AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE





TRIM – D17-44637

OrgTRx Quick Reference Guide – Calculating group susceptibility

This document takes you through the steps to calculate and display the susceptibility for a group of organisms from different genera.

Open a view you want to change – the instructions below assume you are working with a view similar to, or based on 'Antibiogram Blood', 'Antibiogram Urine' or 'Antibiogram - not Blood or Urine'.

1. Click on Dimensions Selector

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Workboard Col	laboration	Analyse	De	esign	View	Din	nensior	view n Mer
Dimension Selector View	Export UChart Type	Chart Exceptions	L E	egend - E lotate E	All o	olumns ^{DWS} F	fx ormula	Manage Exceptions
Period Hierarchy 2022	Specimen Categ	ory Hierarch	y Bloc	od Culture	Speci	men Year I	solate	First Isolate
Antibiogram Blood (2022	First Isolate,Blo	od Culture)						
		Antimicrobia	al 🍸 Me	easures 7				
Organism	Ŷ	Benzylper Sensitivity	nicillin	Ampici	illin	Amoxic	illin	Cefazoli Sensitivity

2. Select *Sensitivity status code* and move it from the dimensions section and drag into the slicer section.

Dimensions Selector		×
Antimicrobial Analysis	☑ Slicers	III Columns
All dimensions	Period Hierarchy (2022) Facility Ward Hierarchy Specimen Category Hierarchy (Blood Culture) Antimicrobial Hierarchy	Antimicrobial Measures
Antimicrobial Facility Ward Isolate Laboratory	Laboratory Hierarchy Specimen Year Isolate (First Isolate) Eacility Year Isolate Sensitivity Status Code	
Measures		Rows
Order Number Organism Patient Patient Category Period Sensitivity Status Sensitivity Status Sensitivity Status		Organism
 Specimen Specimen Category 	• Preview	🗌 Auto refresh 🏻 🍡 🐓

3. Select OK

4. Right click on *Measures* and select replace measures with and then select *Sensitivity Status Code*





5. The display has now changed to show the sensitivity status of each organism antimicrobial combination as below:

Period Hierarchy 2022	Specimen Catego	ry H	lierarch	iy B	loo	d Culti	ure S	Spe	cimen N	rear l	solat	e Fi	rst Isol
Antibiogram Blood (Count,2022,First Isolate,Blood Culture)													
Antimicrobial Sensitivity Status Code													
Organism		Ber	nzylpeni	cillin		Ampic	illin	A	Amoxicil	lin	C	efazo	olin
		Т	R	S	I	R	S	Т	R	S	Т	R	S
Escherichia coli					1	1,437	1,698		548	668	133	532	1,847
Coagulase negative Staphylo	ococcus		2,792	319		506	85		1,253	82		965	661

6. The next step is to create a formula to calculate a total count. Click on the *Formula* symbol

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Workb	oard	Colla	aboration		Analyse	Design	View	Dimension	Viev Me	r Tools mbers V	/isuals F	ormat			
			⊂Ç⊃		Chart	Legend	All columns	fx		Show Percent: Percent Format	No •	Format:	e: Count #,#	*	<pre>CO</pre>
Selector	View	*	Ţ	Туре	Exceptions	Chart		Pointula	exceptions	% Show Per Analyse	cent and Values	\$ %	# KMB Value format		Properties Data

7. Click on the + sign in the Formulas box below:



8. Next type in the name of the formula, e.g. **Total Tested**, select **Sum** from the *Formula type*, and the *Format* as indicated below

Formulas		≯ ×
Edit Formula		1
Name:		Format:
Total Tested		#,##0 💌
Formula type:		Precedence:
Sum	*	6 🕂 🌑
Select members:		+

9. Highlight and drag the members from the data grid that you want to add up (S, R & I) into the Items box or use the members selection button on the RHS of the Items box to select the required members from the Sensitivity Status Code dimension. Then select Apply

ormulas		≯ ×
Edit Formula	ĩ	ĭ←
Name:	Format:	
Total Tested	#,##0	-
Formula type:	Precedence	:
Sum 🔻	6	
Members (Sensitivity Status Code):	+	
R S		×× × ÷
Sum(I,R,)		
	A	pply

A new column will appear to the RHS of the count of the number tested with **Total Tested** displayed as a count.

Period Hierarchy 2022	Specimen Category Hierarc	hy I	Blood Cu	Ilture	Specimen Year		
Formulas	* ×	ultu	re)				
+	Q	al 🝸	Sensitivi	ity Status	s Code		
Name	Dimension	peni	cillin	,	Ampicillir	ı	
Total Tested	Sensitivity St	s	∱∗ Total Tested	I R	S	, Total Tested	

10. Click on the + sign in the box to create a new formula and Enter the formula Name, e.g. **Other Enterobactereales**

Formulas	🗶 X
Edit Formula	🗑 🗑
Name:	Format:
Other Enterobacterales	#,##0 💌
Formula type:	Precedence:
Sum 👻	6 🕂 💭
Select members:	+

11. Click on the plus sign next to the *Members (Organisms)* and select from the drop down menu of organisms.



12. Press down the CTRL key and select all members for this group that you wish to include. When completed press *Apply*.



- 13. Once all the organisms are included in the **Other Enterobacterales** group select formulas as before.
- 14. Create a new formula **% Susceptible** with a *Formula Type* of **Ratio** as below; bring in *Total Tested* and *S* **in the order below** and select **Apply**

Formulas		_	* ×	ultu	ire)		
Edit Formula		Î	÷	al T	Sensi	tivity Sta	itus Code
Name:	Format:			В	enzylpe	enicillin	
% Susceptible	#0.0%		•	R	S	∱ Total Tested	% Susceptible
Formula type:	Precede	nce:	_	1		1	
Ratio	6	-		953	668	6,621	10.1%
Members (Sensitivity Status Code):		+		761	861	4,622	18.6%
O Total Tested O S							
				89	917	1,200	76.4%
				4	309	313	98.7%
					810	810	100.0%
				7	535	584	91.6%
			•	58	636	818	77.8%
			×				
			*		354	354	100.0%
				191	19	210	9.0%
				1	488	489	99.8%
					484	484	100.0%
S/Total Tested							
		Ар	ply		275	275	100.0%

15. The new grouping **Other Enterobacterales** will appear as below at the bottom of the organism list with its own % susceptibility.

		Ar	npicillin			Ce	fazolin		Gentamicin			Pip	oerac	illin and	enzyme	e inhibitor		Ceftriaxone				
Organism	R	s	& Total Tested	∳ % Suscep	IF	s	€ Total Tested	% Suscep	Ţ	R	s	∱ Total Tested	% % Suscep	I.	R	s	∱ Total Tested	∳ % Suscep	R	s	∙ fs Total Tested	% Suscep
Escherichia coli	1,512	1,666	3,178	52.4%	1 50	2 2,607	3,170	82.2%	8	245	2,925	3,178	92.0%	21	117	3,036	3,174	95.7%	284	2,884	3,168	91.09
Klebsiella pneumoniae	717	16	733	2.2%		9 684	733	93.3%	2	17	714	733	97.4%	20	36	675	731	92.3%	25	707	732	96.69
Enterobacter cloacae complex	231	19	250	7.6%	24	5 5	250	2.0%		7	243	250	97.2%	5	50	194	249	77.9%	51	198	249	79.5%
Proteus mirabilis	16	194	210	92.4%		6 174	210	82.9%		2	208	210	99.0%			208	208	100.0%	1	208	209	99.5%
Klebsiella oxytoca	119		119		6	3 56	119	47.1%			119	119	100.0%		9	109	118	92.4%	9	110	119	92.49
Serratia marcescens	102	16	118	13.6%	1	8	118		1	1	116	118	98.3%	3	3	112	118	94.9%	6	112	118	94.99
Klebsiella (Enterobacter) aerogenes	49	6	55	10.9%	1	1 4	55	7.3%		1	54	55	98.2%	1	14	40	55	72.7%	14	41	55	74.59
Citrobacter koseri/amalonaticus complex	52		52			3 49	52	94.2%			52	52	100.0%	1		51	52	98.1%		52	52	100.09
Enterobacter spp.	241	19	260	7.3%	25	5 5	260	1.9%		8	252	260	96.9%	5	53	201	259	77.6%	55	204	259	78.89
Serratia spp.	106	17	123	13.8%	12	2 1	123	0.8%	1	1	121	123	98.4%	3	3	117	123	95.1%	6	117	123	95.19
Citrobacter freundii complex	14	4	18	22.2%		6 2	18	11.1%			18	18	100.0%		5	13	18	72.2%	6	12	18	66.79
Aeromonas spp.	1		1			2	2				21	21	100.0%		7	13	20	65.0%		21	21	100.09
Hafnia spp.	2		2			2	2				2	2	100.0%			2	2	100.0%		2	2	100.09
Providencia spp.	20	2	22	9.1%	1	0 2	22	9.1%	1	5	16	22	72.7%			22	22	100.0%		22	22	100.09
Pantoea spp.	24	5	29	17.2%		2 16	28	57.1%			29	29	100.0%		1	28	29	96.6%		28	28	100.09
Morgenelle spp	69		69			9	69			1	68	69	98.6%		1	68	69	98.6%	3	66	69	95.79
Other Enterobacterales	438	38	476	8.0%	46	8 8	476	1.7%	2	15	459	476	96.4%	8	57	410	475	86.3%	64	411	475	86.59

16. You may want to hide the columns you don't want displayed in the grid. Press CTRL and select the column(s) you want to hide.

	8 - 4 ¹ - 1 - 1		0	-it. Otata	0.4.						
	Antimicr	obiai	Sensitiv	hty Status	Code						
Organism	P	X	Hide Formulas			Coto	tal				
Escherichia coli	1.512		170								
Klebsiella pneumoniae	717	Ger	Actions								
Enterobacter cloacae complex	231						250				
Proteus mirabilis	16	Expand Ampicillin to									
Klebsiella oxytoca	119	119 Select highlighted members									
Serratia marcescens	102	2 Create Set from highlighted member									
Klebsiella (Enterobacter) aerogenes	49	9 🗊 Reorder									
Citrobacter koseri/amalonaticus complex	52						_ 5				
Enterobacter spp.	241		Finderson				26				
Serratia spp.	106	-	Find peop	le			12				
Citrobacter freundii complex	14						1				
Aeromonas spp.	1	0	Visuals				•				
Hafnia spp.	2	_	2		2		1				
Providencia spp.	20	2	22	9.1%	20	2	22				
Pantoea spp.	24	5	29	17.2%	12	16	28				
Morganella spp.	69		69		69		69				
Other Enterobacterales 5x	438	38	476	8.0%	468	8	476				

Right click and choose Hide then Hide highlighted members

17. You may also want to review the organisms you want included in the rows of the grid (e.g. to remove the organisms included in the group you have created).

Right click on the *Organism* dimension and choose *Select members*. Highlight the organism(s) in the *Selected* column on the right hand side that you don't want to appear in the grid and use the \bigcirc arrow to remove them

18.	Now you	have	the	group	that	you	require	as	below.

Organism	Ampicillin		Cefazolin		Gentamicin		Piperacillin and enzyme inhibitor		Ceftriaxone	
	<i>f</i> ∗ Total Tested	% % Suscep	∱ _∗ Total Tested	% % Suscep	∱x Total Tested	∳ % Suscep	√ Total Tested	% % Suscep	₅ Total Tested	% Suscep
Escherichia coli	3,178	52.4%	3,170	82.2%	3,178	92.0%	3,174	95.7%	3,168	91.0%
Klebsiella pneumoniae	733	2.2%	733	93.3%	733	97.4%	731	92.3%	732	96.6%
Enterobacter cloacae complex	250	7.6%	250	2.0%	250	97.2%	249	77.9%	249	79.5%
Proteus mirabilis	210	92.4%	210	82.9%	210	99.0%	208	100.0%	209	99.5%
Klebsiella oxytoca	119		119	47.1%	119	100.0%	118	92.4%	119	92.4%
Serratia marcescens	118	13.6%	118		118	98.3%	118	94.9%	118	94.9%
Klebsiella (Enterobacter) aerogenes	55	10.9%	55	7.3%	55	98.2%	55	72.7%	55	74.5%
Citrobacter koseri/amalonaticus complex	52		52	94.2%	52	100.0%	52	98.1%	52	100.0%
Citrobacter freundii complex	18	22.2%	18	11.1%	18	100.0%	18	72.2%	18	66.7%
Aeromonas spp.	1		2		21	100.0%	20	65.0%	21	100.0%
Pantoea spp.	29	17.2%	28	57.1%	29	100.0%	29	96.6%	28	100.0%
Other Enterobacterales 5.	476	8.0%	476	1.7%	476	96.4%	475	86.3%	475	86.5%

19. Click OK when finished. Don't forget to save this view.