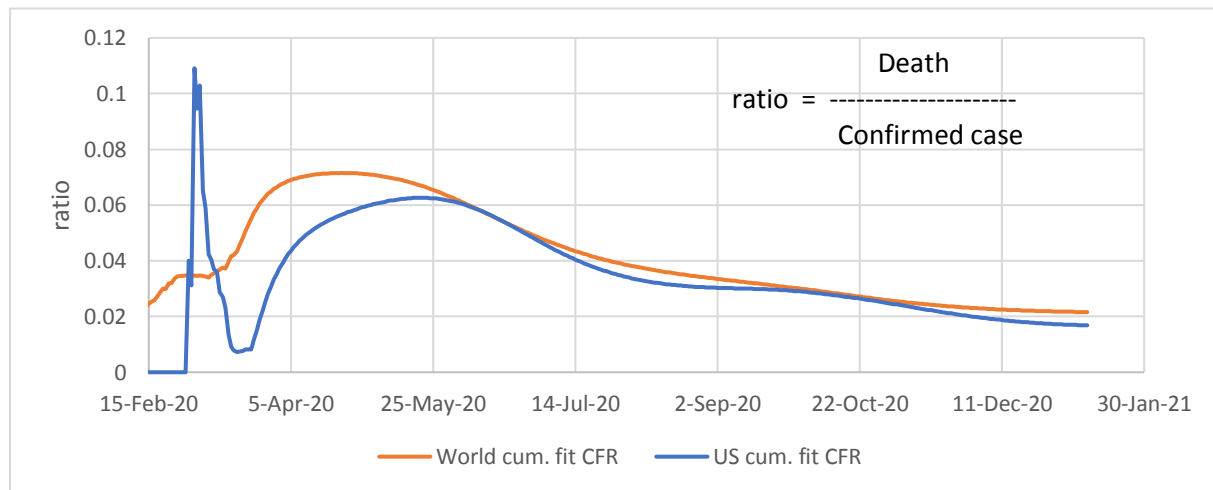
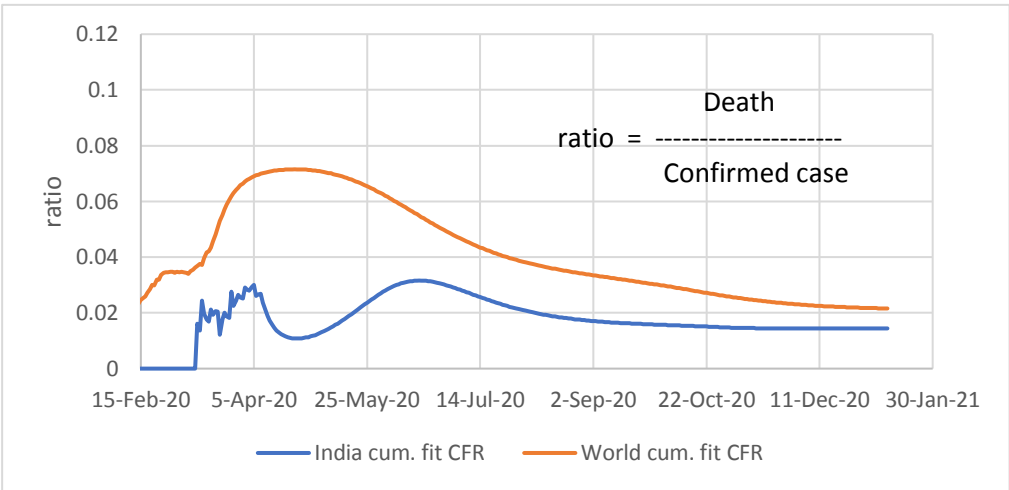
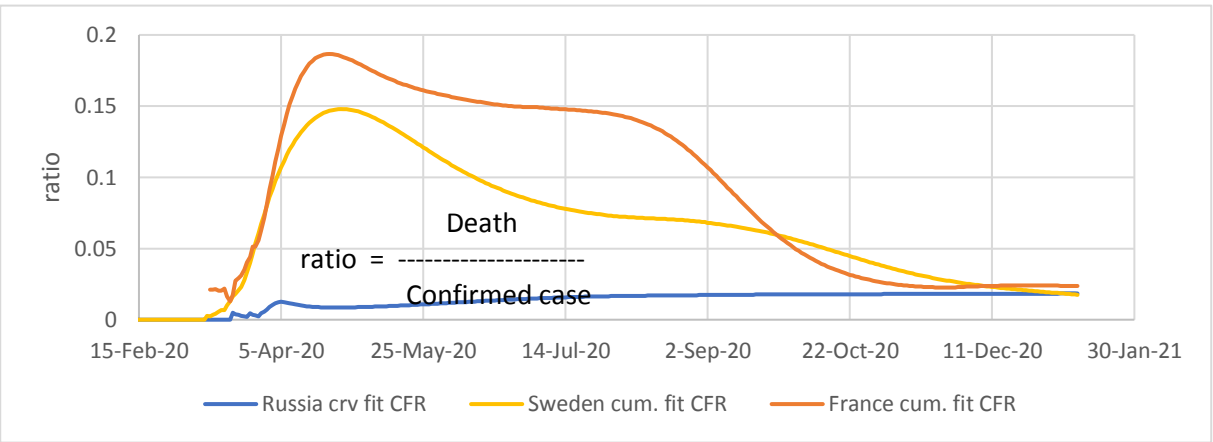
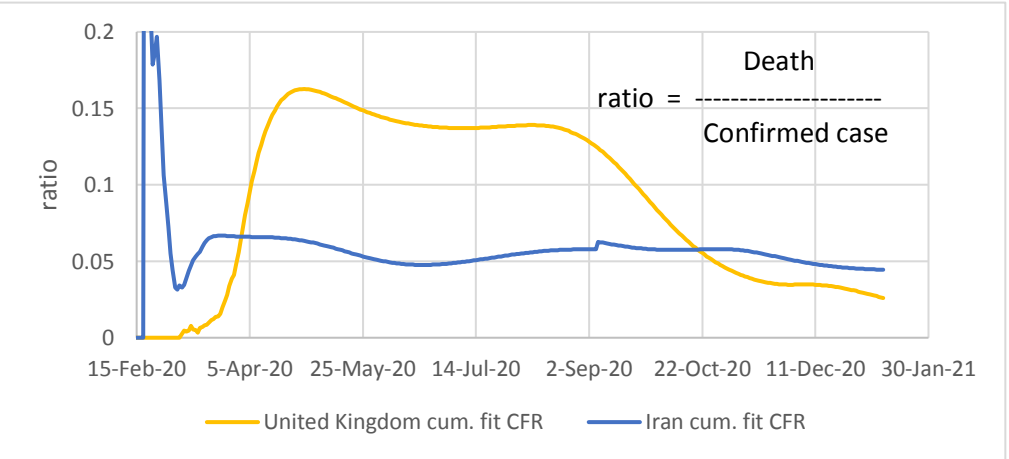
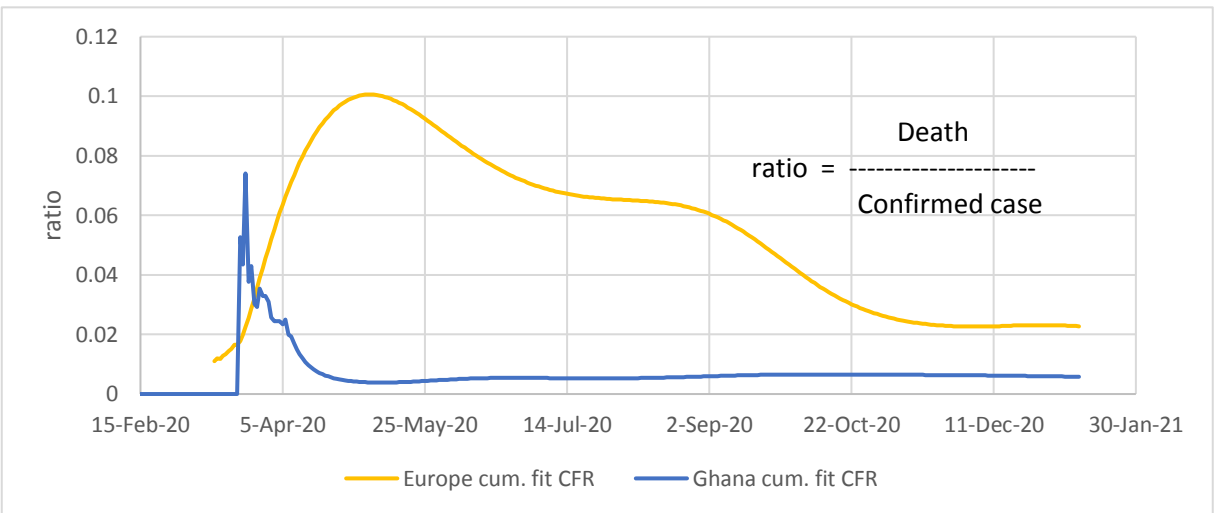
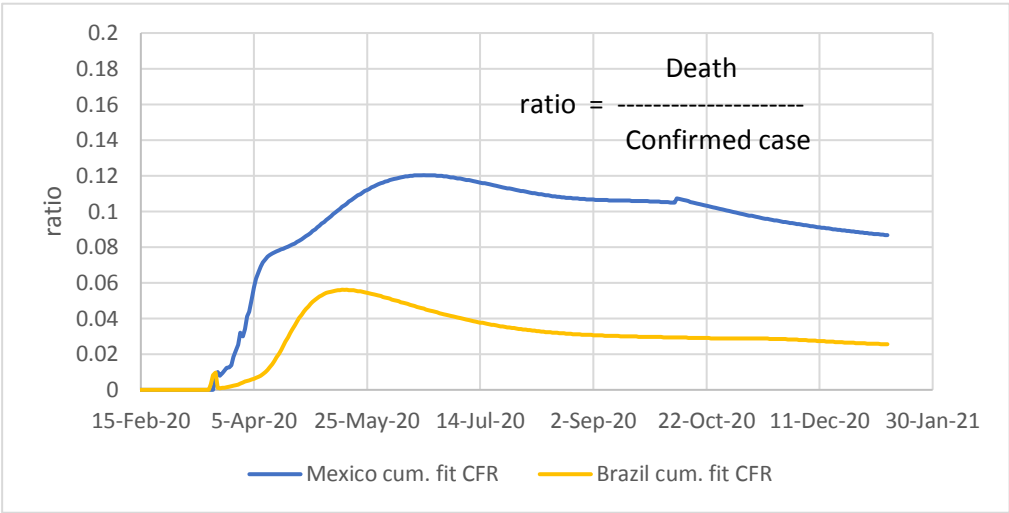
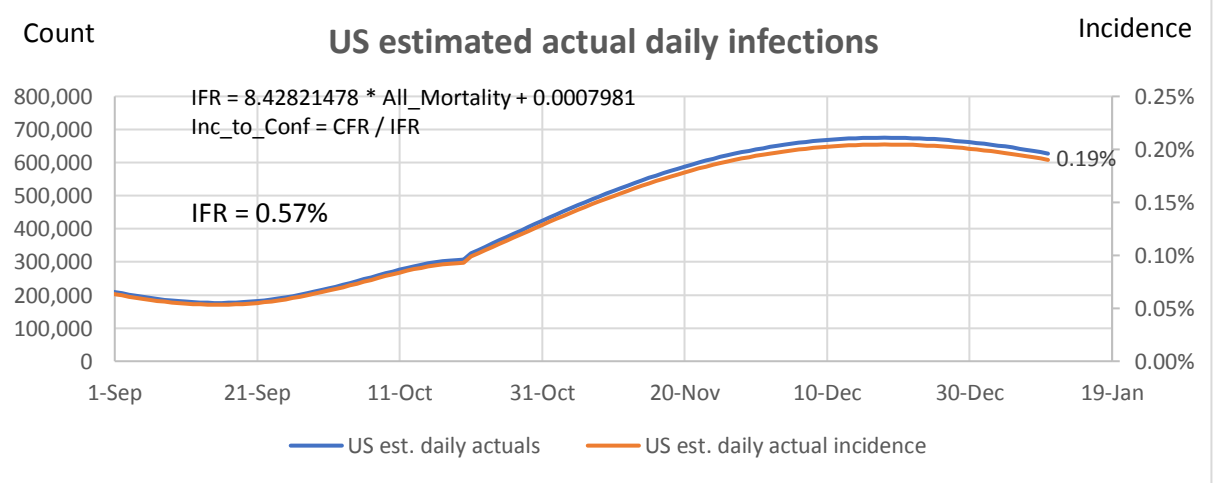
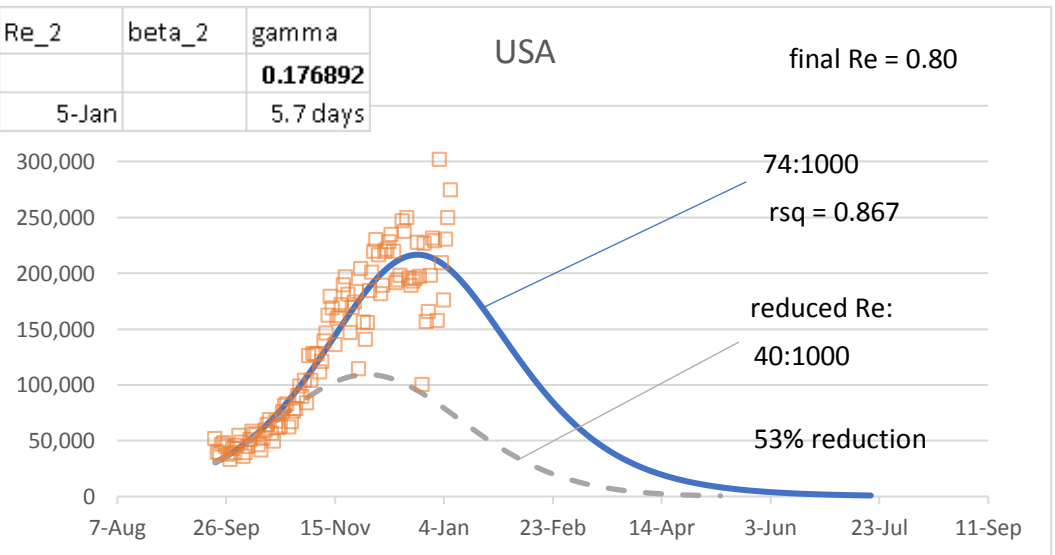
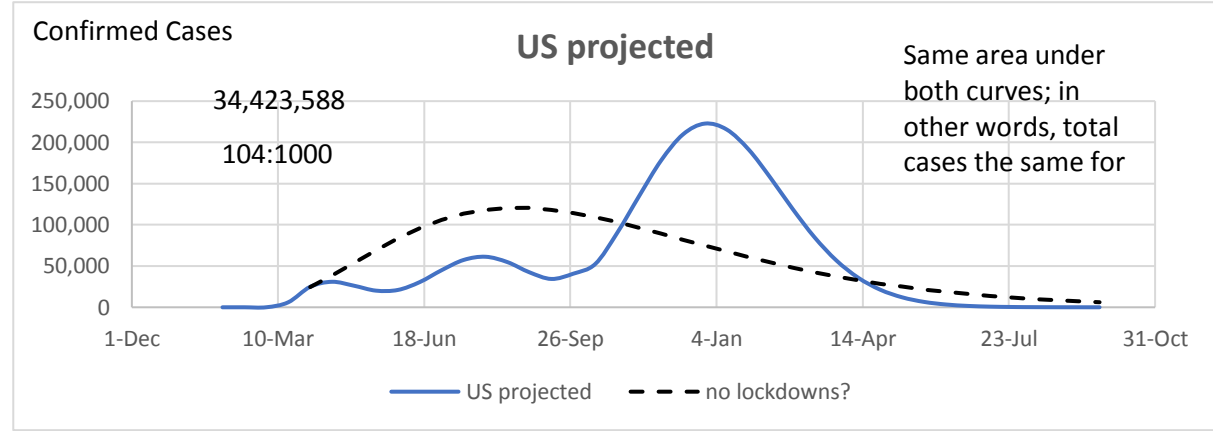
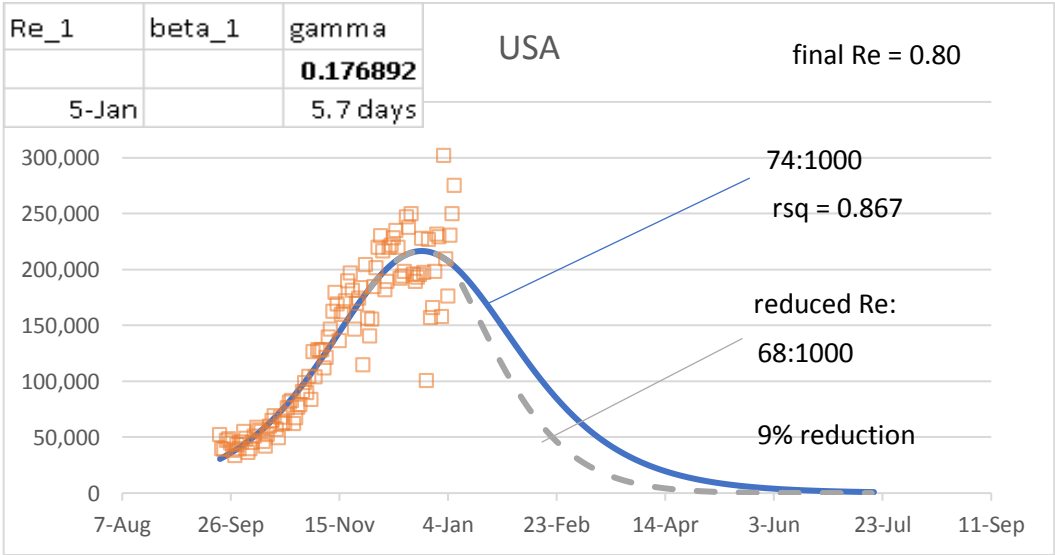


Experimental page : ratios of curve fit deaths to curve fit confirmed cases (CFR)



Demonstration of SIR model where  $R_e$  is linearly reduced to 0.80 at the end of the sequence:



**False Positives Demonstration**

Use 0.19% from US est. incidence above as estimated daily incidence

Prevalence estimated as avg. infected period of 2 weeks X incidence

99% accuracy of test

0.19% X 14 = 2.660%

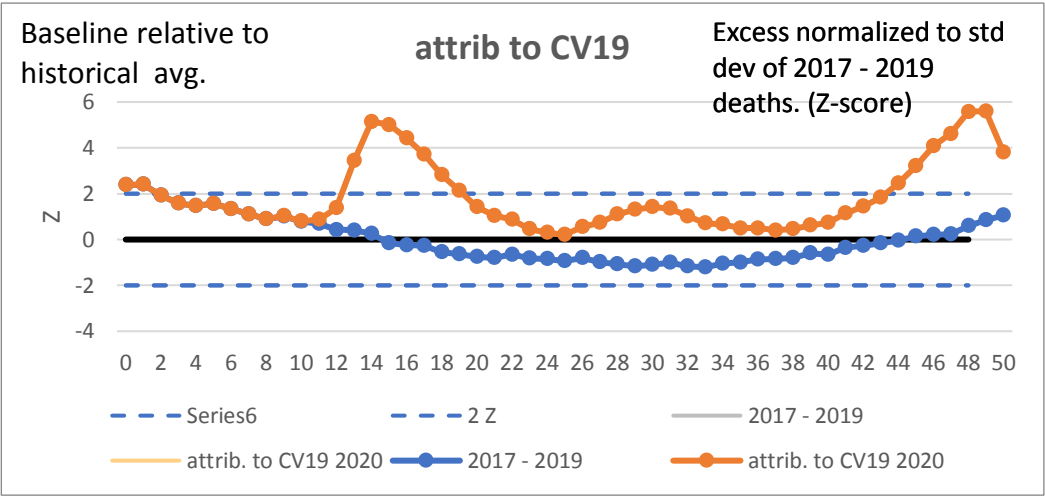
	Positive	Negative	
test pos	2.633%	0.973%	3.61%
test neg	0.027%	96.367%	96.39%
	2.660%	97.340%	100.00%

False pos. is a bit over 1/4 of total positives!

	TRUE +	FALSE +	Total
	2.633%/3.61%	0.973%/3.61%	-----
	73.0%	27.0%	100.00%

Reducing the  $R_e$  while keeping gamma constant is the same as reducing contact rate. Contact rate is reduced through isolation, lockdowns, and vaccinations. Seems to indicate timing of start of measures is a big factor. The orange data taken as without measures, but we know certain measures were taken. Hard to determine effect, without a basis of comparison.

Counter-act this tendency by increasing test sensitivity. However this may increase false negatives, the recipients of which may be positive, think they're negative, and go spread it around some more.



USA Excess Deaths (from CDC data):

Annualized on 52 weeks	Weeks are labelled 0 thru 51		
	All Cause	All Cause, excl. CV19	CV19
3 yr average before 2020	859:100,000	876:100,000	-
2020	1009:100,000	909:100,000	-
Diff.	133:100,000	34:100,000	99:100,000

3 yr average	26% of All-Cause excess deaths are non-CV19
859:100,000	

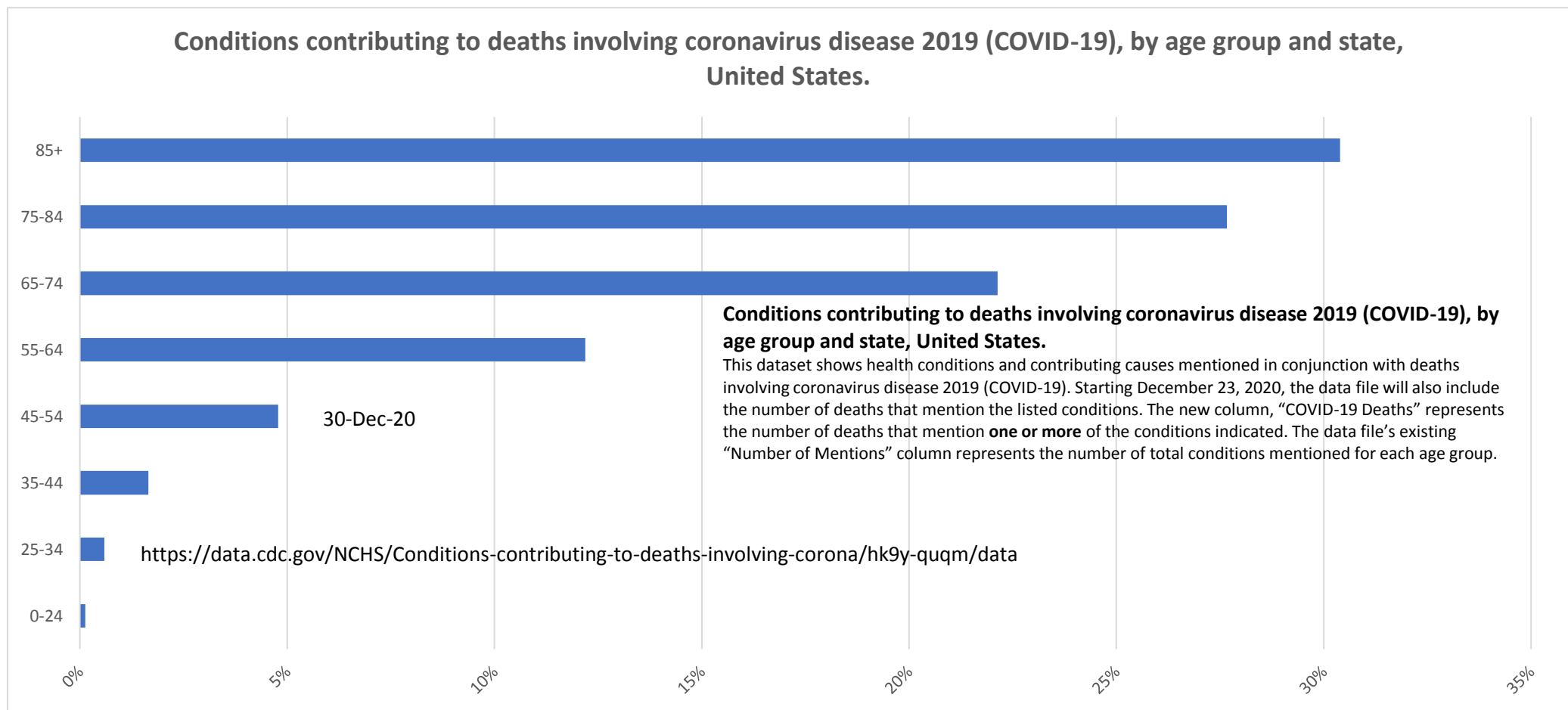
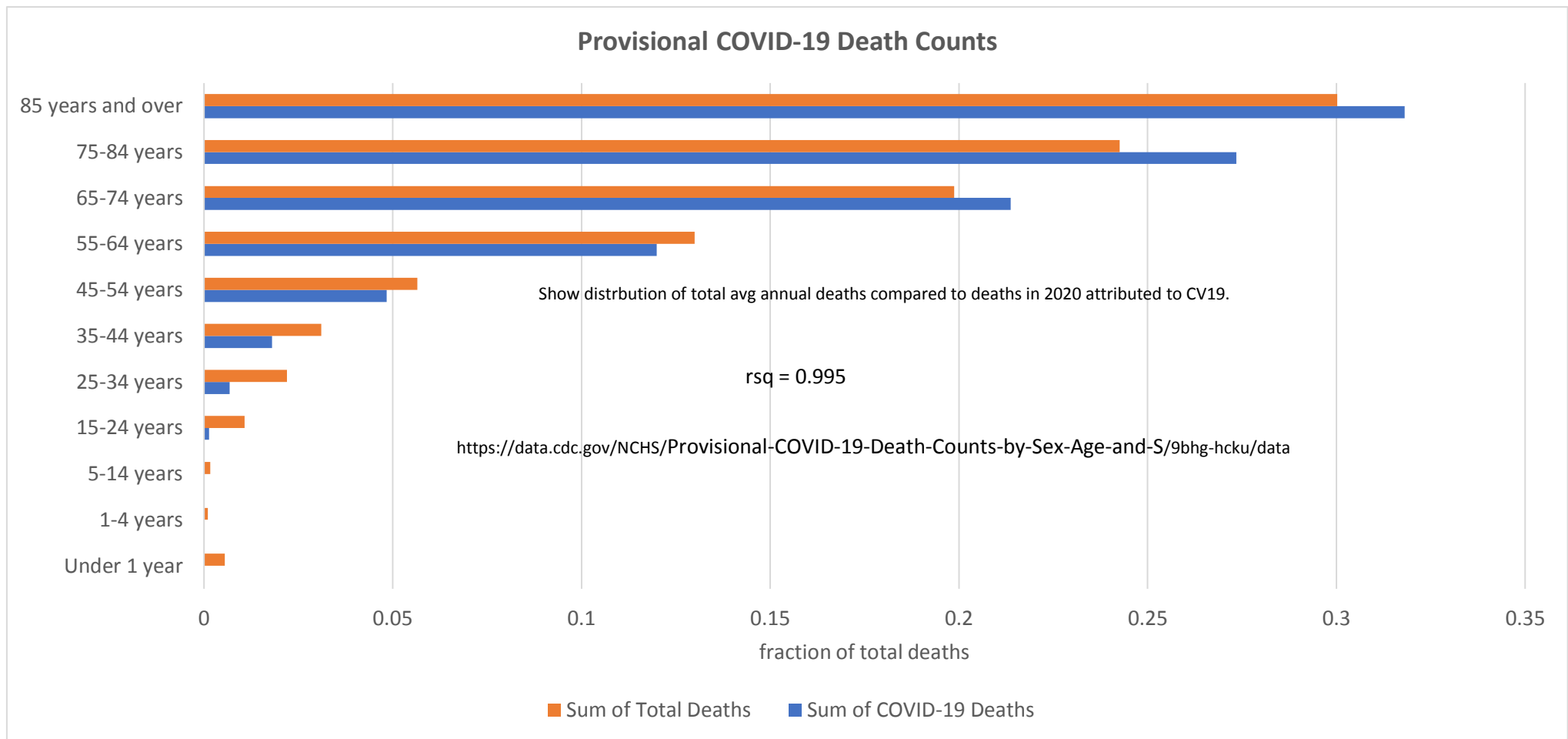
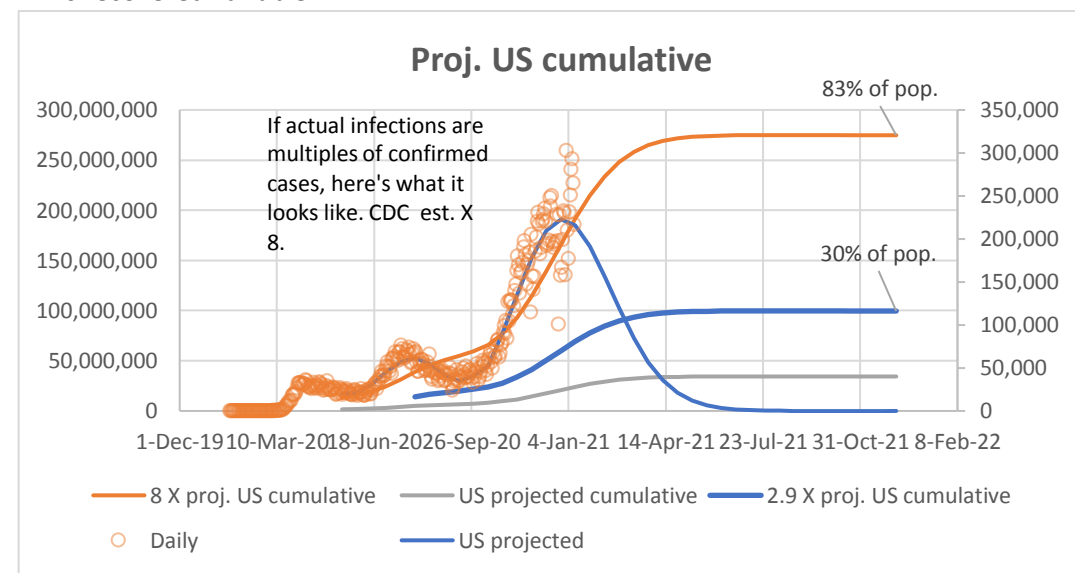
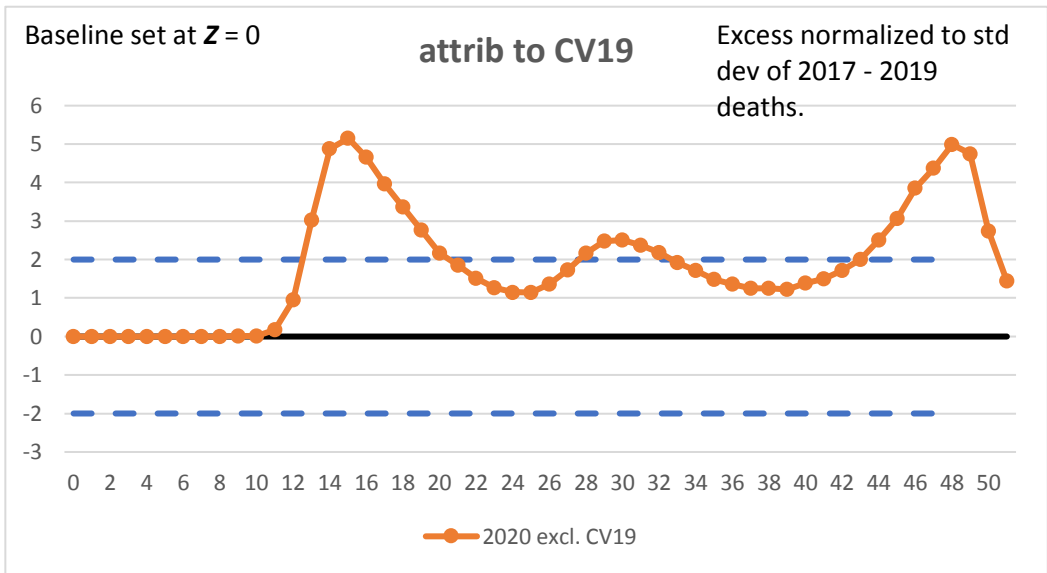
<https://data.cdc.gov/NCHS/Excess-Deaths-Associated-with-COVID-19/xkkf-xrst/data>

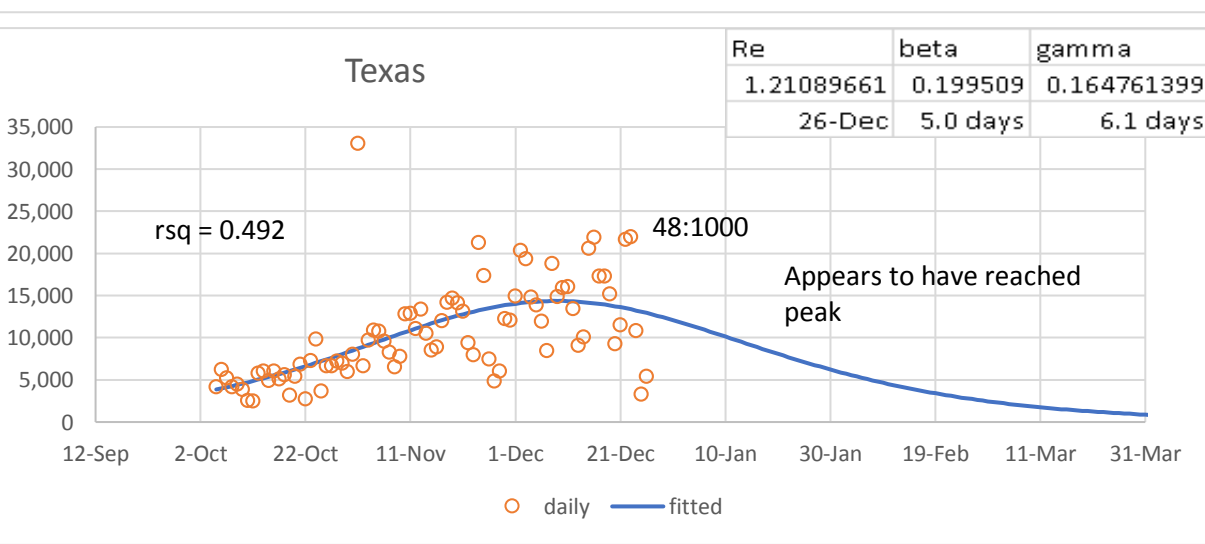
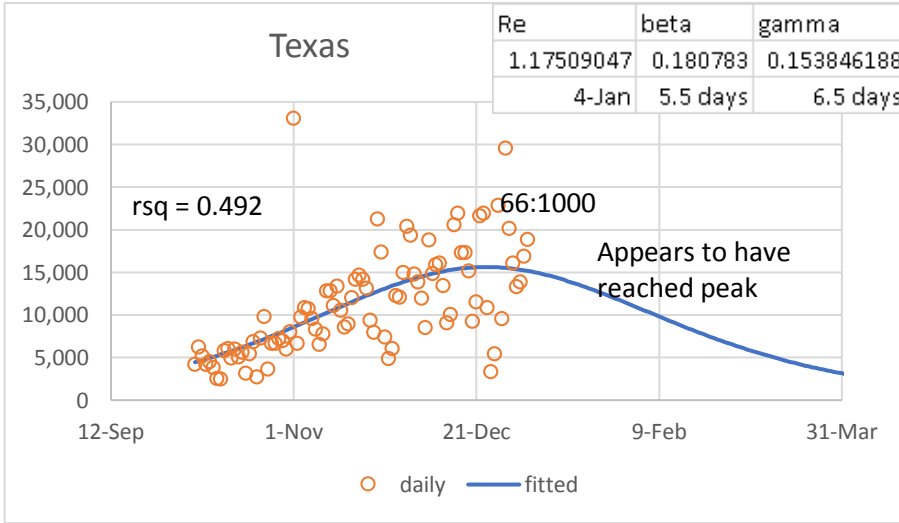
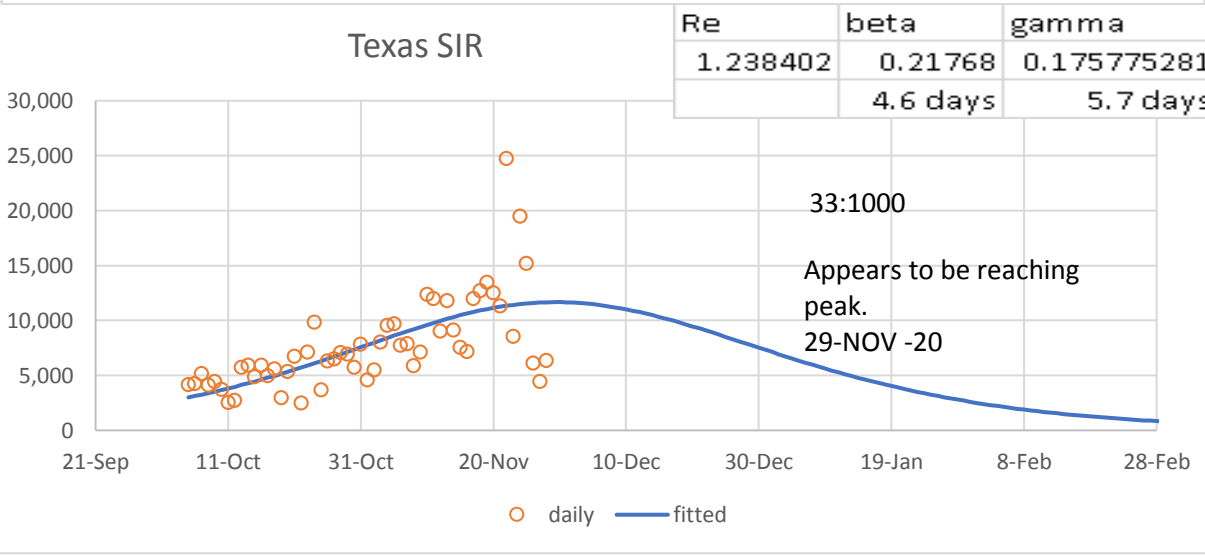
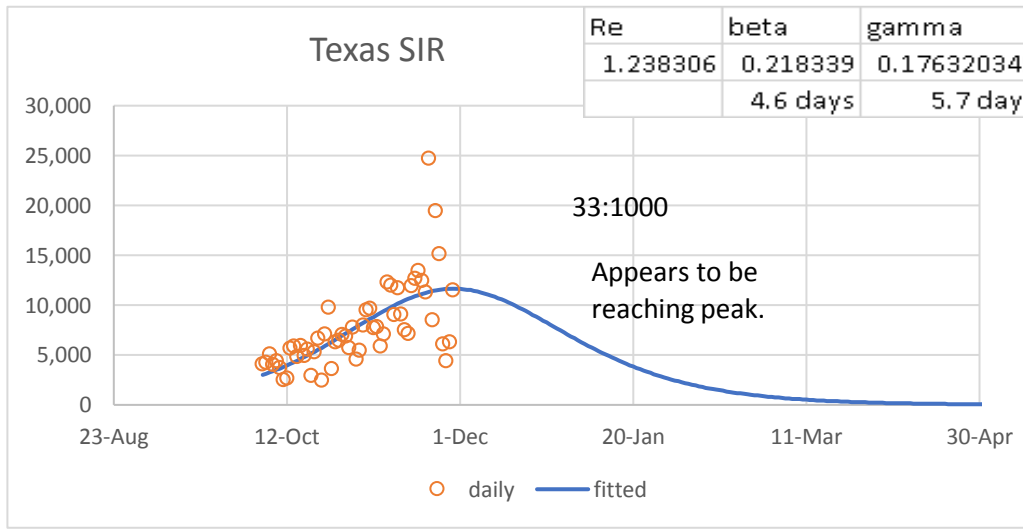
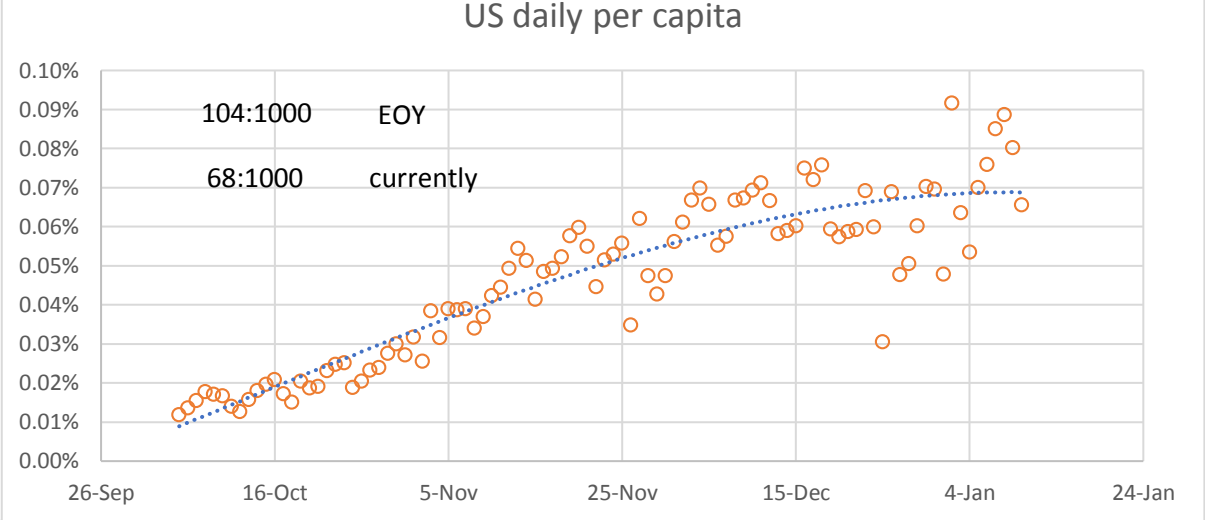
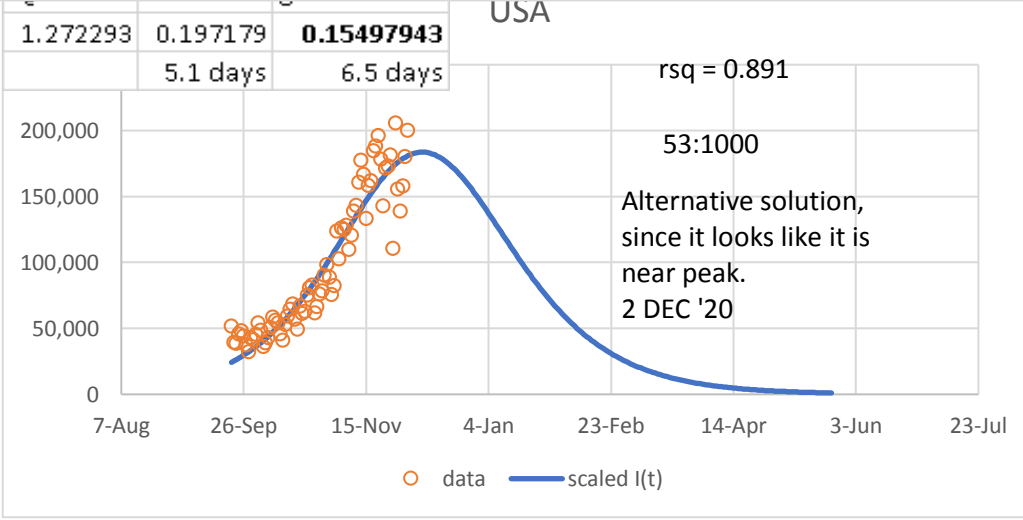
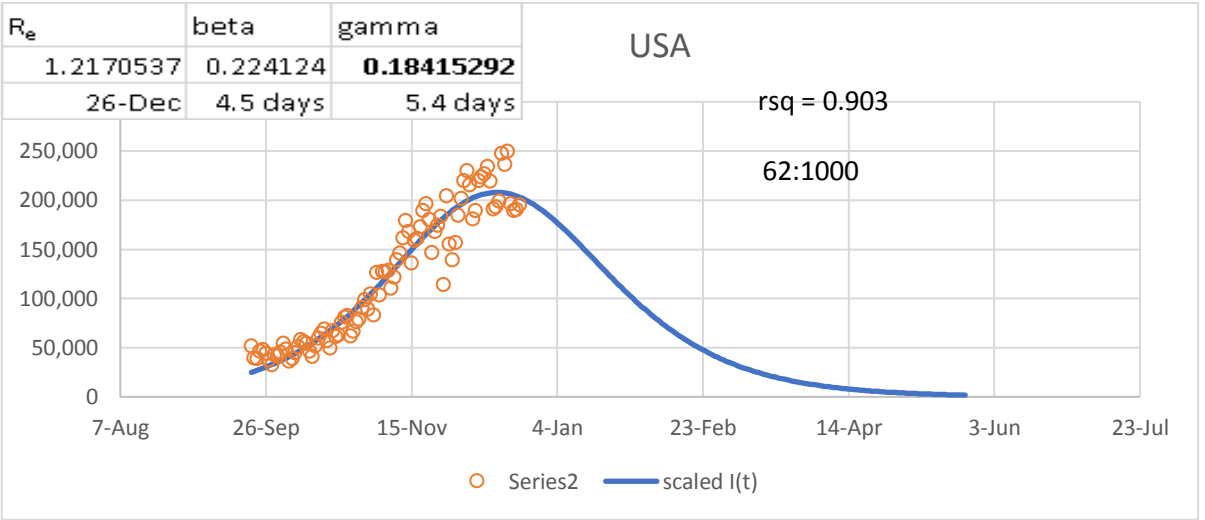
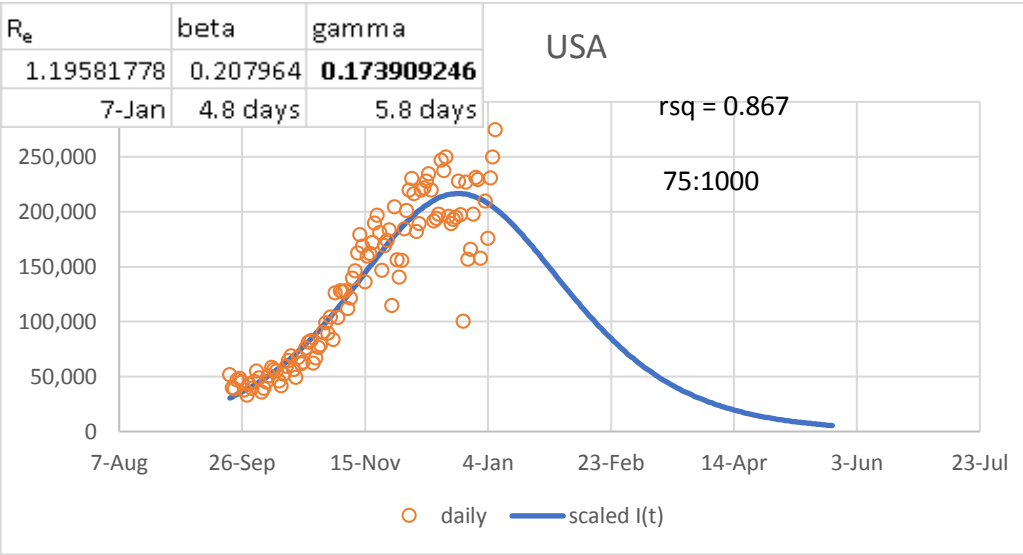
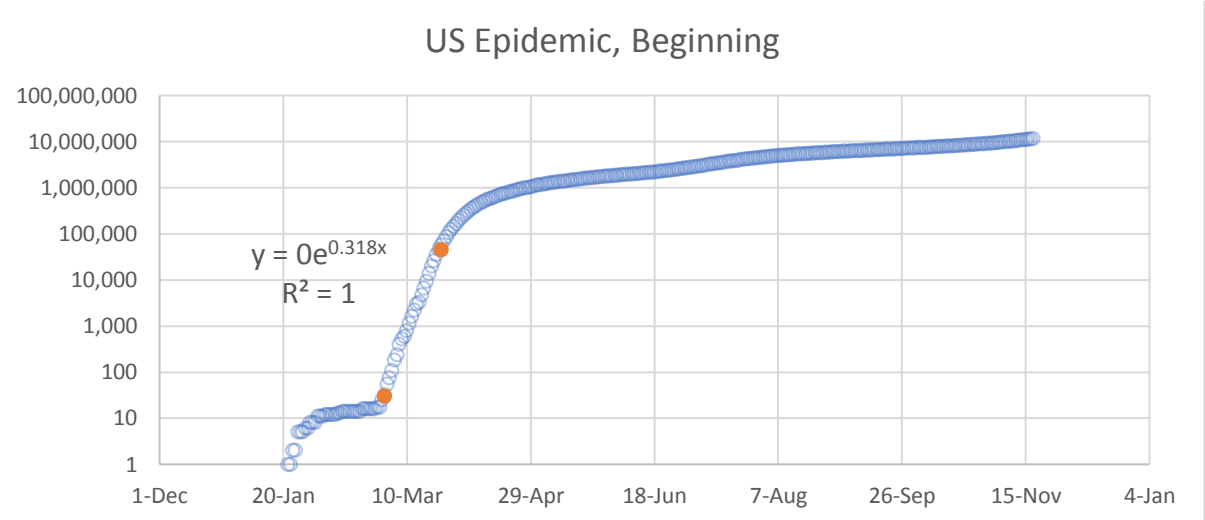
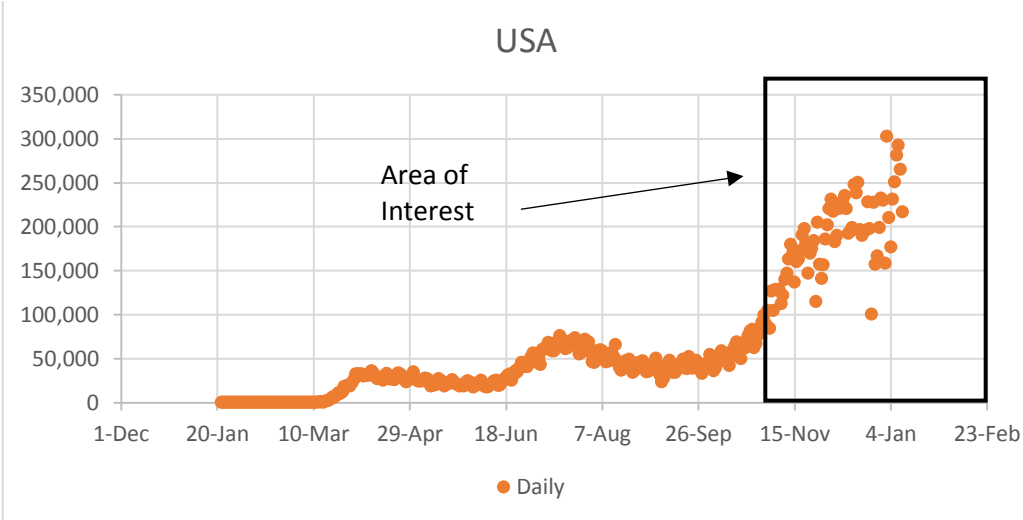
$K = 0.318$

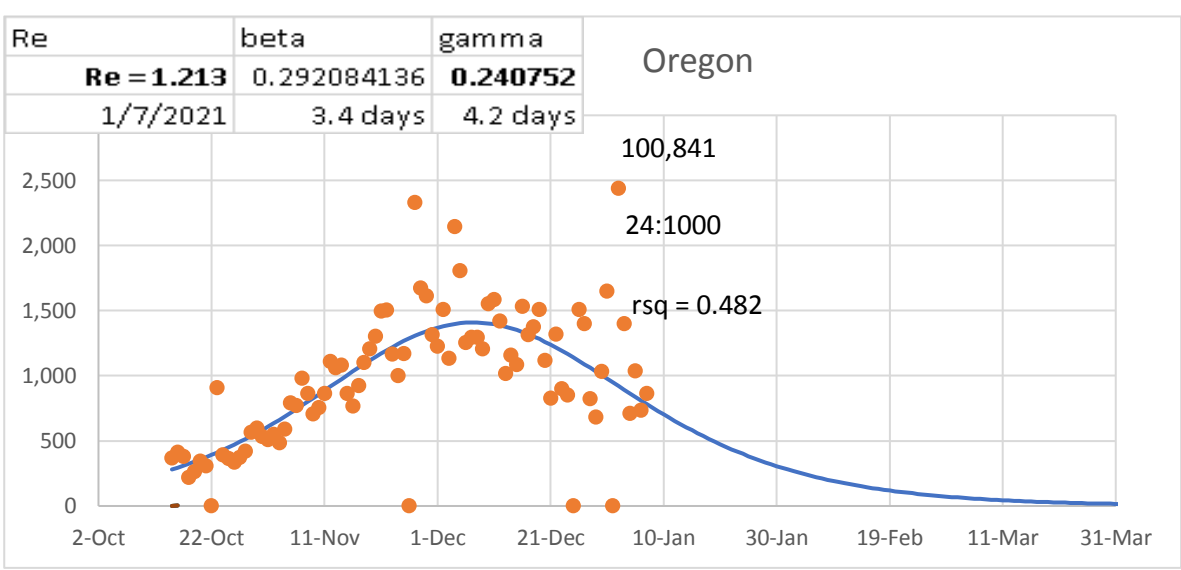
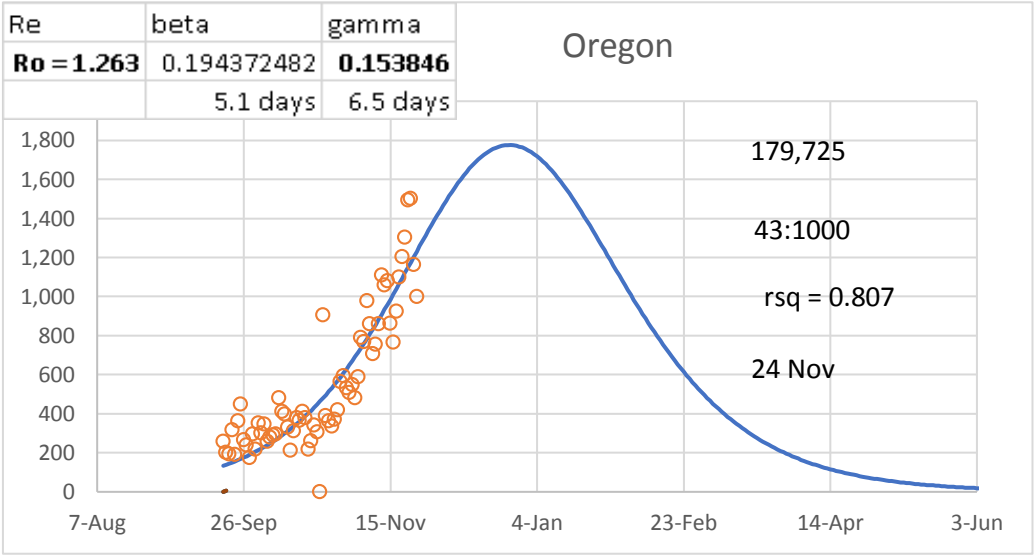
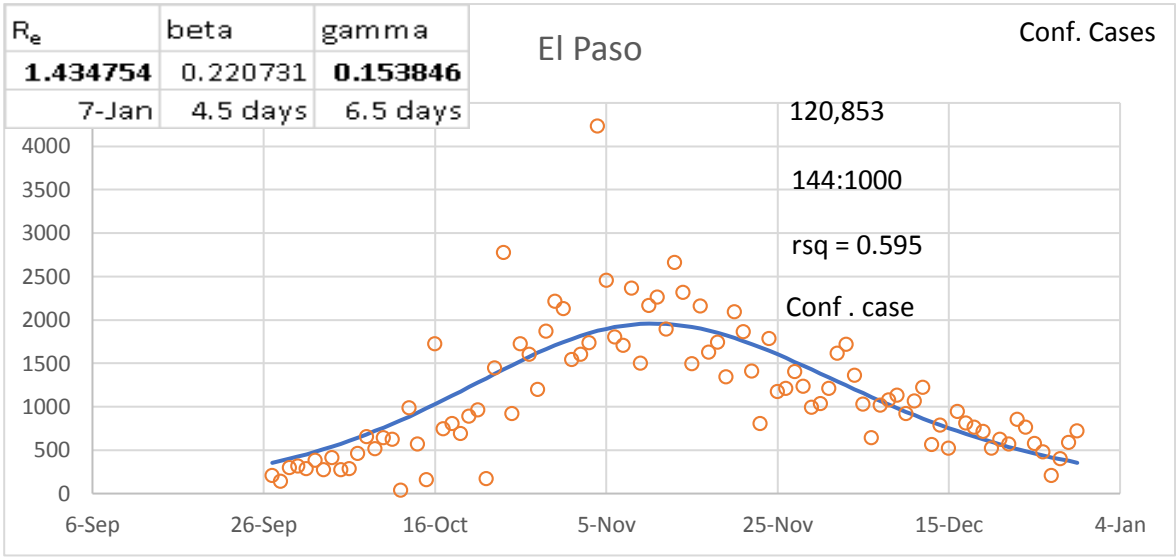
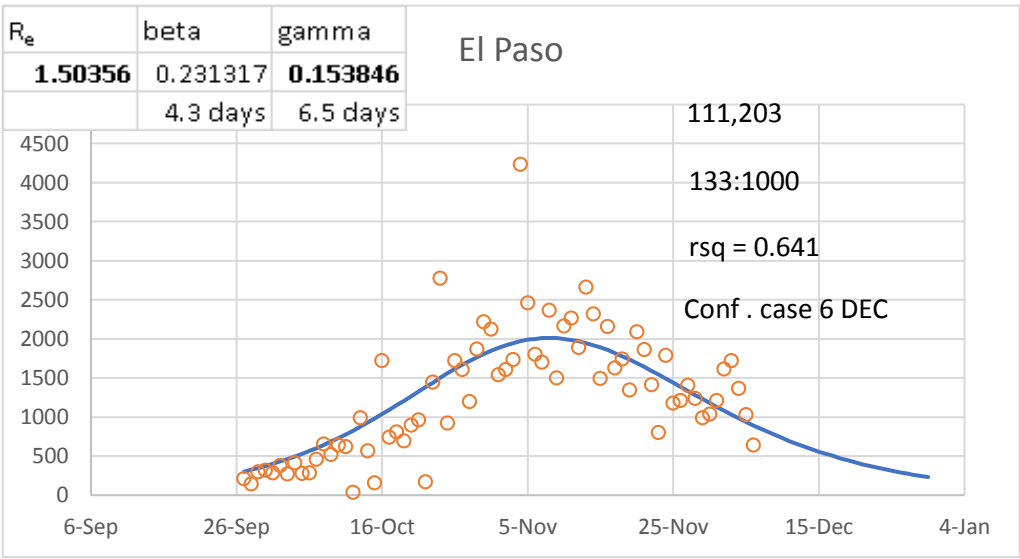
$\gamma = 0.171$   $R_o = \exp(K/\gamma) = 6.42$  84%  $\leq$  Herd immunity

$\gamma = 0.286$   $R > [1 - 1/R_o]/N = 3.04$  67%

$R$  is recovered variable.







Difference between 2019 and 2020

State	deaths per 100,000	note
North Carolina	-188	2019 hurricanes
West Virginia	-111	??
Puerto Rico	-69	2019 hurricanes
Hawaii	3	
Alaska	3	
Oregon	19	
Washington	38	
Maine	39	
Connecticut	44	
Rhode Island	52	
Vermont	54	
Kentucky	57	
Utah	62	
New Hampshire	62	
California	77	
Oklahoma	78	
Nebraska	79	
Virginia	79	
Idaho	80	
Ohio	81	
Minnesota	88	
Delaware	90	
North Dakota	90	
New Mexico	90	
Colorado	94	
Georgia	95	
Wyoming	98	
Montana	100	
United States	102	
Kansas	103	
Pennsylvania	103	
Nevada	105	
Wisconsin	108	
Iowa	111	
Massachusetts	113	
Texas	116	
Missouri	117	
South Dakota	118	
Maryland	118	
Indiana	120	
Tennessee	122	
Florida	123	
Alabama	130	
Arkansas	132	
South Carolina	135	
Michigan	136	
New York City	137	
District of Columbia	142	
Louisiana	148	
Illinois	149	
Arizona	169	
Mississippi	185	
New York	190	
New Jersey	211	

Keep in mind this does not distinguish COVID-19 deaths.

<https://data.cdc.gov/NCHS/Weekly-Counts-of-Deaths-by-State-and-Select-Causes/muzy-ite6/data>