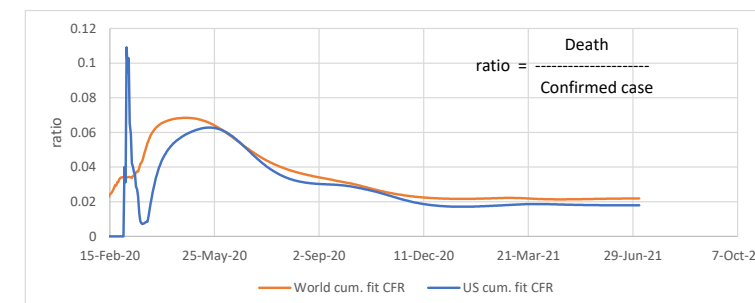
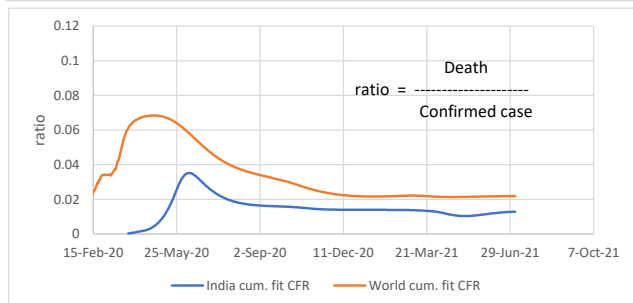
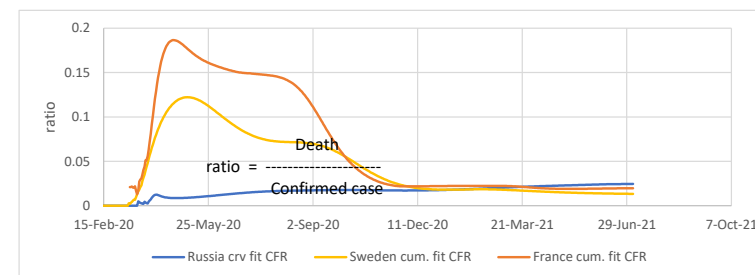
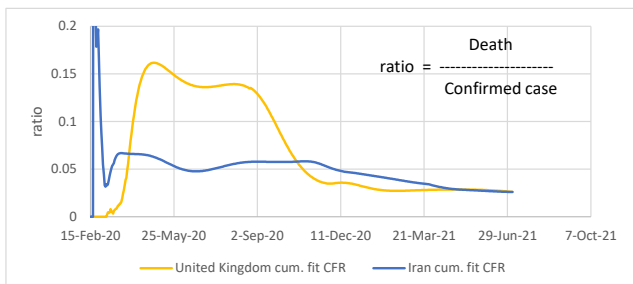
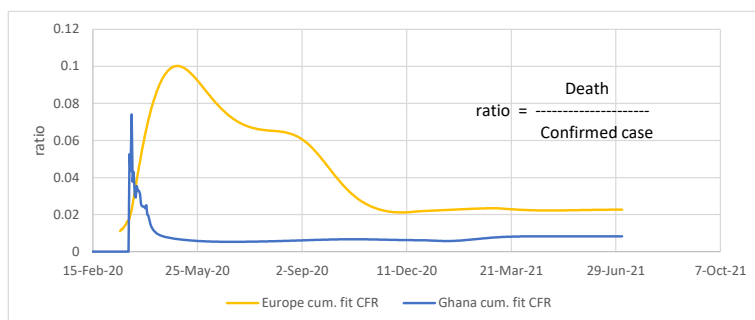
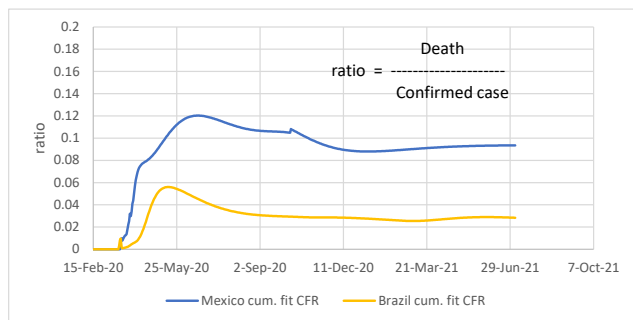
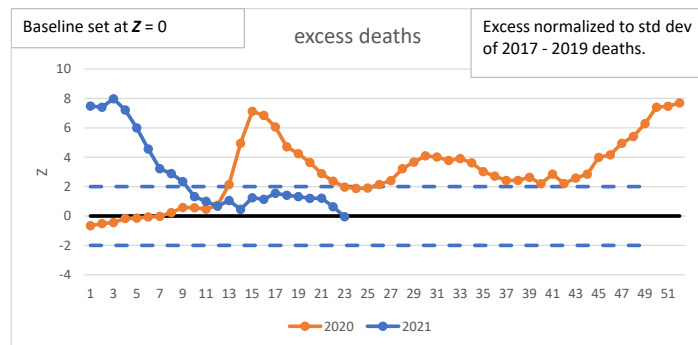


## Experimental page : ratios of curve fit deaths to curve fit confirmed cases (CFR)

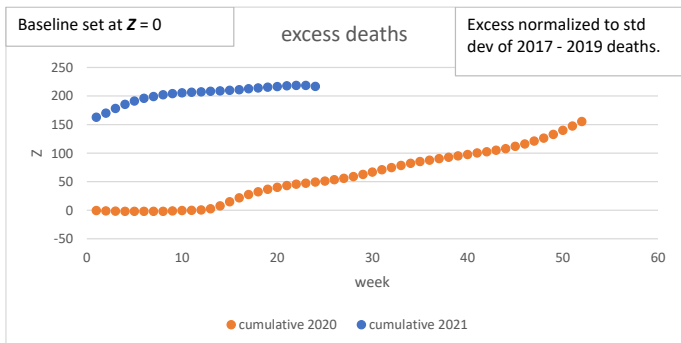


Excess deaths as a Z score:



Above based on Z score of three year standard deviation from 2017-2019. What follows is cumulative plot of same.

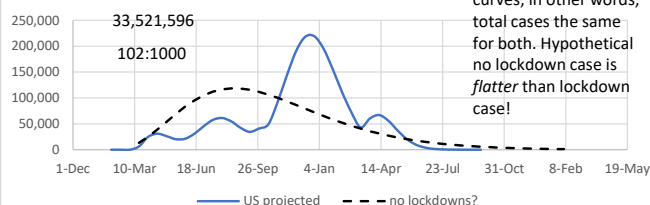
Data in recent weeks are incomplete. Only 60% of death records are submitted to NCHS within 10 days of the date of death, and completeness varies by jurisdiction. Data are not weighted and counts are likely



Confirmed Cases

US projected

Same area under both curves; in other words, total cases the same for both. Hypothetical no lockdown case is flatter than lockdown case!



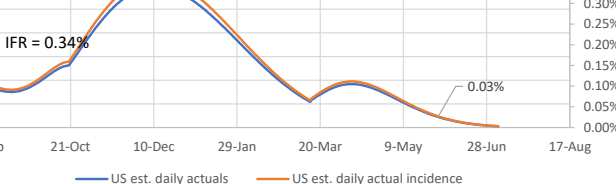
Count

US estimated actual daily infections

Incidence

IFR = 0.34%, weighted median Inc\_to\_Conf = CFR / IFR  
Est\_Inc = Avg\_Conf \* Inc\_to\_Conf

IFR = 0.34%



False Positives Demonstration

Use 0.04% as estimated daily incidence

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

99% accuracy of test

0.04% X 14 = 0.560%

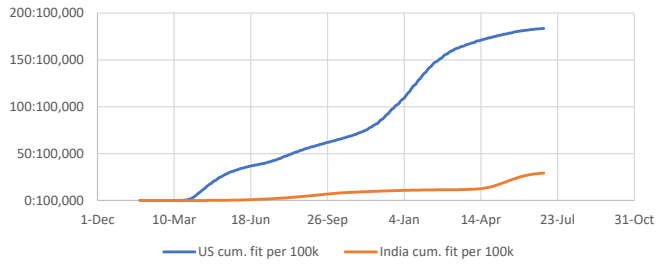
	Positive	Negative	
test pos	0.554%	0.994%	1.55%
test neg	0.006%	98.446%	98.45%
	0.560%	99.440%	100.00%

False pos. is more than half of total positives.

TRUE +	0.554%/1.55%	35.8%
FALSE +	0.994%/1.55%	64.2%
Total		100.00%

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.

US mortality vs. India



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	1016:100,000	905:100,000	-
Diff.	157:100,000	46:100,000	111:100,000

3 yr average
859:100,000

29% of All-Cause excess deaths are non-CV19

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

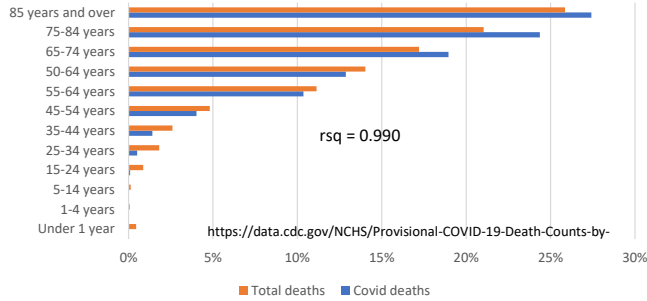
$$K = 0.318 \quad R_o : \quad R :$$

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

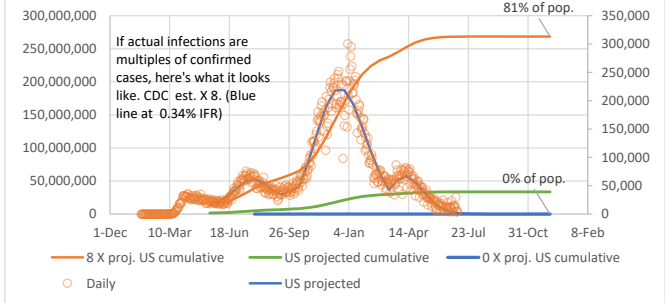
$$\text{gamma} = 0.286 \quad R > 1 - 1/R_o = 3.04 \quad 67\%$$

R is recovered variable.

Provisional COVID-19 Death Counts

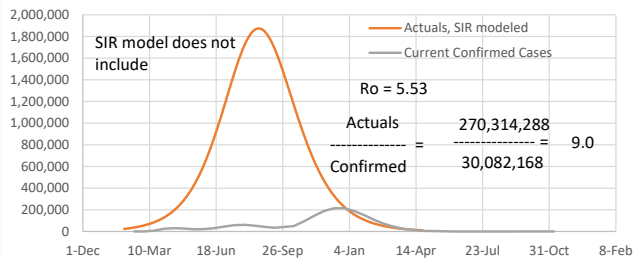


Proj. US cumulative

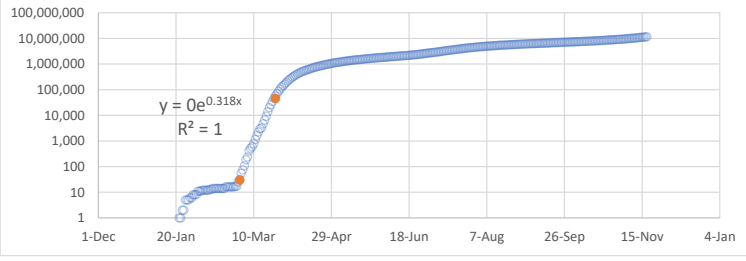


Here are some demonstrations of SIR model, using  $R_o$ , gamma, and beta

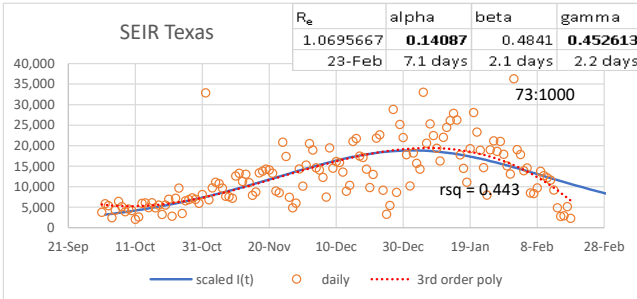
USA trends



US Epidemic, Beginning

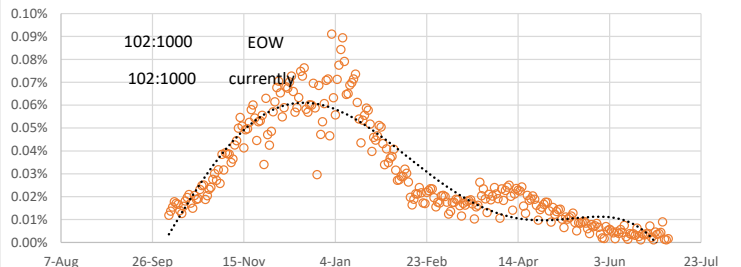


SEIR Texas



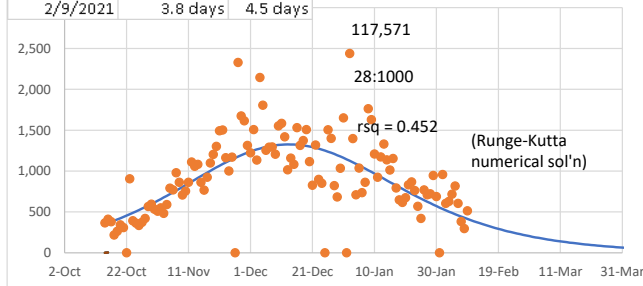
Confirmed Case

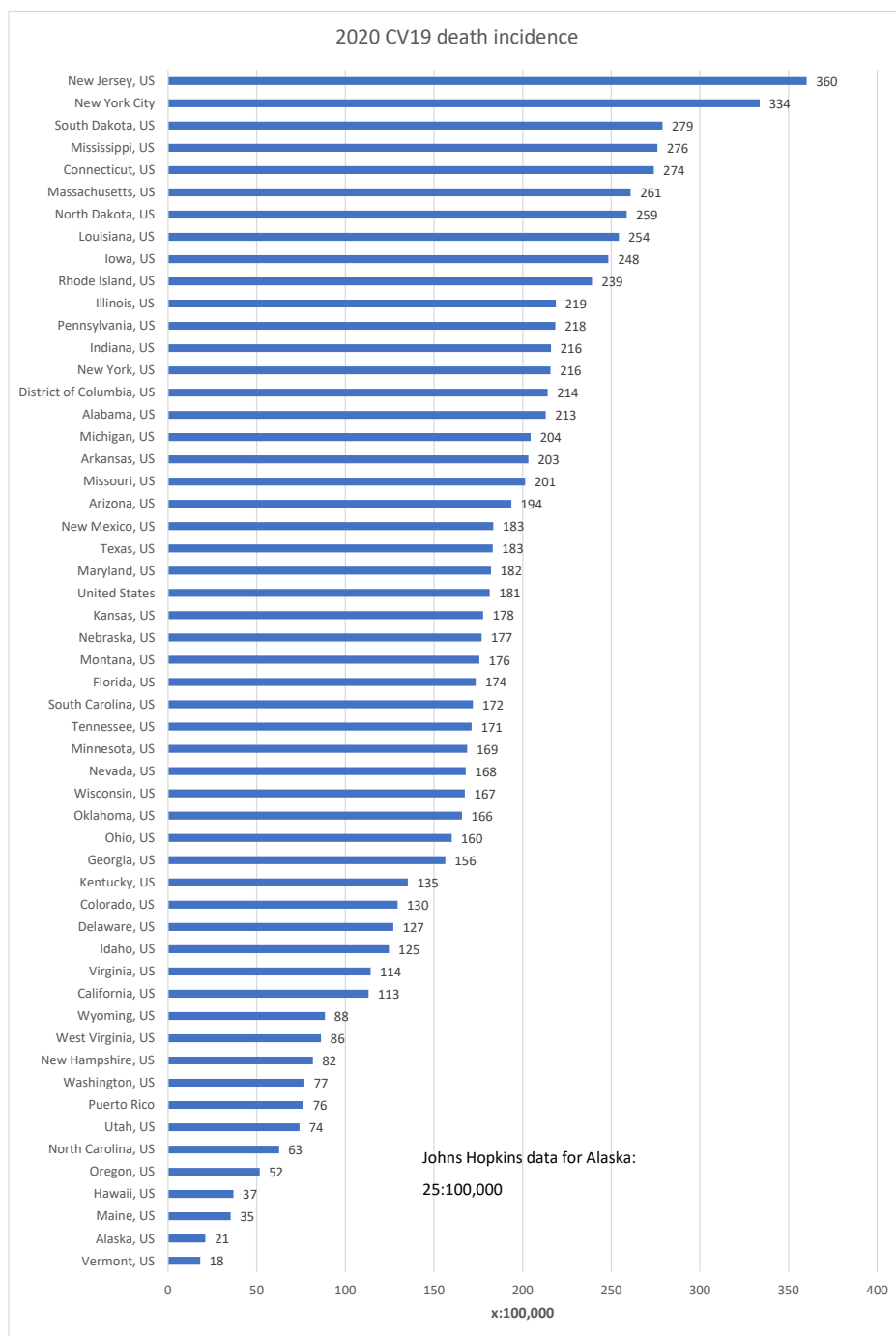
US daily per capita



Re	beta	gamma
Re = 1.172	0.262912956	0.224398
2/9/2021	3.8 days	4.5 days

Oregon





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