

Data Fundamentals Lab 6: Exploring Data in Larger Data Sets

In this lab, you will use a spreadsheet tool to prepare, filter, sort and transpose data from the World Health Organisation about main infectious diseases filtered by countries and years. Countries selected are [UNDP Africa](#)¹.

Hypothesis

Vaccine preventable infectious diseases continue to plague countries in the region and impact overall health of citizens.

Questions

- Q1: What is the most common selected vaccine preventable infectious disease in the region from 2009 to 2014?
- Q2: What are the three most common selected vaccine preventable infectious disease in the region in 2014?
- Q3: What are the most common selected vaccine preventable infectious disease in Tanzania?
- Q4: What are the most common selected vaccine preventable infectious diseases in your country?
- Q5: What countries have the highest rate of all these diseases in 2014?
What data would you need to figure out which country has the highest rate of infection?

¹ South Sudan is not included because WHO did not have data about it.

- Q6: Are the number of infections by the most common selected vaccine preventable infectious diseases going up or down?

Task 1: Get Data

1. Open **Selected Vaccine Preventable Infectious diseases.xlsx** in your lab folder
2. Review all the sheets to make sure you understand what each contains and is being measured.
 - a. **Source:** First recommendation is to make a sheet with the source of your dataset. Sometime if there is some special definitions of your data you include that in source sheet.
 - b. **Data:** This is the data directly extracted from your source without any change.
 - c. **Copy:** Make a copy of the original data sheet in case you make a mistake
 - d. **Clean:** Is a cleaned sheet to be used for analysis.
 - e. **SubSaharanAfrica:** Is a filtered sheet with just the Sub Saharan Africa countries to analyse.
 - f. **PT_SubSaharanAfrica:** PivotTable (we will explore in the next lab)
 - g. **Total by Country:** Total reported cases from 2009 to 2014

Task 2: Analyse Data

Q1: What is the most common selected vaccine preventable infectious disease in the region from 2009 to 2014?

3. Go to **Total by Country** sheet

4. Copy data. Do not use copy all (Control A), just select data and copy it

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	
1	Country	gambiense	%	cholera	%cases	%reported	%cases																
2	Angola	786	0	1396	0	0	0	35	0	3902	0	30126	0	212	6479	0	36	285	3351	0	0	0	0
3	Benin	0	0	3797	0	3717	0	0	1410	0	3990	0	28	53	0	0	0	95	110	0	0	0	0
4	Botswana	0	0	15	0	0	0	0	5	1081	1054	0	0	0	0	0	0	1020	0	0	0	0	0
5	Burkina Faso	0	0	163	0	28680	0	0	1506	0	65569	8090	14	97	0	0	0	761	208	0	1032	3470	0
6	Burundi	0	0	4113	0	0	0	0	1271	0	978	0	20	0	0	0	0	708	20	0	0	0	0
7	Cabo Verde	0	0	0	62	0	0	0	0	8	168	0	295	0	25	0	0	11388	4	2064	0	0	0
8	Cameroun	75	0	37743	0	7092	0	0	2797	0	3195	0	198	0	13	629	424	0	102	0	0	0	0
9	Central Africa	2218	0	138	0	1772	25	0	881	0	1639	0	241	653	0	4	611	250	0	46	0	0	0
10	Chad	1503	0	23729	0	15128	0	0	1522	0	10630	0	1195	0	0	167	6	916	0	257	0	0	0
11	Comoros	0	0	0	0	0	0	0	1624	0	5	109	5	0	0	0	0	36	6	634	0	0	0
12	Congo	315	0	3660	0	0	1	0	344	0	775	0	13	170	0	442	195	25	0	191	0	0	0
13	Cote d'Ivoire	48	0	2013	0	1522	0	0	4763	0	1487	0	50	0	0	36	575	44	0	113	0	0	0
14	Democratic Republic of Congo	33243	0	141291	1	47883	0	0	24683	0	33387	0	4062	8846	283	193	4986	4846	0	488	0	0	0
15	Equatorial Guinea	21	0	0	0	0	0	0	54	0	1602	0	5	0	0	5	0	5	2410	0	0	0	0
16	Eritrea	0	0	0	0	0	20	0	12	0	547	10170	0	310	0	0	0	732	101	0	0	0	0
17	Ethiopia	0	0	33191	0	2237	0	0	26035	0	31005	0	234	0	10	2105	174	0	223	0	9651	0	0
18	Gabon	88	0	0	0	0	0	0	144	660	160	0	10	0	0	1	190	10	0	0	0	0	0
19	Gambia	0	0	0	0	662	0	0	188	0	3	0	2	0	0	0	0	196	2	0	1	0	0
20	Ghana	1	0	50902	0	3880	47	0	623	0	2918	3780	16	63	0	0	1311	793	0	195	129	0	0
21	Guinea	385	0	7715	0	1423	0	0	2749	0	554	0	336	25	0	3	117	244	0	10	0	0	0
22	Guinea-Bissau	0	0	4053	0	0	0	0	120	0	27	0	1	0	0	0	29	6	0	0	0	0	0
23	Kenya	0	3	14722	0	0	0	0	504	0	4252	0	55	0	0	15	3338	55	0	0	0	1129	0
24	Lesotho	0	0	0	0	0	0	0	20	0	3355	0	0	0	0	0	1052	0	0	0	0	0	0
25	Liberia	0	0	4117	0	0	0	0	1914	0	2562	0	23	0	0	2	69	31	0	20	0	0	0
26	Madagascar	0	0	0	0	0	6	0	9329	0	12	17	79	676	569	1	949	2123	0	0	0	0	0
27	Malawi	0	176	7213	0	0	1	0	1080	0	118774	0	28	0	0	0	860	28	0	0	0	0	0
28	Mali	0	0	2462	0	2620	0	0	1598	0	66	0	66	0	0	11	254	365	0	8	0	0	0
29	Mauritania	0	0	46	0	56	0	0	34	940	1959	0	8	30	0	5	110	12	0	0	0	0	0
30	Mauritius	0	0	2	0	5	0	0	3	0	29	31	0	3	0	0	33	2	735	0	0	0	0
31	Mozambique	0	0	31384	0	0	0	0	4253	0	2720	0	219	0	0	0	1047	270	0	0	0	0	0
32	Namibia	0	0	647	0	0	4	0	52	1255	8884	0	31	18	0	0	628	39	0	0	0	0	0
33	Niger	0	0	11406	0	18523	73	0	2657	0	4582	0	46	3251	0	9	126	625	0	20	0	0	0
34	Nigeria	7	0	124717	0	65528	0	0	18305	0	94760	0	1030	40998	0	296	4804	1189	0	387	95	57	0
35	Rwanda	0	0	76	5	0	0	0	196	0	259	0	0	0	0	0	389	0	0	0	0	0	0
36	Sao Tome and Principe	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	755	0	0	0	0
37	Senegal	0	0	13	0	1375	0	0	975	0	1540	0	71	1	0	18	435	381	0	11	0	0	0
38	Seychelles	0	0	0	0	0	0	0	3	0	0	0	0	7	0	0	0	0	110	0	0	0	0
39	Sierra Leone	0	0	23501	0	0	0	0	1080	0	4684	0	105	23	0	1	56	133	0	461	0	0	0
40	South Africa	0	0	10521	1	0	1	0	15	0	18571	0	7	531	0	0	852	4	0	0	0	0	0
41	South Sudan	1341	0	70421	0	370	0	0	4867	0	4174	0	118	0	2	20	32	0	128	0	13437	0	0
42	Swaziland	0	0	19	0	0	0	0	0	1019	339	14378	0	6	0	0	385	2	0	0	0	0	0
43	Togo	0	0	783	3	2275	0	0	259	0	2111	0	137	259	0	0	323	137	0	12	0	0	0
44	Uganda	282	506	10819	0	0	0	0	1569	0	16445	0	1095	0	0	4	13508	9054	0	204	0	930	0
45	United Republic of Tanzania	0	26	13667	0	0	0	0	11483	0	5304	0	13	0	16	0	839	13	0	0	0	0	0
46	Zambia	0	39	12034	10	0	0	0	1196	0	29954	0	0	681	0	0	1528	0	0	0	0	0	0
47	Zimbabwe	0	22	70347	65	0	0	0	15	0	10549	0	22	0	0	0	1755	22	0	0	0	0	0
48	Grand Total	40313	772	670834	149	204743	228	0	135940	5123	831004	36870	9695	63205	868	1276	67115	28056	6708	3909	3694	25204	0

5. Create a new sheet and name it Q1.

6. Go to Home, select paste and then **Transpose**.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Country	Angola	Benin	Botswana	Burkina Faso	Burundi	Cabo Verde	Cameroun	Central Africa	Chad	Comoros	Congo	Cote d'Ivoire	Democratic Republic of Congo	Equatorial Guinea	Eritrea	Ethiopia
2	SUM of Num	786	0	0	0	0	0	75	2218	1503	0	315	48	33243	21	0	0
3	SUM of Num	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	SUM of Num	13396	3797	15	163	4113	0	37743	138	23729	0	3660	2013	141291	0	0	33191
5	SUM of Num	0	0	0	0	0	0	62	0	0	0	0	0	1	0	0	0
6	SUM of Num	0	3717	0	28680	0	0	7092	1772	15128	0	0	1522	47883	0	0	2237
7	SUM of Num	35	0	0	0	0	0	0	35	0	0	1	0	0	0	20	0
8	SUM of Num	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	SUM of Num	3802	1410	5	1506	1271	8	2797	881	1522	1624	344	4763	24683	54	12	26035
10	SUM of Num	0	0	0	1081	0	0	168	0	0	0	0	0	0	0	0	0
11	SUM of Num	30126	3990	1054	65569	978	0	3195	1639	10630	5	775	1487	33387	1602	547	31005
12	SUM of Num	0	0	0	8090	0	0	295	0	0	109	0	0	0	0	10170	0
13	SUM of Num	212	28	0	14	20	0	198	241	1195	5	13	50	4062	5	0	234
14	SUM of Num	6479	53	0	97	0	25	0	653	0	0	170	0	8846	0	310	0
15	SUM of Num	0	0	0	0	0	0	0	0	0	0	0	0	283	0	0	0
16	SUM of Num	38	0	0	0	0	0	13	4	167	0	442	36	193	5	0	10
17	SUM of Num	285	95	1020													

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Diseases	Angola	Benin	Botswana	Burkina Faso	Burundi	Cabo Verde	Cameroon	Central Africa	Chad	Comoros	Congo	Cote d'Ivoire	Democratic R	Equatorial G	Eritrea	Ethiopia
2	SUM of Num	786	0	0	0	0	0	75	2218	1503	0	315	46	33243	21	0	0
3	SUM of Num	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	SUM of Num	13396	3797	15	163	4113	0	37743	138	23729	0	3660	2013	141291	0	0	33191
5	SUM of Cong	0	0	0	0	0	62	0	0	0	0	0	0	1	0	0	0
6	SUM of Num	0	3717	0	28680	0	0	7092	1772	15128	0	0	1522	47883	0	0	2237
7	SUM of Dipt	35	0	0	0	0	0	0	35	0	0	1	0	0	0	0	20
8	SUM of Japa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	SUM of Lep	3802	1410	5	1506	1271	8	2797	881	1522	1624	344	4763	24683	54	12	26035
10	SUM of Mala	0	0	1081	0	0	168	0	0	0	0	0	0	0	0	0	0
11	SUM of Mea	30126	3990	1054	65569	978	0	3195	1639	10630	5	775	1487	33387	1602	547	31005
12	SUM of Mum	0	0	0	8090	0	295	0	0	0	109	0	0	0	0	0	10170
13	SUM of Neo	212	28	0	14	20	0	198	241	1195	5	13	50	4062	5	0	234
14	SUM of Pert	6479	53	0	97	0	25	0	653	0	0	170	0	8846	0	310	0
15	SUM of Plag	0	0	0	0	0	0	0	0	0	0	0	0	283	0	0	0
16	SUM of Polio	38	0	0	0	0	0	13	4	167	0	442	36	193	5	0	10
17	SUM of Rub	285	95	1020	761	708	11388	629	611	6	36	195	575	4986	0	732	2105
18	SUM of Total	3351	110	0	208	20	4	424	250	916	6	25	44	4846	5	101	174
19	SUM of Tube	0	0	0	0	0	2064	0	0	0	634	0	0	0	2410	0	0
20	SUM of Yello	0	0	0	1032	0	0	102	46	257	0	191	113	488	0	0	223
21	SUM of Num	0	0	0	3470	0	0	0	0	0	0	0	0	0	0	0	0
22	SUM of Num	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9651
23																	
24																	

8. In AV1 type **Total Cases**

9. Use the **SUM** function to calculate the total number of cases

	AN	AO	AP	AQ	AR	AS	AT	AU	AV
	South Africa	South Sudan	Swaziland	Togo	Uganda	United Repu	Zambia	Zimbabwe	Total Cases
0	0	1341	0	0	282	0	0	0	40313
0	0	0	0	0	506	26	39	22	772
L	10521	6421	19	783	10819	13667	12034	70347	670834
0	1	0	0	3	0	0	10	65	149
0	0	370	0	2275	0	0	0	0	204743
0	1	0	0	0	0	0	0	0	228
0	0	0	0	0	0	0	0	0	0
0	15	4867	0	259	1569	11483	1196	15	135940
0	0	0	1019	0	0	0	0	0	5123
4	18571	4174	339	2111	16445	5304	29954	10549	831004
0	0	0	14378	0	0	0	0	0	36870
5	7	118	0	137	1095	13	0	22	9695
3	531	0	6	259	0	0	681	0	63205
0	0	0	0	0	0	16	0	0	868
L	0	2	0	0	4	0	0	0	1276
5	8652	20	385	323	13508	839	1528	1755	67115
3	4	32	2	137	9054	13	0	22	26056
0	0	0	0	0	0	0	0	0	6708
L	0	128	0	12	204	0	0	0	3909
0	0	0	0	0	0	0	0	0	3694
0	0	13437	0	0	930	0	0	0	25204

10. Q1 is referring to total cases so let's hide countries for a better view.

Select column B to AU, use right click on any column and click on **Hide**.

	A	AV
1	Diseases	Total Cases
2	SUM of Number of new reported cases of human African trypanosomiasis (T.b. gambiense)	40313
3	SUM of Number of new reported cases of human African trypanosomiasis (T.b. rhodesiense)	772
4	SUM of Number of reported cases of cholera	670834
5	SUM of Congenital Rubella Syndrome - number of reported cases	149
6	SUM of Number of suspected meningitis cases reported	204743
7	SUM of Diphtheria - number of reported cases	228
8	SUM of Japanese encephalitis - number of reported cases	0
9	SUM of Leprosy - number of reported cases	135940
10	SUM of Malaria - number of reported confirmed cases	5123
11	SUM of Measles - number of reported cases	831004
12	SUM of Mumps - number of reported cases	36870
13	SUM of Neonatal tetanus - number of reported cases	9695
14	SUM of Pertussis - number of reported cases	63205
15	SUM of Plague - number of reported cases	868
16	SUM of Poliomyelitis - number of reported cases	1276
17	SUM of Rubella - number of reported cases	67115
18	SUM of Total tetanus - number of reported cases	26056
19	SUM of Tuberculosis - new and relapse cases	6708
20	SUM of Yellow fever - number of reported cases	3909
21	SUM of Number of cases of cutaneous leishmaniasis reported	3694
22	SUM of Number of cases of visceral leishmaniasis reported	25204
23		

11. Select row 1 and use the filter function.

	A	AV
1	Diseases	Total Cases
2	SUM of Number of new reported cases of human African trypanosomiasis (T.b. gambiense)	40313
3	SUM of Number of new reported cases of human African trypanosomiasis (T.b. rhodesiense)	772
4	SUM of Number of reported cases of cholera	670834
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8	SUM of Japanese encephalitis - number of reported cases	0
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11	SUM of Measles - number of reported cases	831004
12	SUM of Mumps - number of reported cases	36870
13	SUM of Neonatal tetanus - number of reported cases	9695
14	SUM of Pertussis - number of reported cases	63205
15	SUM of Plague - number of reported cases	868
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20	SUM of Yellow fever - number of reported cases	3909
21	SUM of Number of cases of cutaneous leishmaniasis reported	3694
22	SUM of Number of cases of visceral leishmaniasis reported	25204

12. Sort Descending Total Cases column.

	A	AV
1	Diseases	Total Cases
2	SUM of Measles - number of reported cases	831004
3	SUM of Number of reported cases of cholera	670834
4	SUM of Number of suspected meningitis cases reported	204743
5	SUM of Leprosy - number of reported cases	135940
6	SUM of Rubella - number of reported cases	67115
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20	SUM of Diphtheria - number of reported cases	228
21	SUM of Congenital Rubella Syndrome - number of reported cases	149
22	SUM of Japanese encephalitis - number of reported cases	0

Q1: What is the most common selected vaccine preventable infectious disease in the region from 2009 to 2014?

Answer: Measles with a total of 831,004 reported cases

Q2: What are the three most common selected vaccine preventable infectious diseases in the region in 2014?

13. Go to SubSaharanAfrica sheet.

14. Filter Year (Column B) and leave just 2014

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	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Country	Year	Number of new reported	Number	Number	Number	Congeni	Diphther	Japanese	Leprosy	Malaria	Measles	Mumps
2	Angola	2014		35		213				No data	2 298 979		11699
8	Benin	2014		0		832	711		0		192 1 044 235		786
14	Botswana	2014		No data					0	No data	1 346		1
20	Burkina	2014		0			3476		0	0	208 5 428 655		343
26	Burundi	2014		No data		582				No data	4 585 273		0
32	Cote	2014		6		235	196				910 3 712 831		50
38	Cabo Verde	2014						0	0	0	No data	26	0
44	Cameroon	2014		7		3355	1156				317		831
50	Central	2014		194			169		0		68 295 088		210
56	Chad	2014		95			235				258 914 032		1275
62	Comoros	2014						0	0	0	324 2 203		0
68	Congo	2014		21					0		No data	66 323	71
74	Democratic	2014		3206		22203	10109				3272 9 968 983		33711
80	Equatorial	2014		0					0		No data	20 417	13
86	Eritrea	2014									1 30 768		127
92	Ethiopia	2014		No data			1744				3758 2 118 815		12739
98	Gabon	2014		10							16 31 900		33
104	Gambia	2014	No data				214	0	0	0	15 166 229		1
110	Ghana	2014		0		28944	448	0	0	0	No data	3 415 912	124
116	Guinea	2014		33			1	582			241 660 207		175
122	Guinea-	2014	No data				11		0	0	No data	93 431	1
128	Kenya	2014			0		35				116 2 808 931		354
134	Lesotho	2014							0	0	2		0
140	Liberia	2014	No data				44		0	0	355 864 204		34
146	Madagascar	2014									1617 365 239		3
152	Malawi	2014		32						1	No data	2 905 310	3
158	Mali	2014		0			327		0		259 2 039 853		290
164	Mauritania	2014					1				No data	15 835	14
170	Mauritius	2014						1	0		No data		0
176	Mozambique	2014		No data		480					No data	7 117 648	9
182	Namibia	2014		No data		485		0	0	0	No data	15 914	477
188	Niger	2014	No data			2059	327		0		403 1 953 309		1142
194	Nigeria	2014		0		35996	1175				2983 7 826 954		6855
200	Rwanda	2014		No data					0		38 1 610 812		10
206	Sao Tome	2014							0		No data	1 754	0
212	Senegal	2014	No data				102	0	0		233 265 624		32
218	Seychelles	2014						0	0	0	1		0
224	Sierra	2014	No data								No data	1 374 476	1006
230	South	2014						1	0	0	No data	11 705	66
236	South	2014		63			6421	111	0	0	691		441
242	Swaziland	2014		No data					0		No data	269	0
248	Togo	2014		0			262	351	0	0			577
254	Uganda	2014		9	69		309				97 1 130 251		314
260	United	2014			1						1947 680 807		88
266	Zambia	2014			12				10		No data	4 077 547	9
272	Zimbabwe	2014			3				2	0		0 535 931	0

15. Copy the filtered data.

16. Create a new sheet and name it Q2

17. Go to Home, select paste and then **Paste Special**. In the window select **Values** and **Transpose**. Click on **OK**.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Country	Angola	Benin	Botswana	Burkina Faso	Burundi	Cote d'Ivoire	Cabo Verde	Cameroon	Central Africa	Chad	Comoros	Congo	Democratic R	Equatorial G
2	Year	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014
3	Number of ne	35	0			0		6		7	194	95		21	0
4	Number of ne			No data		No data									
5	Number of rej	213	832			582	235		3355					22203	
6	Number of su		711			3476	196		1156	169	235			10109	
7	Congenital R			0	0	0	0	0	0	0	0	0	0	0	0
8	Diphtheria - n			0	0	0	0	0	0	0	0	0	0	0	0
9	Japanese enc														
10	Leprosy - num	No data	192	No data		208	No data	910	No data	317	68	258	324	No data	3272
11	Malaria - num	2 298 979	1 044 235	1 346	5 428 655	4 585 273	3 712 831		26	295 088	914 032	2 203	66 323	9 968 983	20 417
12	Measles - nur	11699	786	1	343	0	50	0	831	210	1275	0	71	33711	13
13	Mumps - num			0	0	0	1	0	0	0	0	0	0	0	0
14	Neonatal tetar	19	3	0	3	3	12	0	33	24	154	0	2	201	0
15	Pertussis - nu	0	0	0	7	0	0	0	0	241	0	0	21	0	0
16	Plague - num														
17	Polio	0	0	0	0	0	0	0	5	0	0	0	0	0	5
18	Rubella - num	112	8	508	57	71	54	0	147	507	35	45	864	0	0
19	Total tetanus	330	3	0	96	3	12	0	110	24	154	1	14	201	0
20	Tuberculosis	53 552	3 886	6 019	5 546	7 226	23 275	274	26 038	10 186	11 973	148	10 017	115 795	1 166
21	Yellow fever -														
22	Number of ca							21	0	3	0	0	0	3	0
23	Number of ca														

18. Delete row 2 (Year)

19. Type in AV1 **Total Cases 2014**

20. Use the SUM function to calculate total of cases

	AN	AO	AP	AQ	AR	AS	AT	AU	AV
1	South Africa	South Sudan	Swaziland	Togo	Uganda	United Repu	Zambia	Zimbabwe	Total Cases 2014
2		63		0	9				3679
3			No data		69	1	12	3	117
4		6421		262	309				102467
5		111		351					21434
6	1	0		0			10	2	14
7		0	0	0				0	1
8	0	0							0
9	No data	691	No data	97	275	1947	No data	0	18597
10	11 705		269	1 130 251	3 631 939	680 807	4 077 547	535 931	295
11	66	441	0	577	314	88	9	0	73914
12		0	3						7
13	2	0	0	18	84	2		0	835
14	230	0	0	38				0	10098
15									0
16	0	2	0	0	0	0	0	0	49
17	10	0	1	16	291	529	74	1130	7399
18	2	0	0	18	1358	2		0	2900
19	306 166	8 335	5 583	2 525	44 187	61 571	37 931	29 653	719
20	0	0		0			0		31
21									0
22									0

21. Select row 1 and use the Filter function

22. Sort the **Total Cases 2014** column by Sort Descending (or Smallest to Largest in Excel).

	A	AV
1	Country	Total Cases 2014
2	Number of reported cases of cholera	102467
3	Measles - number of reported cases	73914
4	Number of suspected meningitis cases reported	21434
5	Leprosy - number of reported cases	18597
6	Pertussis - number of reported cases	10098
7	Rubella - number of reported cases	7399
8	Number of new reported cases of human African trypanosomiasis (T.b. gambiense)	3679
9	Total tetanus - number of reported cases	2900
10	Neonatal tetanus - number of reported cases	835
11	Tuberculosis - new and relapse cases	719
12	Malaria - number of reported confirmed cases	295
13	Number of new reported cases of human African trypanosomiasis (T.b. rhodesiense)	117
14	Poliomyelitis - number of reported cases	49
15	Yellow fever - number of reported cases	31
16	Congenital Rubella Syndrome - number of reported cases	14
17	Mumps - number of reported cases	7
18	Diphtheria - number of reported cases	1
19	Japanese encephalitis - number of reported cases	0
20	Plague - number of reported cases	0
21	Number of cases of cutaneous leishmaniasis reported	0
22	Number of cases of visceral leishmaniasis reported	0

Q2: What are the three most common selected vaccine preventable infectious diseases in the region in 2014?

Answer: Cholera (102,467), measles (73,914) and meningitis (21,434) were the 3 most common in 2014.

Q3: What are the most common selected vaccine preventable infectious disease in Tanzania?

23. Make a new sheet and name it Q3

24. Go to SubSaharanAfrica sheet. In column A (Country) filter just **United Republic of Tanzania**.

	A	B	C	D	E	F
1	Country	Year	Number of new reported			
260	United Rep	2014		1		
261	United Rep	2013		1	270	
262	United Rep	2012		4	286	
263	United Rep	2011		1	942	
264	United Rep	2010		5	4469	
265	United Rep	2009		14	7700	
278						
279						
280						
281						
282						
283						
284						
285						
286						
287						
288						
289						
290						
291						
292						
293						

25. Copy the filtered data

26. In Q3, paste special with values and transpose.

	A	B	C	D	E	F	G
1	Country	United Rep	United Reput				
2	Year	2014	2013	2012	2011	2010	2009
3	Number of r						
4	Number of r	1	1	4	1	5	14
5	Number of r		270	286	942	4469	7700
6	Number of s						
7	Congenital f						
8	Diphtheria -		0	0	0	0	0
9	Japanese e		0	0			
10	Leprosy - nu	1947	2005	2528	No data	2349	2654
11	Malaria - nu	680 807	1 552 444	1 986 955	2 150 761	1 278 998	3 242
12	Measles - nu	88	185	1668	1622	167	1574
13	Mumps - nu						
14	Neonatal tet	2	0	0	0	5	6
15	Pertussis - r		0	0	0	0	0
16	Plague - nu			7		9	
17	Poliomyelitis	0	0	0	0	0	
18	Rubella - nu	529	116	55	18	121	0
19	Total tetanu	2				5	6
20	Tuberculosis	61 571	64 053	62 479	59 357	61 098	61 537
21	Yellow fever		0	0			
22	Number of c						
23	Number of c						

27. Delete Row 1 and rename Column A as **Diseases**.

28. Name Column H as **Cases of Infectious Diseases in Tanzania**.

	A	B	C	D	E	F	G	H
1	Diseases	2014	2013	2012	2011	2010	2009	Cases of Infectious Diseases in Tanzania
2	Number of r							
3	Number of r	1	1	4	1	5	14	
4	Number of r		270	286	942	4469	7700	
5	Number of s							
6	Congenital f							
7	Diphtheria -		0	0	0	0	0	
8	Japanese en		0	0				
9	Leprosy - nu	1947	2005	2528	No data	2349	2654	
10	Malaria - nu	680 807	1 552 444	1 986 955	2 150 761	1 278 998	3 242	
11	Measles - nu	88	185	1668	1622	167	1574	
12	Mumps - nu							
13	Neonatal tet	2	0	0	0	5	6	
14	Pertussis - r		0	0	0	0	0	
15	Plague - nu			7		9		
16	Poliomyelitis	0	0	0	0	0		
17	Rubella - nu	529	116	55	18	121	0	
18	Total tetanu	2				5	6	
19	Tuberculosis	61 571	64 053	62 479	59 357	61 098	61 537	
20	Yellow fever		0	0				
21	Number of c							
22	Number of c							

29. In H3, use SUM function to calculate Cases of Infectious Diseases from 2009 to 2014.

	A	B	C	D	E	F	G	H
1	Diseases	2014	2013	2012	2011	2010	2009	Cases of Infectious Diseases in Tanzania
2	Number of r							0
3	Number of r	1	1	4	1	5	14	26
4	Number of r		270	286	942	4469	7700	13667
5	Number of s							0
6	Congenital f							0
7	Diphtheria -		0	0	0	0	0	0
8	Japanese en		0	0				0
9	Leprosy - nu	1947	2005	2528	No data	2349	2654	11483
10	Malaria - nu	680 807	1 552 444	1 986 955	2 150 761	1 278 998	3 242	0
11	Measles - nu	88	185	1668	1622	167	1574	5304
12	Mumps - nu							0
13	Neonatal tet	2	0	0	0	5	6	13
14	Pertussis - r		0	0	0	0	0	0
15	Plague - nu			7		9		16
16	Poliomyelitis	0	0	0	0	0		0
17	Rubella - nu	529	116	55	18	121	0	839
18	Total tetanu	2				5	6	13
19	Tuberculosis	61 571	64 053	62 479	59 357	61 098	61 537	0
20	Yellow fever		0	0				0
21	Number of c							0
22	Number of c							0

30. Hide Columns B to G

31. Use the filter function to sort the largest to the smallest column H.

	A	H
1	Diseases	Cases of Infectious Diseases in Tanzania
2	Number of reported cases of cholera	13667
3	Leprosy - number of reported cases	11483
4	Measles - number of reported cases	5304
5	Rubella - number of reported cases	839
6	Number of new reported cases of human African trypanosomiasis (T.b. rhodesiense)	26
7	Plague - number of reported cases	16
8	Neonatal tetanus - number of reported cases	13
9	Total tetanus - number of reported cases	13
10	Number of new reported cases of human African trypanosomiasis (T.b. gambiense)	0
11	Number of suspected meningitis cases reported	0
12	Congenital Rubella Syndrome - number of reported cases	0
13	Diphtheria - number of reported cases	0
14	Japanese encephalitis - number of reported cases	0
15	Malaria - number of reported confirmed cases	0
16	Mumps - number of reported cases	0
17	Pertussis - number of reported cases	0
18	Poliomyelitis - number of reported cases	0
19	Tuberculosis - new and relapse cases	0
20	Yellow fever - number of reported cases	0
21	Number of cases of cutaneous leishmaniasis reported	0
22	Number of cases of visceral leishmaniasis reported	0
23		
24		

32. Q3: What are the most common selected vaccine preventable infectious diseases in Tanzania?

Answer:

Diseases	Cases of Infectious Diseases in Tanzania
Number of reported cases of cholera	13667
Leprosy - number of reported cases	11483
Measles - number of reported cases	5304
Rubella - number of reported cases	839