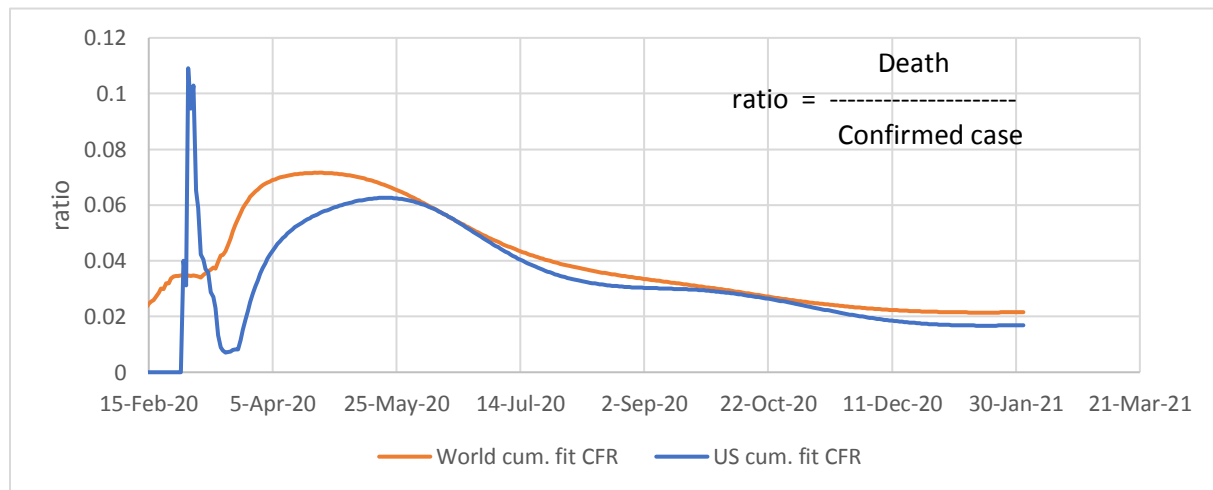
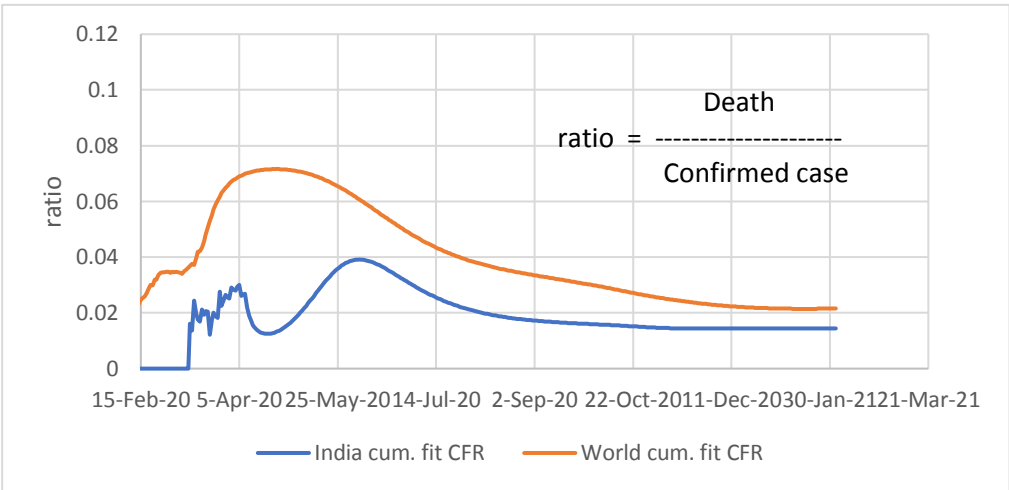
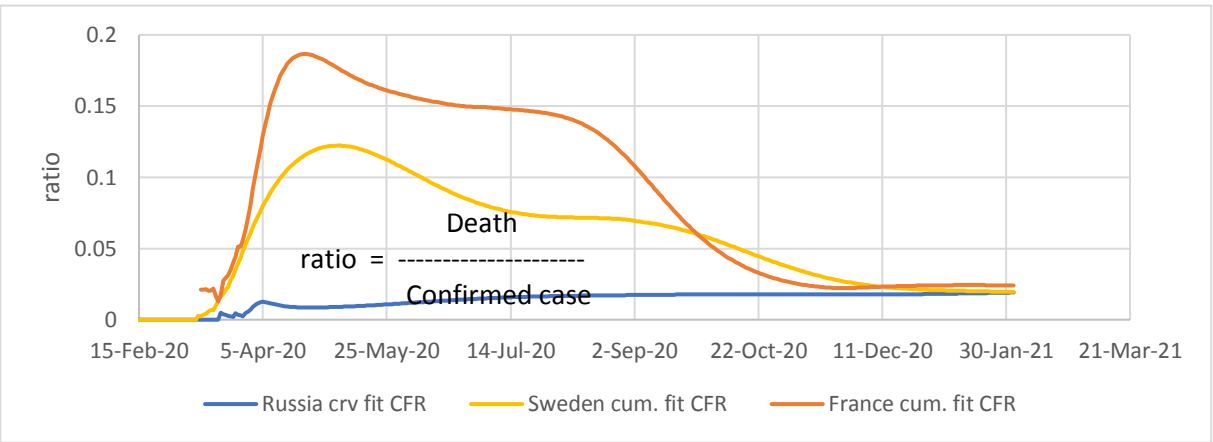
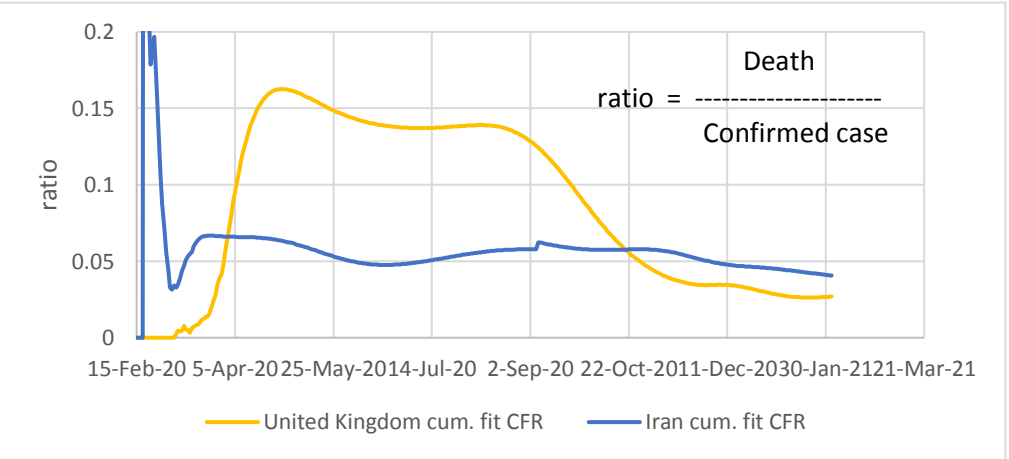
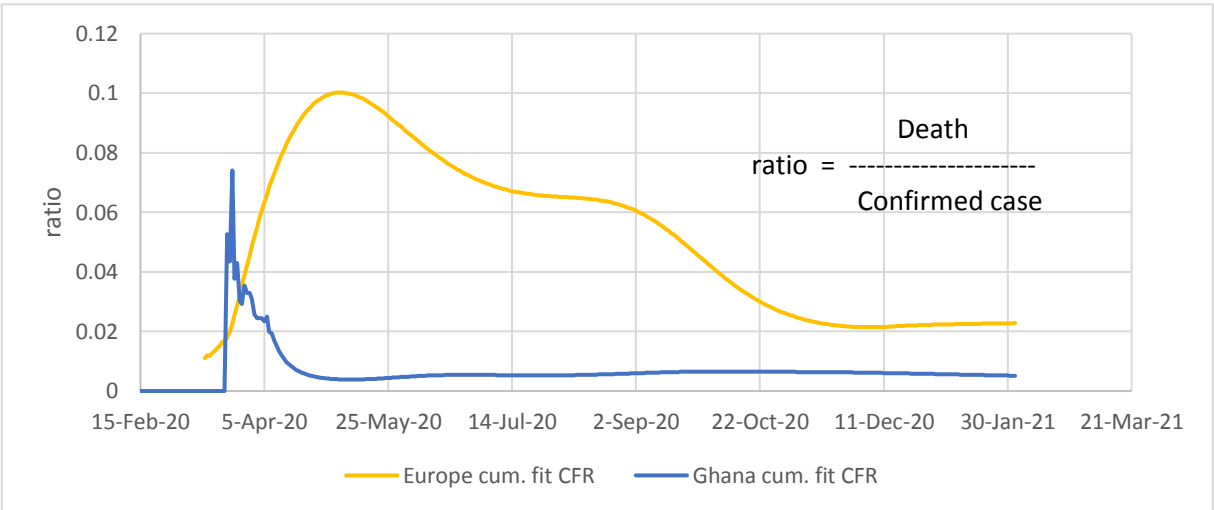
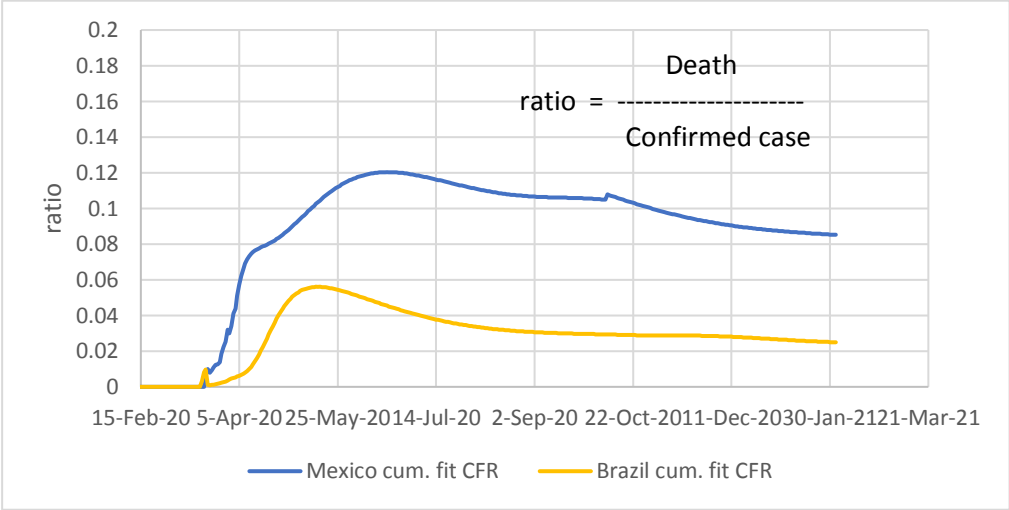
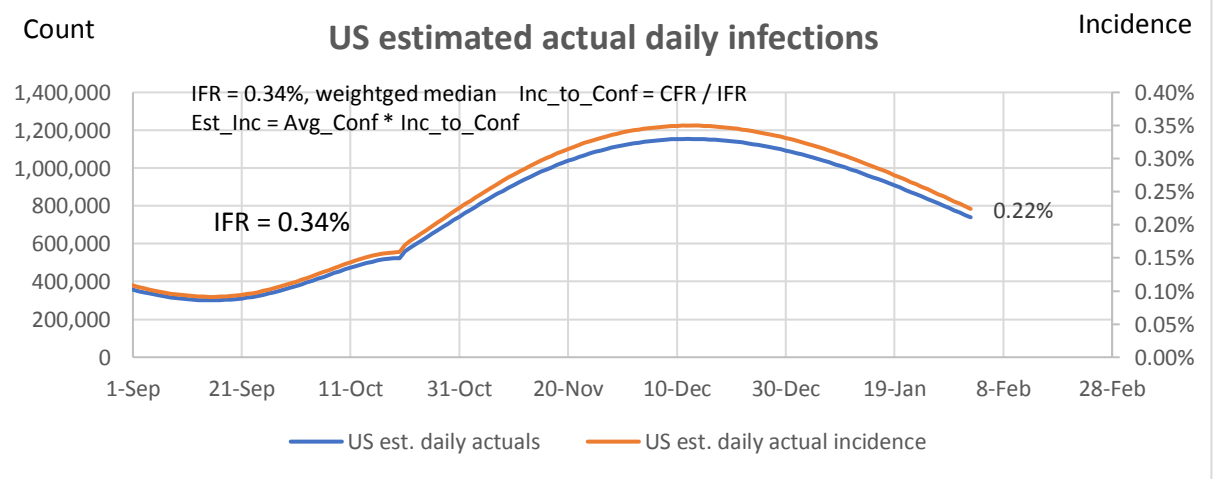
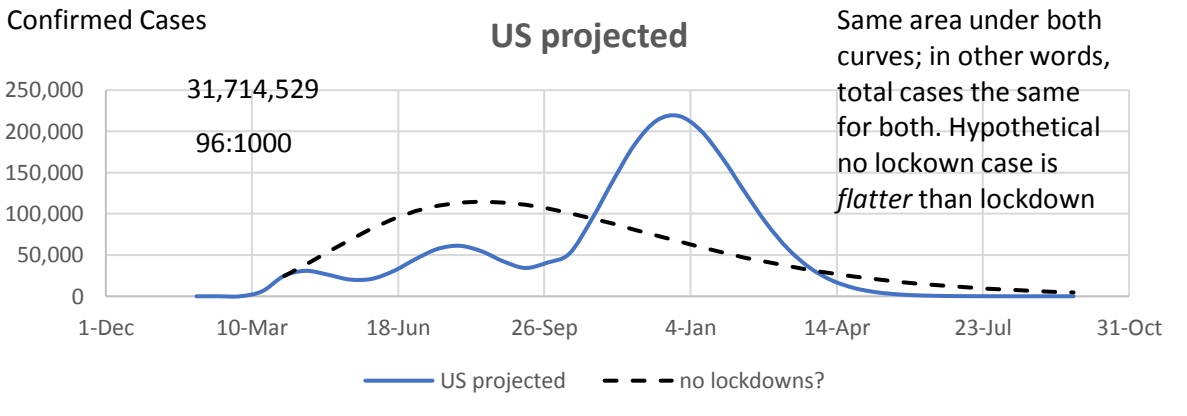
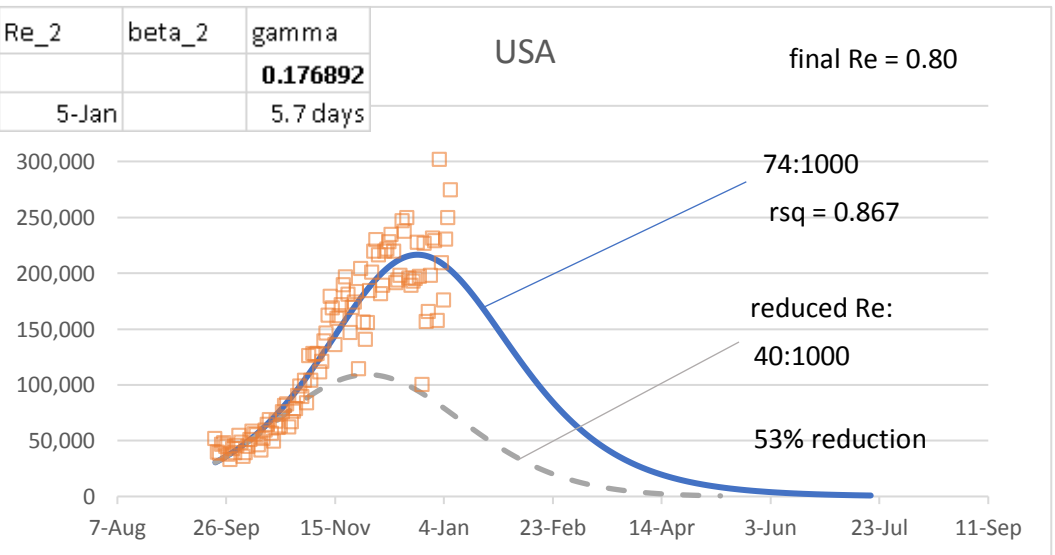
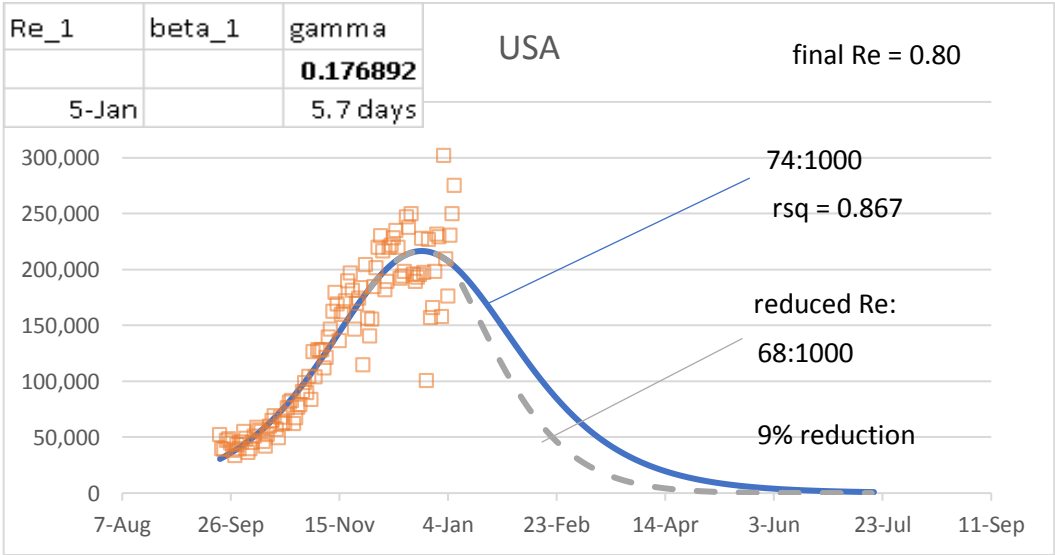


Experimental page : ratios of curve fit deaths to curve fit confirmed cases (CFR)



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



False Positives Demonstration

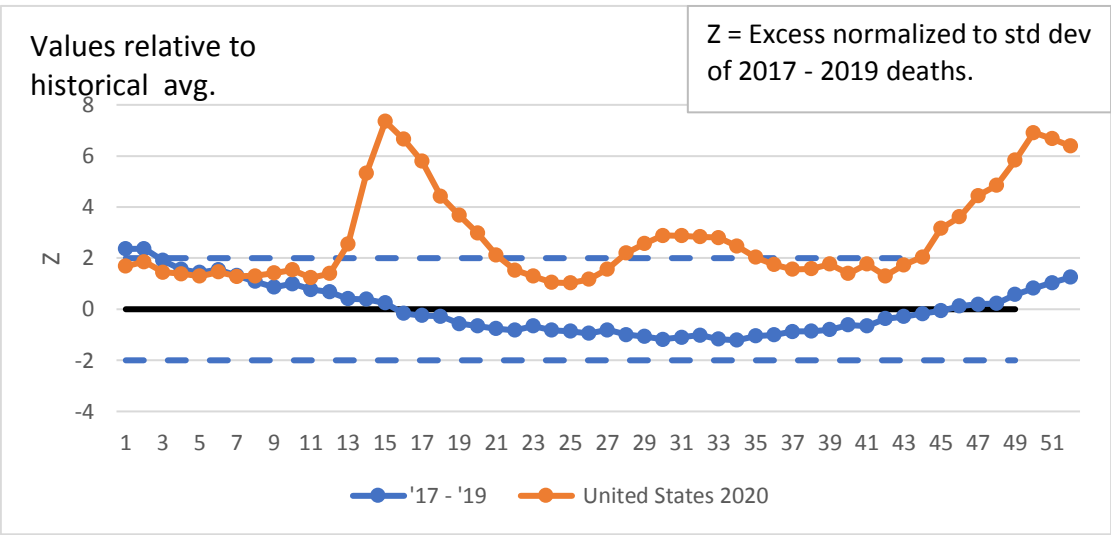
Use 0.22% from US est. incidence above as estimated daily incidence  
Prevalence estimated as avg. infected period of 2 weeks X incidence  
99% accuracy of test 0.22% X 14 = 3.080%

	Positive	Negative	
test pos	3.049%	0.969%	4.02%
test neg	0.031%	95.951%	95.98%
	3.080%	96.920%	100.00%

False pos. is a 1/4 of total positives.		
TRUE +	3.049%/4.02%	75.9%
FALSE +	0.969%/4.02%	24.1%
Total		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			
	All Cause	All Cause, excl. CV19	CV19
3 yr average before 2020	859:100,000	859:100,000	-
2020	1004:100,000	898:100,000	-
Diff.	148:100,000	39:100,000	109:100,000

3 yr average
859:100,000

26% of All-Cause excess deaths are non-CV19

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

$K = 0.318$

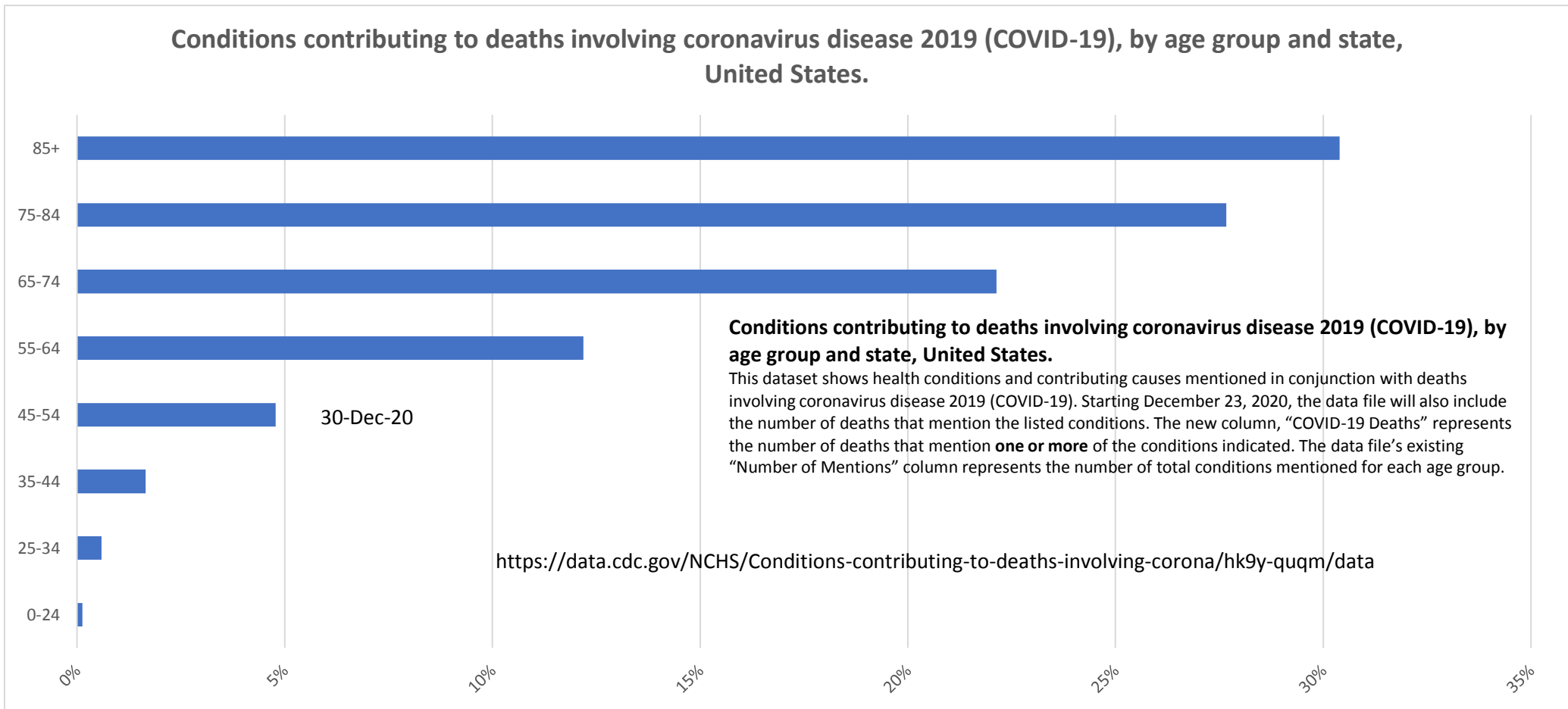
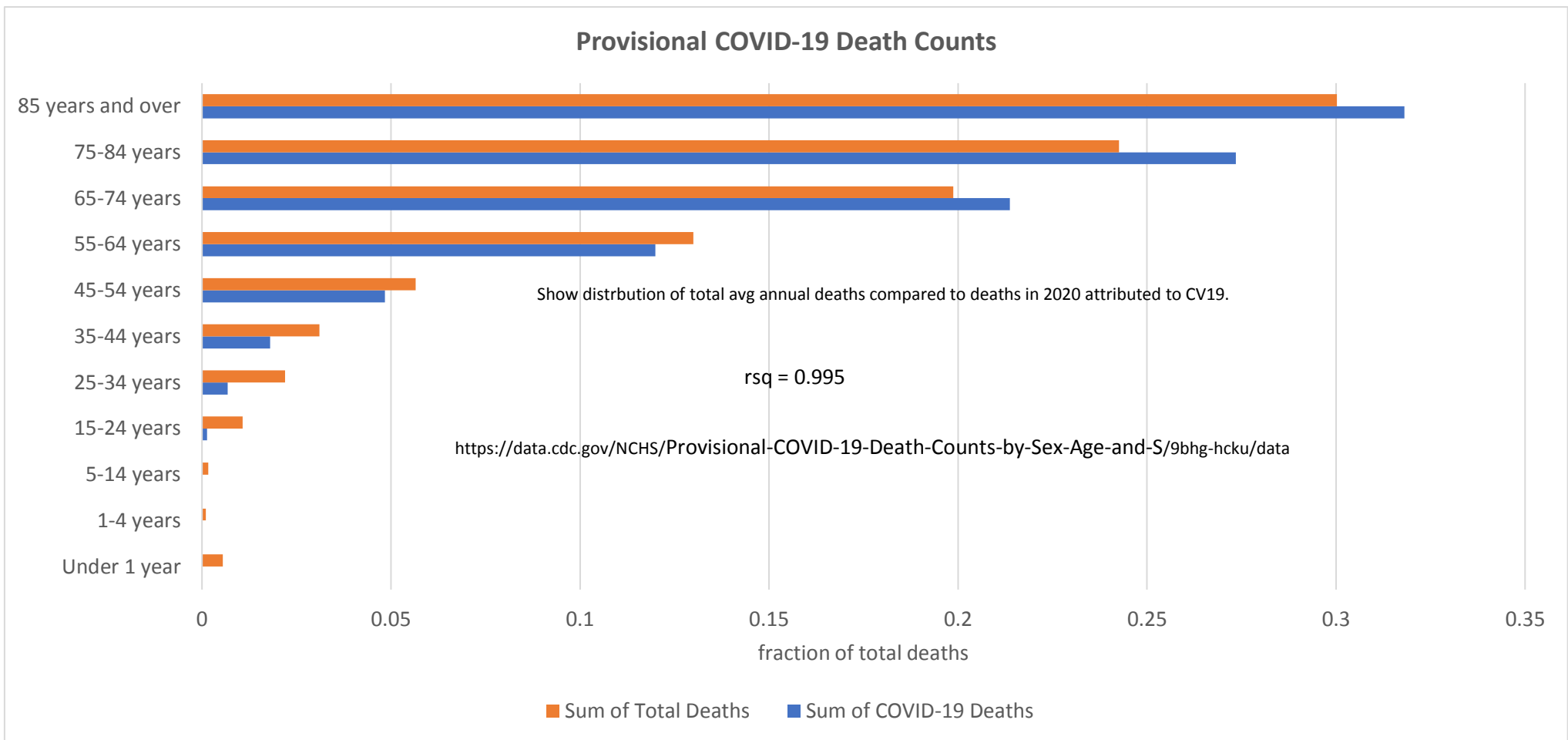
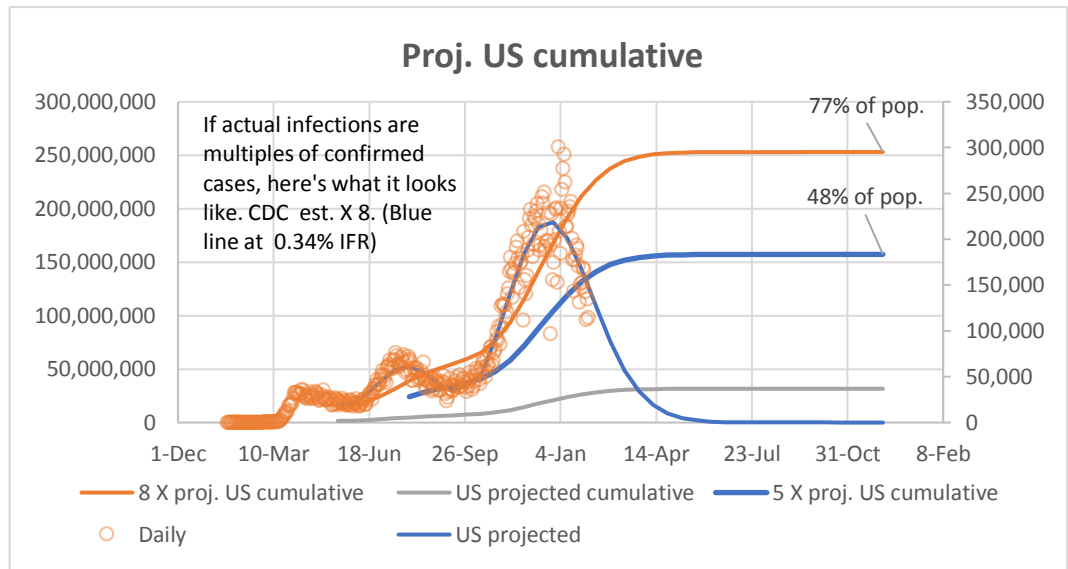
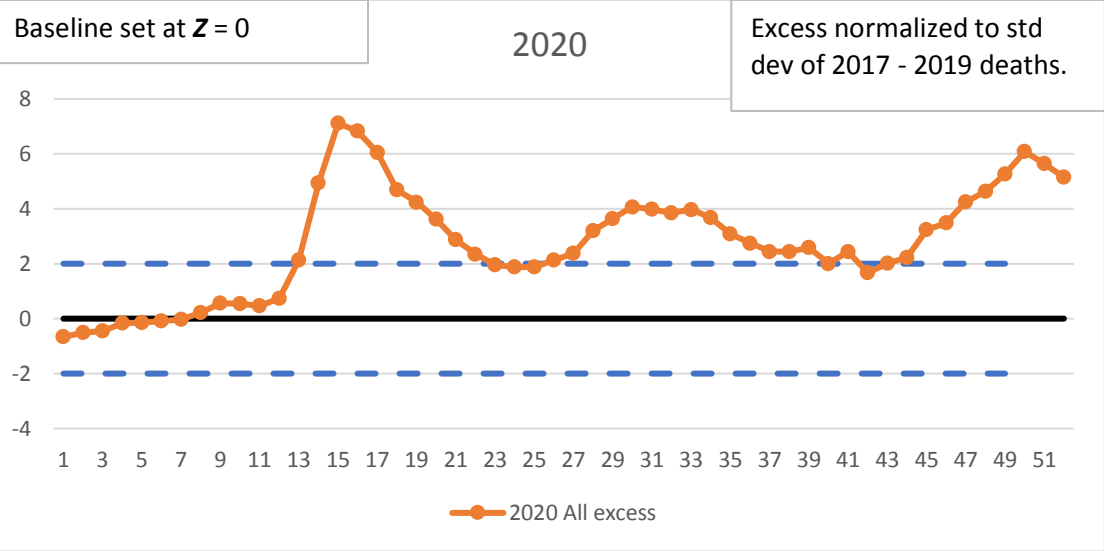
$\gamma = 0.171 \quad R_o = \exp(K/\gamma) = 6.42$

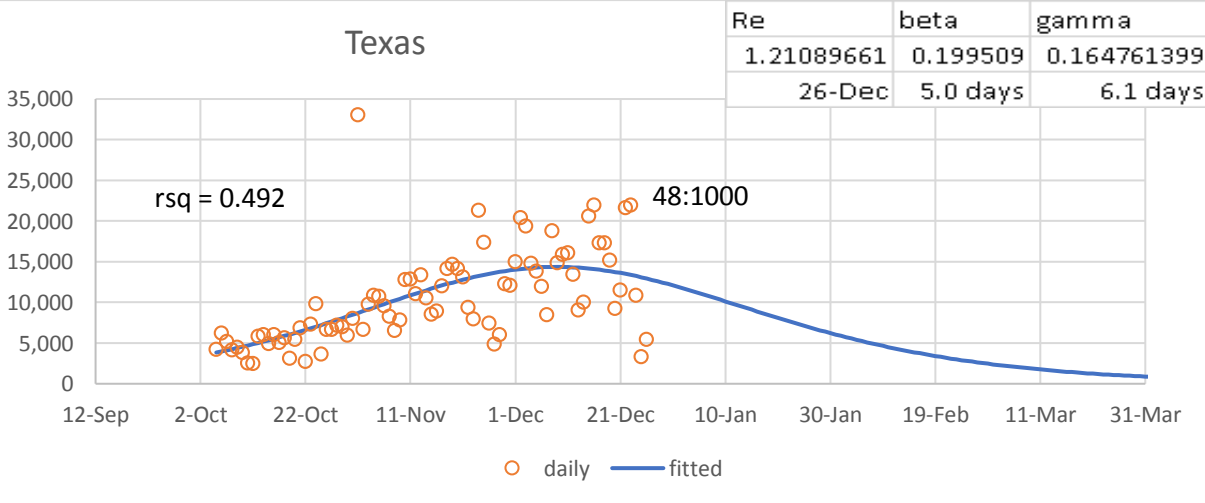
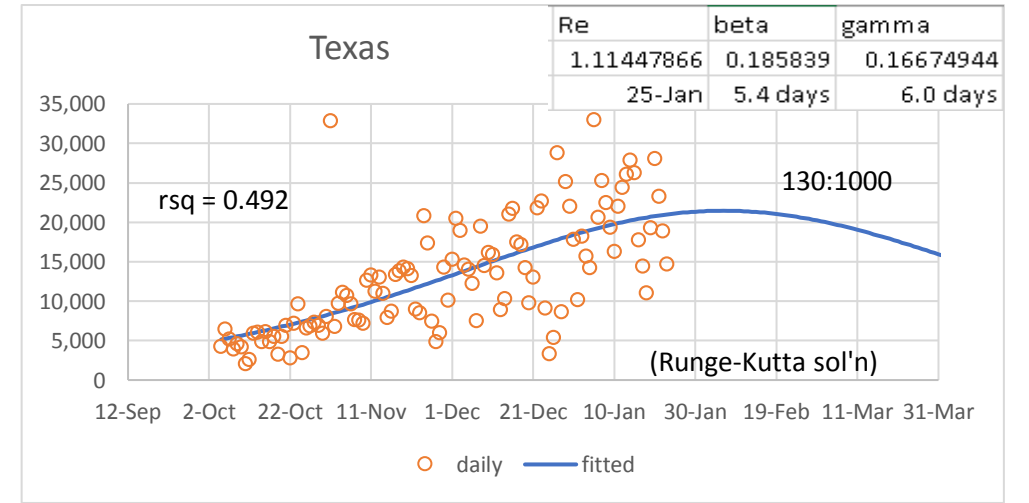
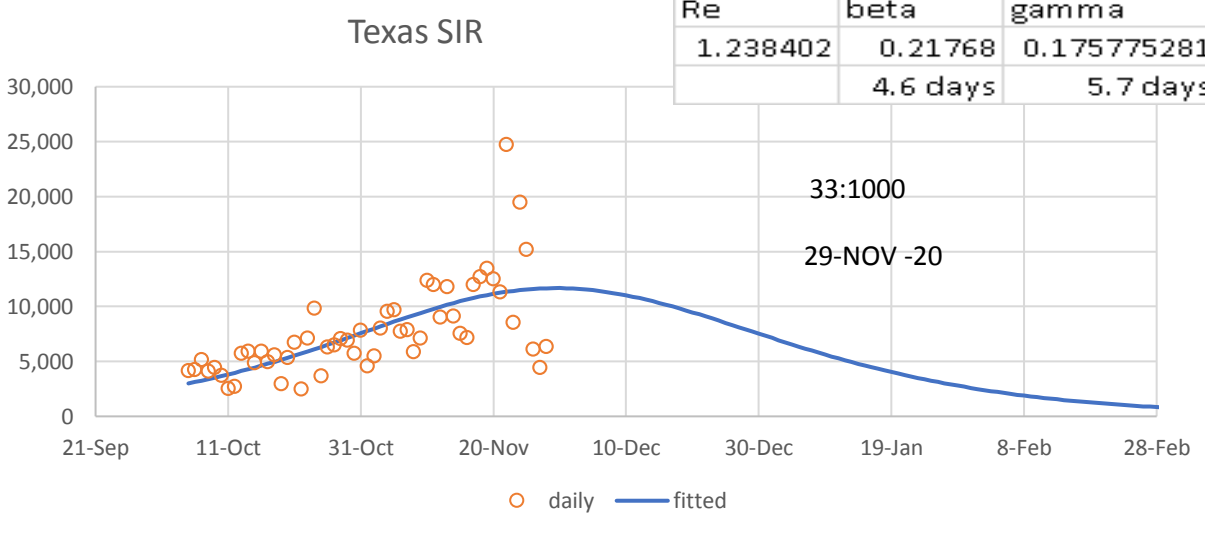
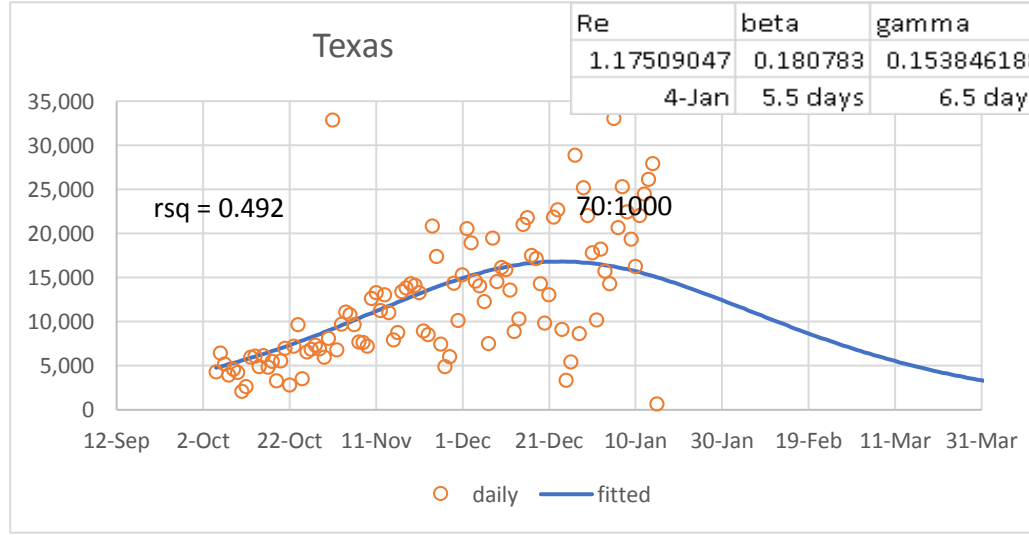
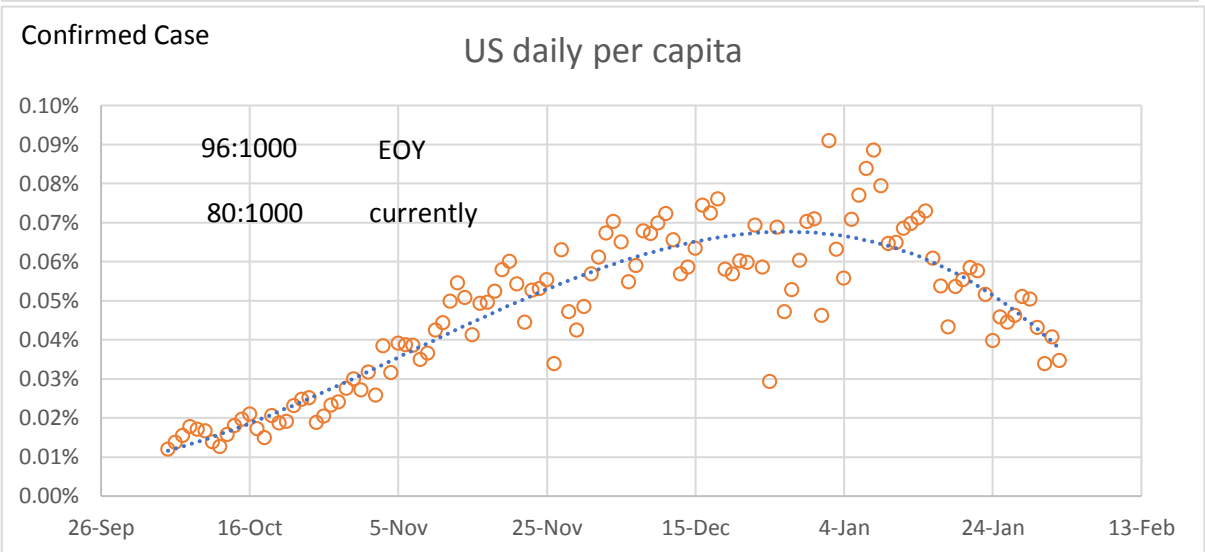
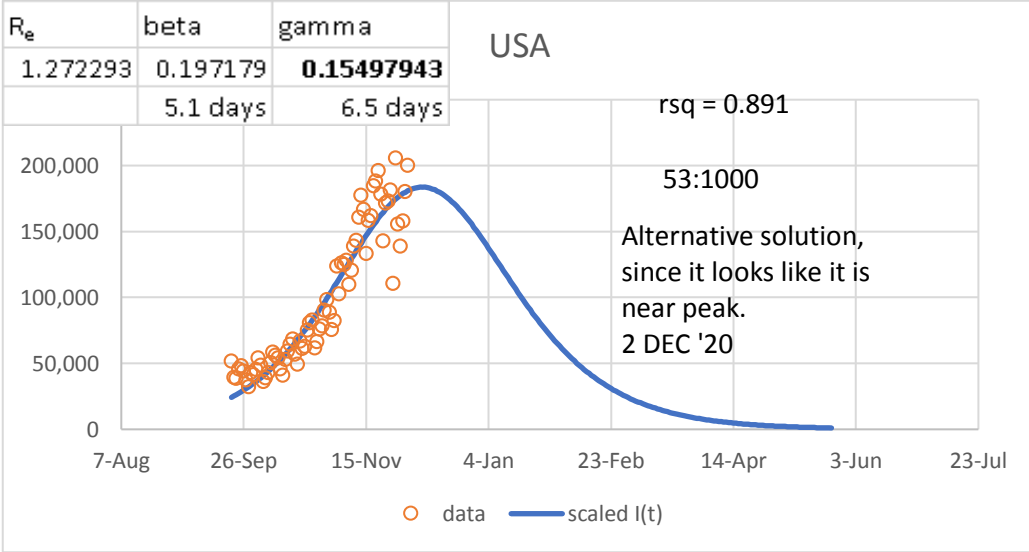
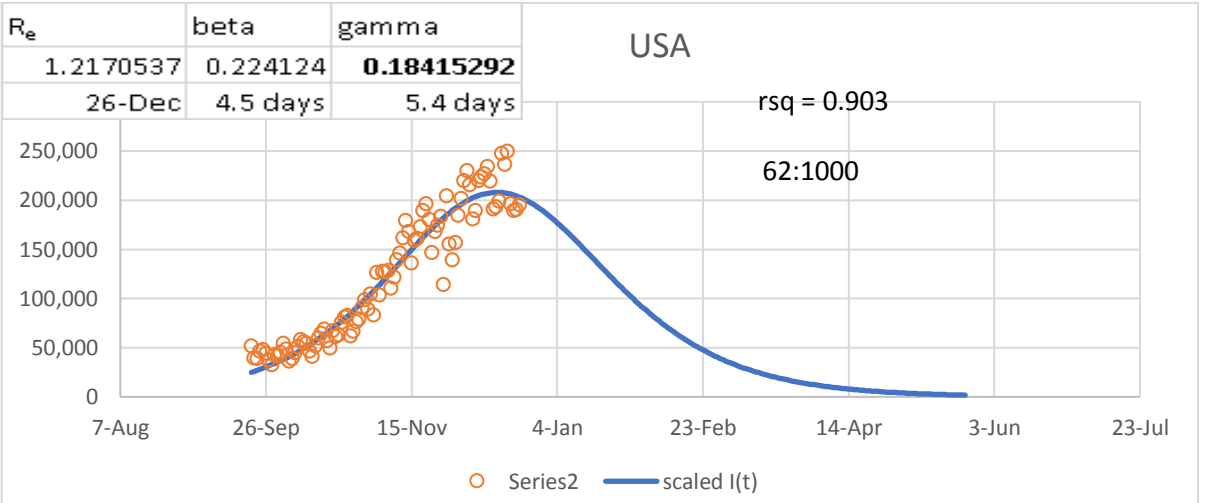
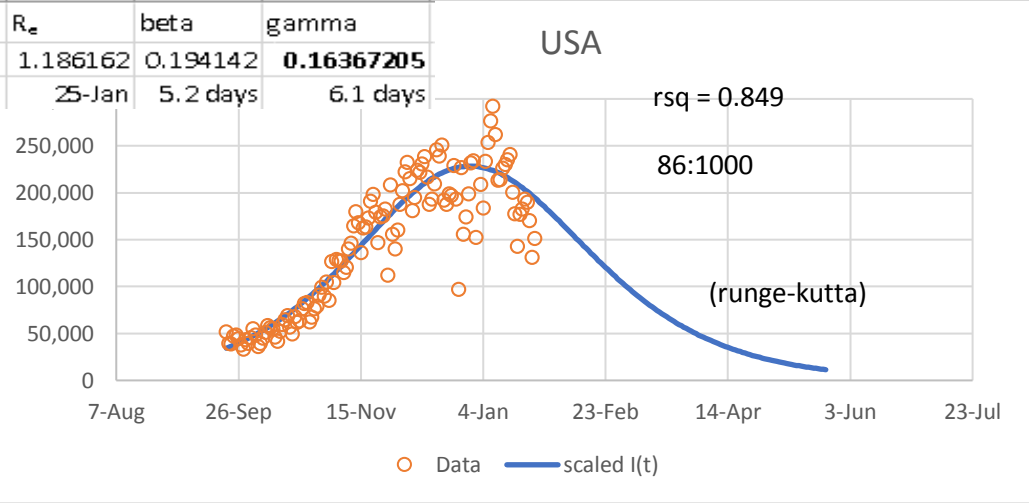
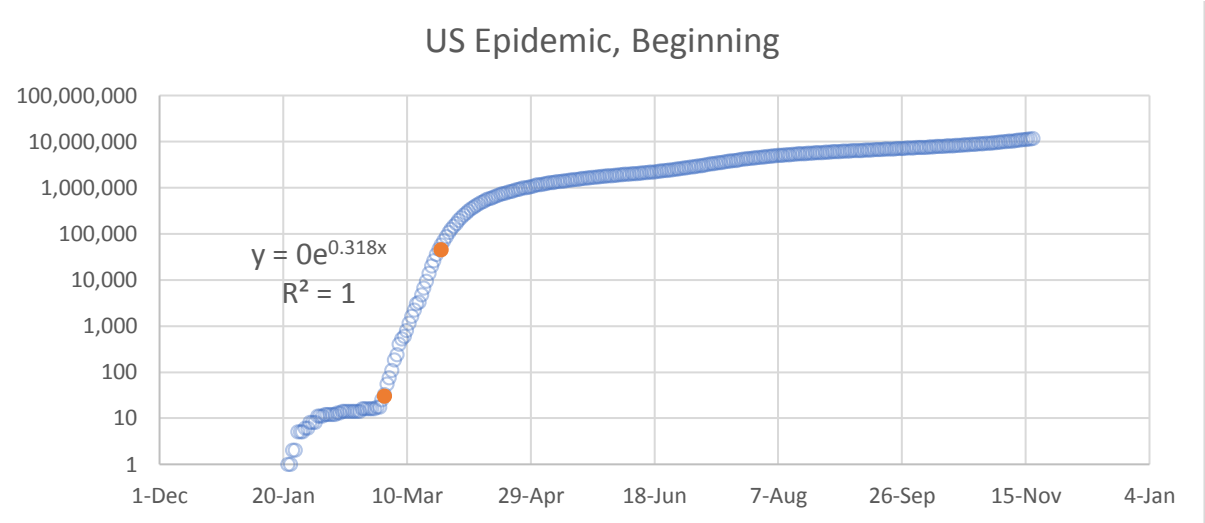
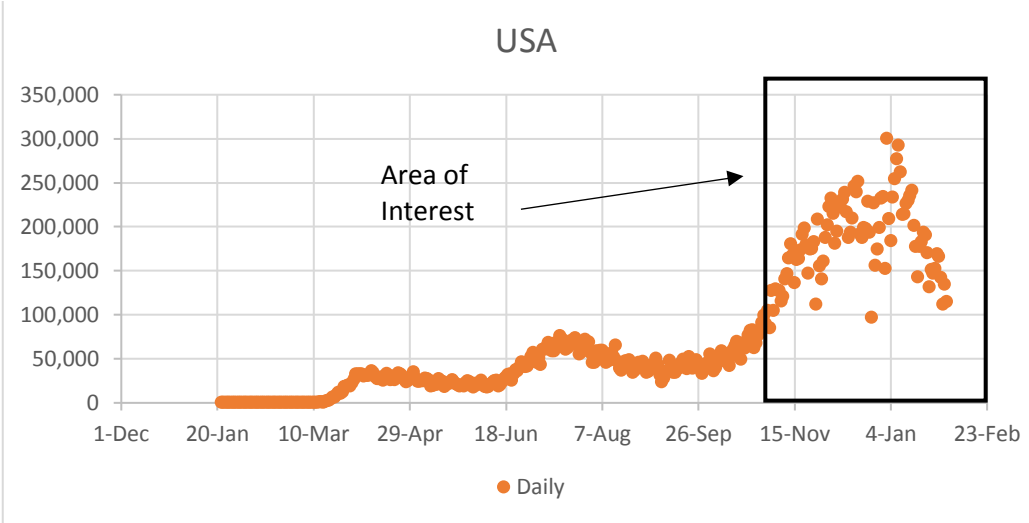
$\gamma = 0.286 \quad R > [1 - 1/R_o]/N = 3.04$

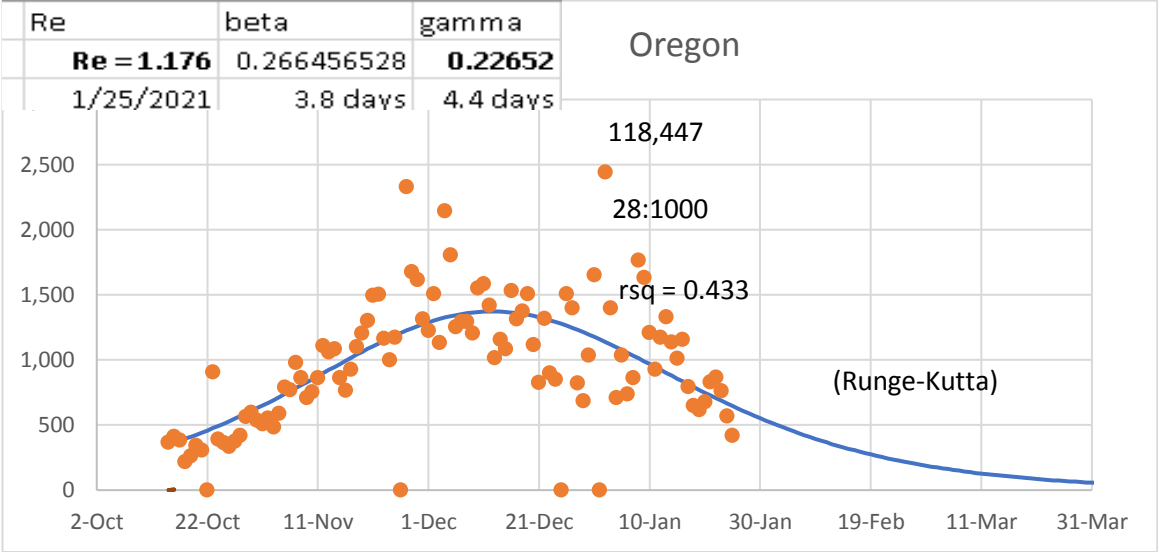
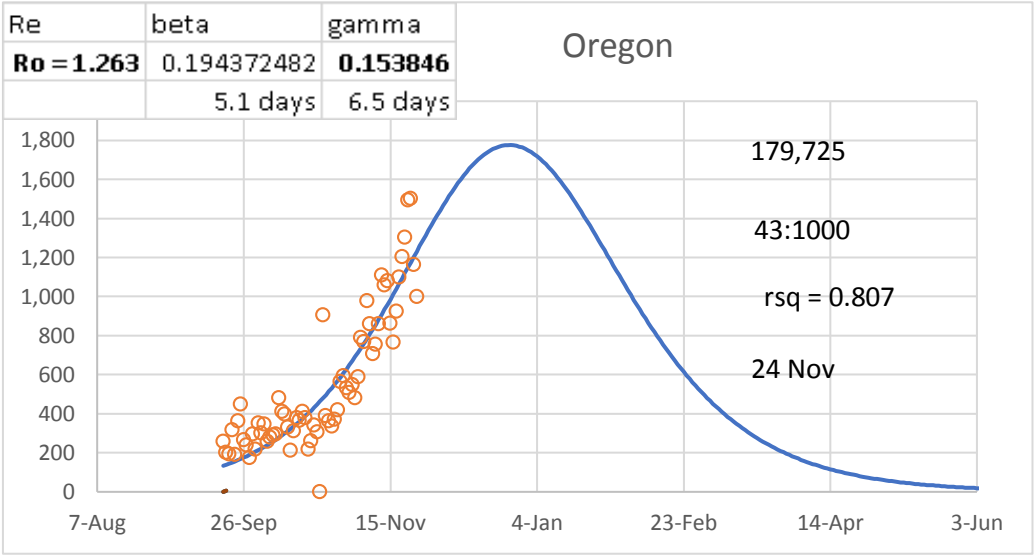
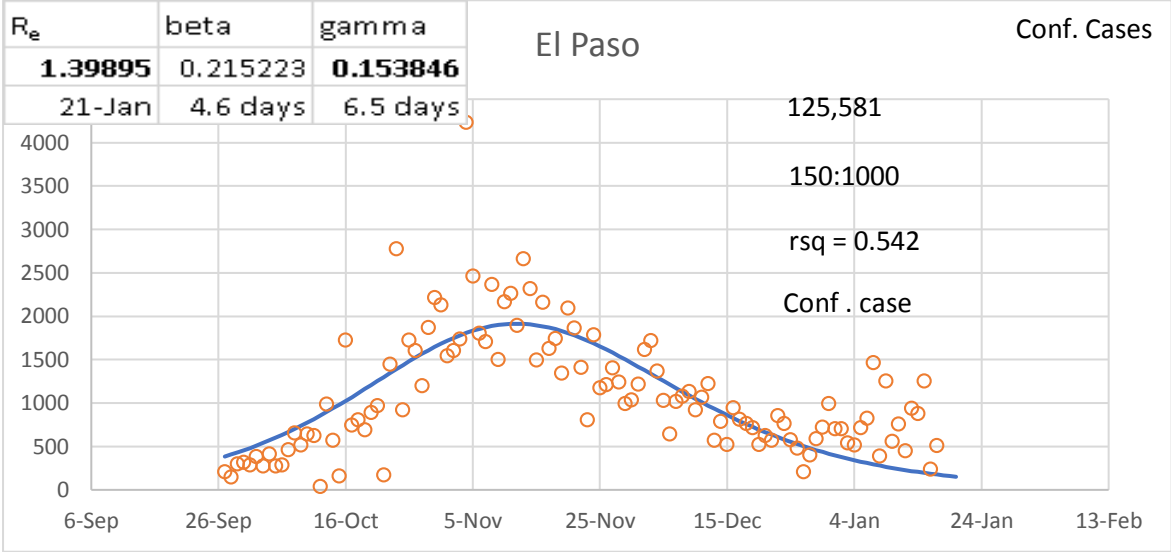
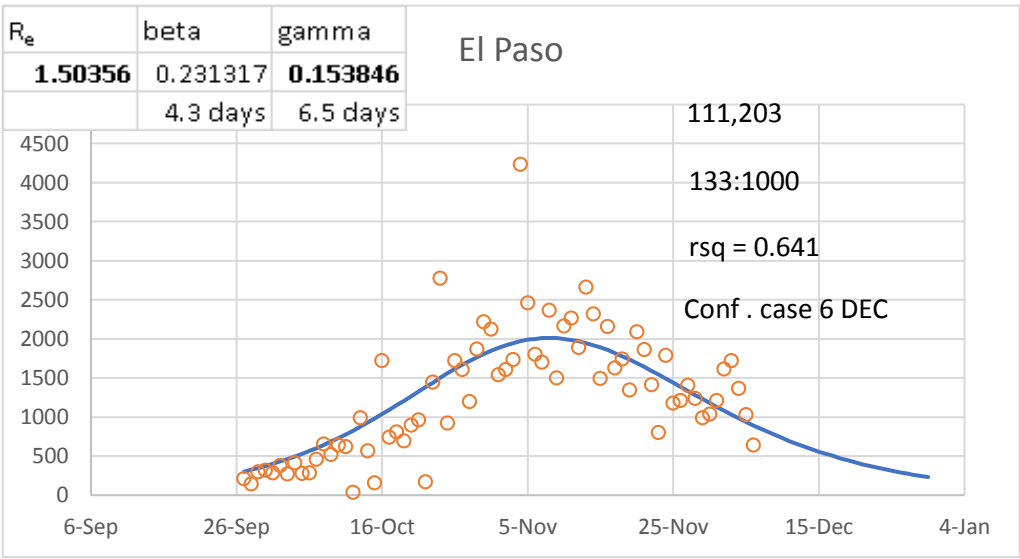
$R$  is recovered variable.

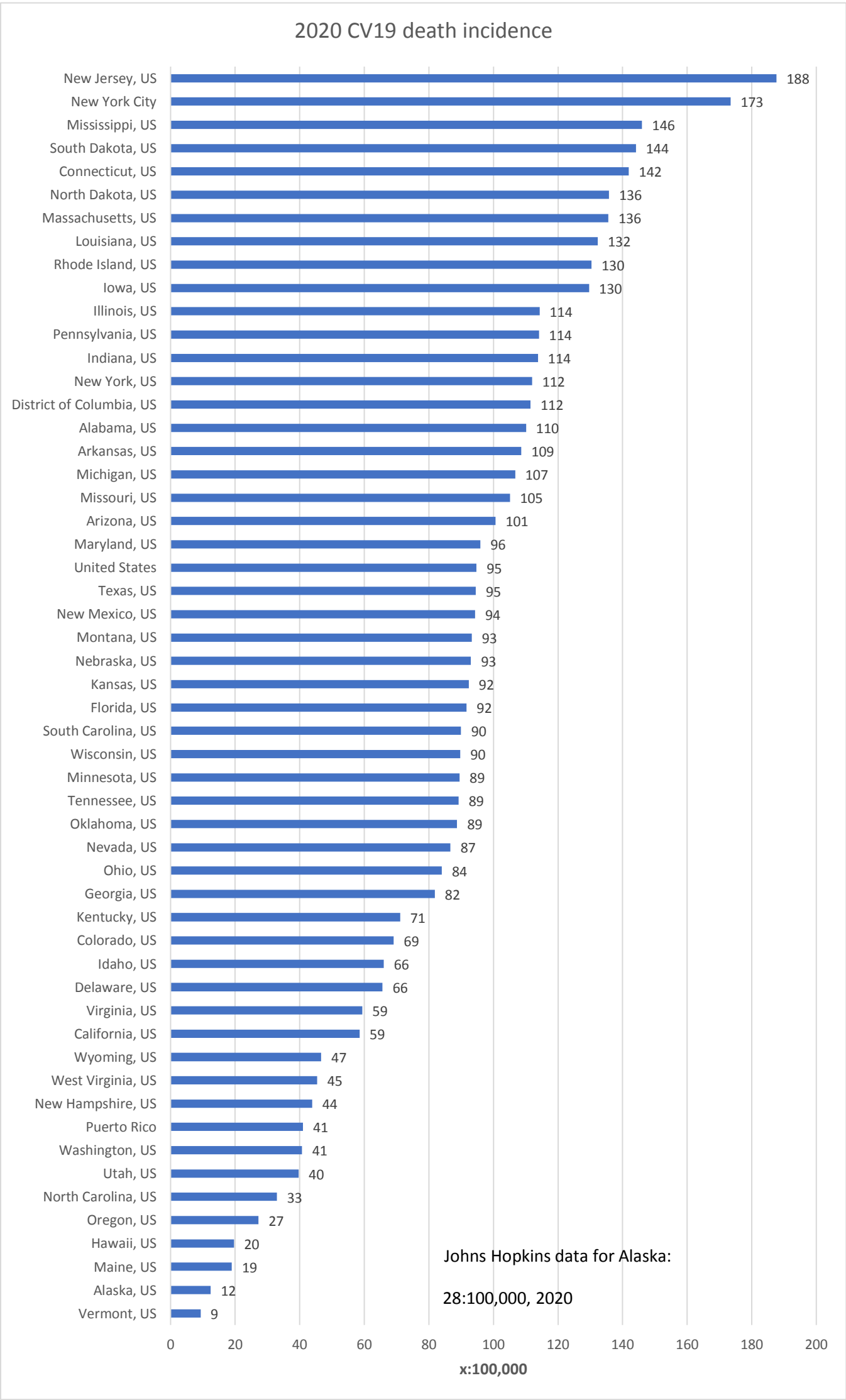
84%  $\leq$  Herd immunity

67%









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