Ŧ						LineListing	_AllSut	omittedAUD	ataf [Rea	d-O)nly] - Exc	cel		S. Shae	fer Spi	ires, M.E) .	ħ	-		X	
F	ile	Home	Inse	rt Pa	ge Layout	Formu	as Dat	ta	Review	View	Help	🔓 Tell me	e wh	nat you wa	nt to do								Я	Share	e
Pas	te	Calibri	<u>U</u> -	• 11 ⊞ • <	• A • A • <u>A</u> •	=	≫ - €≣ > ≣	ab ce W	'rap Text erge & Cente	G 87 • (ieneral \$ • % •	▼ 00. 0.€ 00. 00.	Co For	nditional matting *	Format as Table •	Cell Styles -	Insert D	elete F	Format	∑ / ↓ F ∢ (AutoSun fill • Elear •	Sort Filte	T & Find t & Find er * Sele) 1 & ect *	
Clip	board	5	Fo	ont	5		Alignn	nent		5	Number	5			Styles			Cells				Editing			^
C2	0		1 2	K 🗸	f_x																				v
	A		в		С		D		E				5	G	н	I	1.	J	к		L		м		
1	sumr	nary\org	ID	druging	gredientD	esc antir	nicrobial	Days	numDaysP	resent	numAdm	issions	11/	1_Count I	V_Count	digestive	e_resp	irator	y_Cou	nt					П
2	2021	M01	45032	VANC -	Vancomy	cin		865		11850	0	2307	1	0	780	8	39	0							
3	2021	M02	45032	VANC -	Vancomy	cin		760		10653	3	2234		0	690	7	79	0							
4	2021	M03	45032	VANC -	Vancomy	cin		961		12204	1	2666		0	828	13	34	0							
5	2021	M04	45032	VANC -	Vancomy	cin		880		11811	L	2617		0	749	13	39	0							
6	2021	M05	45032	VANC -	Vancomy	cin		947		12179	9	2562		0	837	11	16	0							
7	2021	M06	45032	VANC -	Vancomy	cin		980		12221	1	2615		0	884	10	00	0							
8	2021	M07	45032	VANC -	Vancomy	rcin		1035		12534	1	2676		0	940	9	99	0							
9	2021	M08	45032	VANC -	Vancomy	cin		996		13478	3	2607	1	0	884	11	13	0							
10	2021	M09	45032	VANC -	Vancomy	cin		1001		12307	7	2463		0	899	11	15	0							
11	2021	M10	45032	VANC -	Vancomy	cin		870		11890		2469		0	792	8	33	0							
12	2021	M11	45032	VANC -	Vancomy	cin		1012		11975	5	2450		0	934	. 8	34	0							
13	2021	M12	45032	VANC -	Vancomy	cin		955		12585	5	2532		0	870	11	12	0							
14													J												
15																									

- 3. The numerator for this metric to calculate the percent of total admissions receiving vancomycin IV, will be outside of what NHSN can currently provide. The specific measurement you will need is the total number of admissions per month receiving the antimicrobial of interest. For the purpose of this demonstration, these data have been added to the Excel document below in column K.
 - a. Please note, the number of admissions in this calculation is not the total number of admissions for each month, but only the number of admissions that ultimately received at least one dose of the antimicrobial of interest, e.g. vancomycin IV.

1	A	В	C	D	E	F	G	н	1 I -	J	К	L	M
1	summary'	orgID	drugIngredientDesc	antimicrobialDays	numDaysPresent	numAdmissions	IM_Count	IV_Count	digestive	respiratory_Count	# of adm rec vanc IV		
2	2021M01	45032	VANC - Vancomycin	865	11850	2307	0	780	89	0	547		
3	2021M02	45032	VANC - Vancomycin	760	10653	2234	0	690	79	0	345		
4	2021M03	45032	VANC - Vancomycin	961	12204	2666	0	828	134		589		
5	2021M04	45032	VANC - Vancomycin	880	11811	2617	0	749	139	0	418		
5	2021M05	45032	VANC - Vancomycin	947	12179	2562	0	837	116	0	305		
7	2021M06	45032	VANC - Vancomycin	980	12221	2615	0	884	100	0	278		
8	2021M07	45032	VANC - Vancomycin	1035	12534	2676	0	940	99	0	349		
Э	2021M08	45032	VANC - Vancomycin	996	13478	2607	0	884	113	0	492		
0	2021M09	45032	VANC - Vancomycin	1001	12307	2463	0	899	115	0	370		
1	2021M10	45032	VANC - Vancomycin	870	11890	2469	0	792	83	0	295		
2	2021M11	45032	VANC - Vancomycin	1012	11975	2450	0	934	84	0	328		
3	2021M12	45032	VANC - Vancomycin	955	12585	2532	0	870	112	0	459)	
4											\sum		

- 4. Then, in the next column L, add the new header "Percent admission of Vanc" or something to indicate to you the calculation being made.
- 5. Enter an equation to find the percent vancomycin admissions.: Type the equal sign "=" to start the equation in box L2. You may either type or click the corresponding cell under Column K, then enter a forward slash "/" and then either type or click the corresponding cell under Column F. See the example below. Then hit enter in that cell.

	А	с	D	E	F	G	н	1	J	к	L
1	summary'	drugIngredientDesc	antimicrobialDays	numDaysPresent	numAdmissions	IM_Count	IV_Count	digestive_	respiratory_Count	# of adm rec vanc IV	Percent Admissions of Vanc
2	2021M01	VANC - Vancomycin	865	11850	2307	0	780	89	0	547	=K2/F2
3	2021M02	VANC - Vancomycin	760	10653	2234	0	690	79	0	345	
4	2021M03	VANC - Vancomycin	961	12204	2666	0	828	134	0	589	
5	2021M04	VANC - Vancomycin	880	11811	2617	0	749	139	0	418	
6	2021M05	VANC - Vancomycin	947	12179	2562	0	837	116	0	305	
7	2021M06	VANC - Vancomycin	980	12221	2615	0	884	100	0	278	
8	2021M07	VANC - Vancomycin	1035	12534	2676	0	940	99	0	349	
9	2021M08	VANC - Vancomycin	996	13478	2607	0	884	113	0	492	
10	2021M09	VANC - Vancomycin	1001	12307	2463	0	899	115	0	370	
11	2021M10	VANC - Vancomycin	870	11890	2469	0	792	83	0	295	
12	2021M11	VANC - Vancomycin	1012	11975	2450	0	934	84	0	328	
13	2021M12	VANC - Vancomycin	955	12585	2532	0	870	112	0	459	
14											
15											

6. To repeat this calculation for the remaining months, simply click, hold, and drag the bottom right corner of the cell containing the calculation, as below.

		А	С	D	E	F	G	н	1	J	К	L
l	1	summary۱	drugIngredientDesc	antimicrobialDays	numDaysPresent	numAdmissions	IM_Count	IV_Count	digestive_	respiratory_Count	# of adm rec vanc IV	Percent Admissions of Vanc
	2	2021M01	VANC - Vancomycin	865	11850	2307	0	780	89	0	547	0.237104465
1	3	2021M02	VANC - Vancomycin	760	10653	2234	0	690	79	0	345	0.154431513
I	4	2021M03	VANC - Vancomycin	961	12204	2666	0	828	134	0	589	0.220930233
1	5	2021M04	VANC - Vancomycin	880	11811	2617	0	749	139	0	418	0.159724876
I	6	2021M05	VANC - Vancomycin	947	12179	2562	0	837	116	0	305	0.119047619
f	7	2021M06	VANC - Vancomycin	980	12221	2615	0	884	100	0	278	0.106309751
I	8	2021M07	VANC - Vancomycin	1035	12534	2676	0	940	99	0	349	0.130418535
ł	9	2021M08	VANC - Vancomycin	996	13478	2607	0	884	113	0	492	0.18872267
I	10	2021M09	VANC - Vancomycin	1001	12307	2463	0	899	115	0	370	0.150223305
ł	11	2021M10	VANC - Vancomycin	870	11890	2469	0	792	83	0	295	0.119481571
I	12	2021M11	VANC - Vancomycin	1012	11975	2450	0	934	84	0	328	0.133877551
1	13	2021M12	VANC - Vancomycin	955	12585	2532	0	870	112	0	459	0.181279621
ſ	14											.
Е												

7. Then to convert these numbers into Percentages, highlight the cells L2 through L13. Then right click and choose "Format Cells..." and click "Percentage" the number category as shown. Then choose the number decimal places interested in displaying and click "OK"

							Formattin	ig * iabie * Sty	165 * * *	Ŧ	Fliter * Select *	
	Clipboard	6	Font G	Alig	gnment r	Number 5		Styles	Cells		Editing	^
12		• : 🗙 🗸	<i>fx</i> =K2/F2		Format Cells				? ×			v
	A	с	D	E	Number Alignment	Font Border	Fill	Protection			L	
1	summary	drugIngredientDes	c antimicrobialDay	s numDaysPrese	Category					ranc IV	Percent Admissions of Van	nc
5	2021M01 \	VANC - Vancomycii	n 86	5 118	General	Sample				547	0.2371044	65
3	2021M02 \	VANC - Vancomycir	n 76	i0 106	Number	22.7%				345	0.1544315	13
4	2021M03 \	VANC - Vancomycir	n 96	51 122	Currency	25.170				589	0.2209302	33
5	2021M04	VANC - Vancomycir	n 88	118	Accounting	Decimal places:				418	0.1597248	76
5	2021M05 \	VANC - Vancomycii	n 94	7 121	Time					305	0.1190476	i19
7	2021M06 \	VANC - Vancomycir	n 98	122	Percentage					278	0.1063097	51
в	2021M07	VANC - Vancomycir	n 103	125	Fraction					349	0.1304185	35
9	2021M08	VANC - Vancomycir	n 99	134	Text					492	0.188722	67
0	2021M09	VANC - Vancomycir	n 100	123	Special					370	0.1502233	05
1	2021M10	VANC - Vancomycir	n 87	0 118	Custom					295	0.1194815	71
2	2021M11	VANC - Vancomvcir	n 10:	2 119						328	0.1338775	51
3	2021M12	VANC - Vancomvcir	n 95	5 125						459	0.1812796	21
4		, , , , , , , , , , , , , , , , , , , ,										-
5												
6						\sim						
7					Perceptage formats mu	tiply the cell value by 100	and displays (the result with a per-	cent symbol			
8					relectinge formats that	topiy the cell value by 100	and dispidys (the result with a per-	cent symbol.			
0					-							
0												
11												
								OK	Cancel			
2								OR	Cancer			

Final Excel sheet should look something like below:

1	A	с	D	E	F	G	н	1	J	к	L	4
1	summary	drugIngredientDesc	antimicrobialDays	numDaysPresent	numAdmissions	IM_Count	IV_Count	digestive_	respiratory_Count	# of adm rec vanc IV	Percent Admissions of Vanc	1
2	2021M01	VANC - Vancomycin	865	11850	2307	0	780	89	0	547	23.7%	
3	2021M02	VANC - Vancomycin	760	10653	2234	0	690	79	0	345	15.4%	
4	2021M03	VANC - Vancomycin	961	12204	2666	0	828	134	0	589	22.1%	1
5	2021M04	VANC - Vancomycin	880	11811	2617	0	749	139	0	418	16.0%	
6	2021M05	VANC - Vancomycin	947	12179	2562	0	837	116	0	305	11.9%	
7	2021M06	VANC - Vancomycin	980	12221	2615	0	884	100	0	278	10.6%	1
8	2021M07	VANC - Vancomycin	1035	12534	2676	0	940	99	0	349	13.0%	
9	2021M08	VANC - Vancomycin	996	13478	2607	0	884	113	0	492	18.9%	1
10	2021M09	VANC - Vancomycin	1001	12307	2463	0	899	115	0	370	15.0%	1
11	2021M10	VANC - Vancomycin	870	11890	2469	0	792	83	0	295	11.9%	
12	2021M11	VANC - Vancomycin	1012	11975	2450	0	934	84	0	328	13.4%	1
13	2021M12	VANC - Vancomycin	955	12585	2532	0	870	112	0	459	18.1%	
14												1
												-

Data Visualization

8. To begin work on visualizing these data, start by Hiding columns you are not planning to display. Highlight whole columns B through K by clicking and dragging across the top row with the letter labels. Then right click and click on "Hide"

1	А	8	c	D	E		F		G	н	L.	J	K	L	M
1	summary	orgID	drugIngredientDesc	antimicrobialDays	numDaysPresent	num	Admiceion	· 11.4	Count IL	Count	digestive_	respiratory_Count	# of adm rec vanc IV	Percent Admissions of Vanc	
2	2021M01	45032	VANC - Vancomycin	865	11850	Calibri	- 11 -	A A	\$ - %	, 🖃	89	0	547	23.7%	
3	2021M02	45032	VANC - Vancomycin	760	1065:	B /	≣ <u>0</u> • 4	A - []	• • .0 .00 • • 00. •	*	79	0	345	15.4%	
4	2021M03	45032	VANC - Vancomycin	961	12204	1	266	6	0	828	134	0	589	22.1%	
5	2021M04	45032	VANC - Vancomycin	880	1181:	XO	ut		0	749	139	0	418	16.0%	
6	2021M05	45032	VANC - Vancomycin	947	12179	Ph C	0.014		0	837	116	0	305	11.9%	
7	2021M06	45032	VANC - Vancomycin	980	1222:	-	opy opy		0	884	100	0	278	10.6%	
8	2021M07	45032	VANC - Vancomycin	1035	12534	ED P	aste Option	5:	0	940	99	0	349	13.0%	
9	2021M08	45032	VANC - Vancomycin	996	13478				0	884	113	0	492	18.9%	
10	2021M09	45032	VANC - Vancomycin	1001	1230	P	aste Special		0	899	115	0	370	15.0%	
11	2021M10	45032	VANC - Vancomycin	870	11890		and Wheepen		0	792	83	0	295	11.9%	
12	2021M11	45032	VANC - Vancomycin	1012	1197	In	isert		0	934	84	0	328	13.4%	
13	2021M12	45032	VANC - Vancomycin	955	1258!	D	elete		0	870	112	0	459	18.1%	
14						C	ear Content	s							
15							and Calle								
16							serrial Cens								
17						6	olumn Widti	s.,							
18						H	ide								
19						U	nhide								
20						-		_	1						

9. Highlight the remaining cells with data in them, go to Insert tab and click on the bar graphs and then click on the first 2-D Column graph, as below. This will provide a time series chart of the Percent of total admissions receiving vancomycin IV

