Calculated Info

This package contains a couple tools to create useful views of the data not by default in the dataframe. These mostly come in the form of the default case and wastewater dataframe augment function.

Wastewater augmeanting function

The wastewater function does three things. first it replaces Concentrations below the level of detection (LOD) with LOD / 2 which is considered best practice. Second it calculates a geometric average of the two gene concentrations. Finally it gets a flow and population normalized loged version of the data which previous work has shown the best results.

sample_id	site	date	pop	N1	N2	flow	geoMean	sars_cov2_adj_load_log10	n
529795001	Algoma	2020-10-06	3171	10000	NA	0.498	NA	NA	34
530920001	Algoma	2020-10-13	3171	10000	16500	0.499	12845.23	0.4802042	34
532236001	Algoma	2020-10-20	3171	10000	16500	0.402	12845.23	0.4196981	34
533319001	Algoma	2020-10-27	3171	10000	16500	0.670	12845.23	0.5698497	34
534556001	Algoma	2020-11-03	3171	10000	16500	0.489	12845.23	0.4743421	34
535601001	Algoma	2020-11-10	3171	10000	16500	0.463	12845.23	0.4587197	34

Case augmeanting function

The case function does two things. first it normalizes the data by population. Second it calculates a rolling sum and average of the data. This needs the population data contained in its own data frame.

site	date	tests	prob_case	conf_case	prob_death	conf_death	regions
Algoma	2020-01-22	0	0	0	0	0	Northeastern
Algoma	2020-01-23	0	0	0	0	0	Northeastern
Algoma	2020-01-24	0	0	0	0	0	Northeastern
Algoma	2020-01-25	0	0	0	0	0	Northeastern
Algoma	2020-01-26	0	0	0	0	0	Northeastern
Algoma	2020-01-27	0	0	0	0	0	Northeastern

county	lab_submitter	population_served	FirstConfirmed.Per100K
Algoma	SLH	3171	NA
Algoma	SLH	3171	NA
Algoma	SLH	3171	NA
Algoma	SLH	3171	NA
Algoma	SLH	3171	NA
Algoma	SLH	3171	NA

pastwk.sum.casesperday.Per100K	pastwk.avg.casesperday.Per100K
NA	NA
NA	NA
NA	NA
NA	NA
NA	NA
NA	NA

These functions are slightly out of date and not used in many new analysis projects