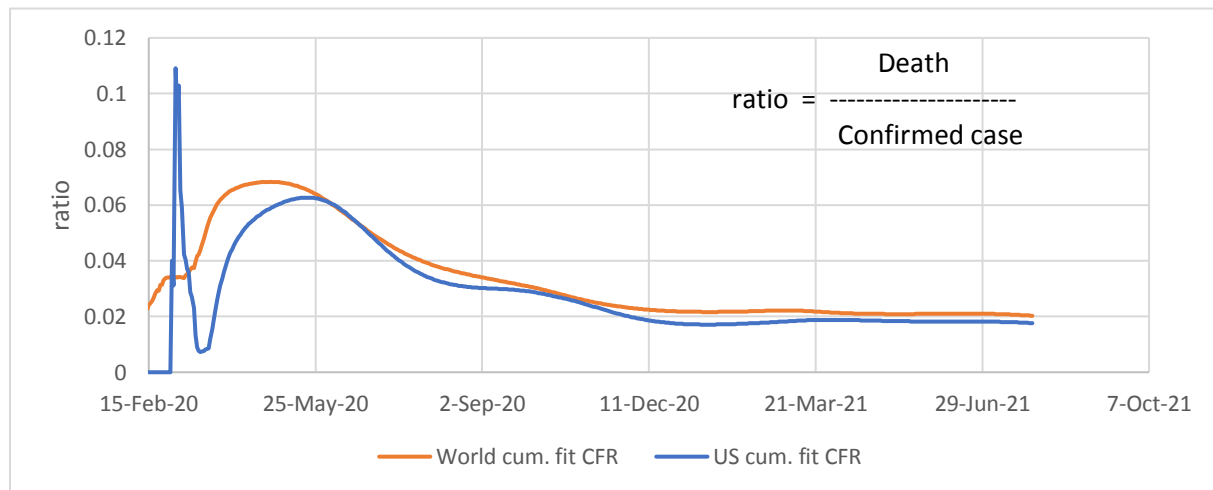
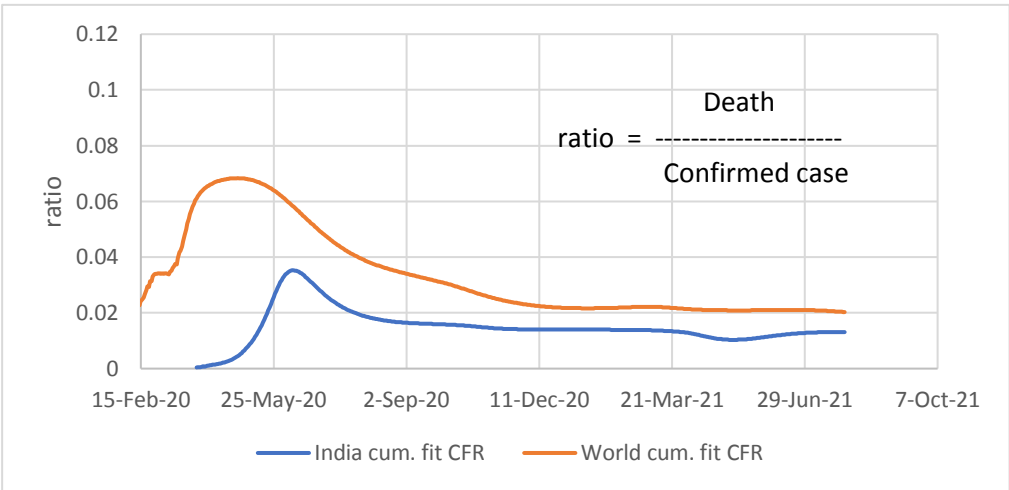
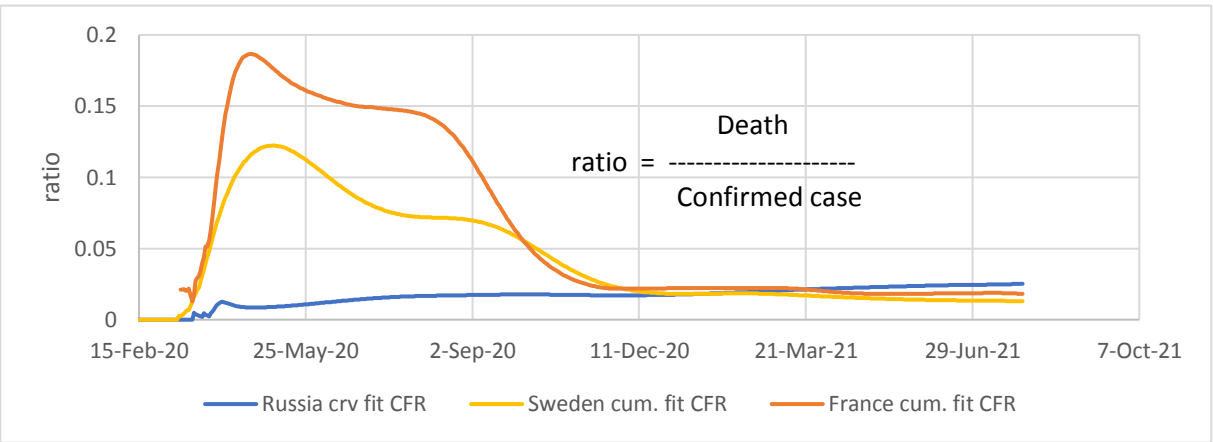
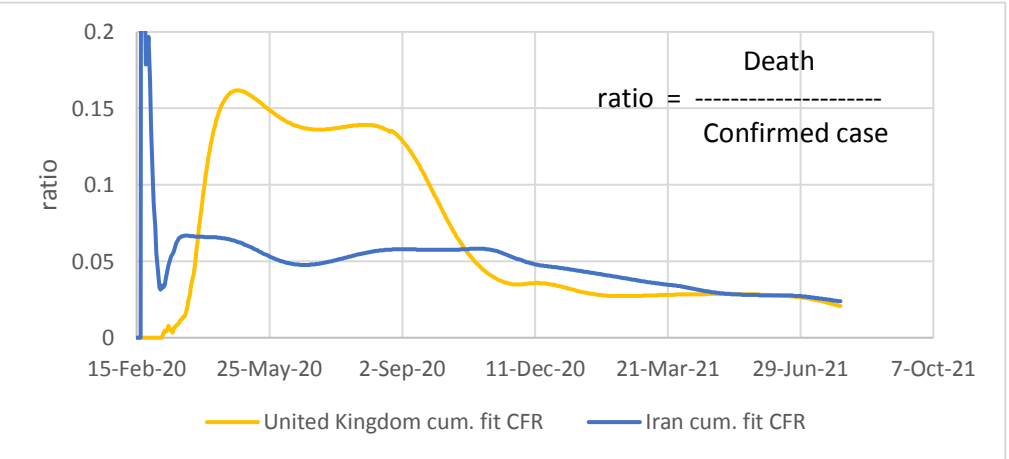
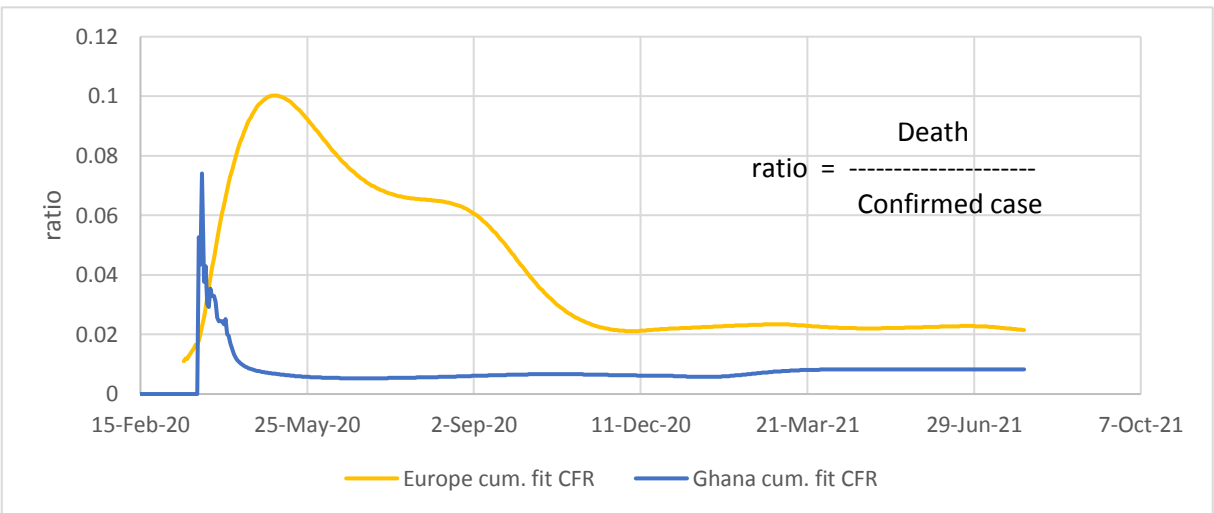
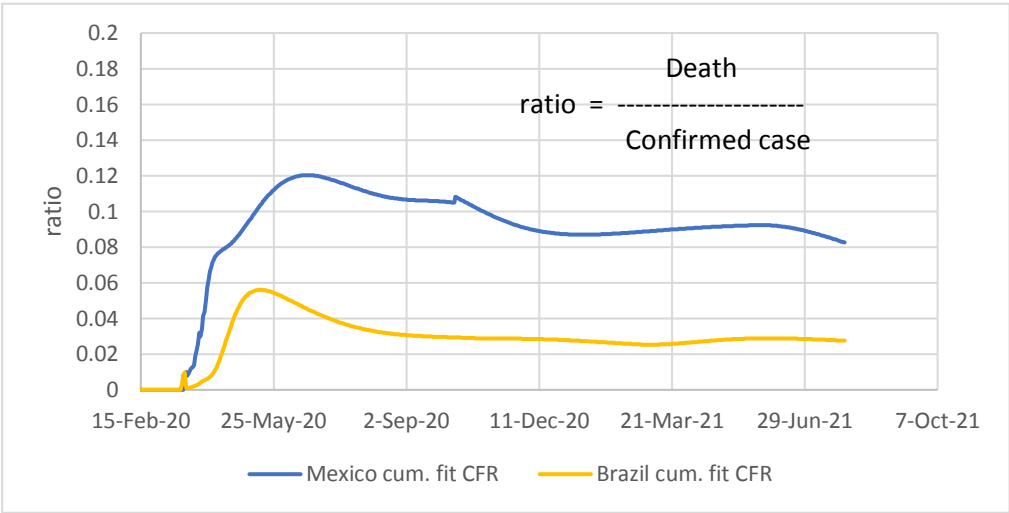
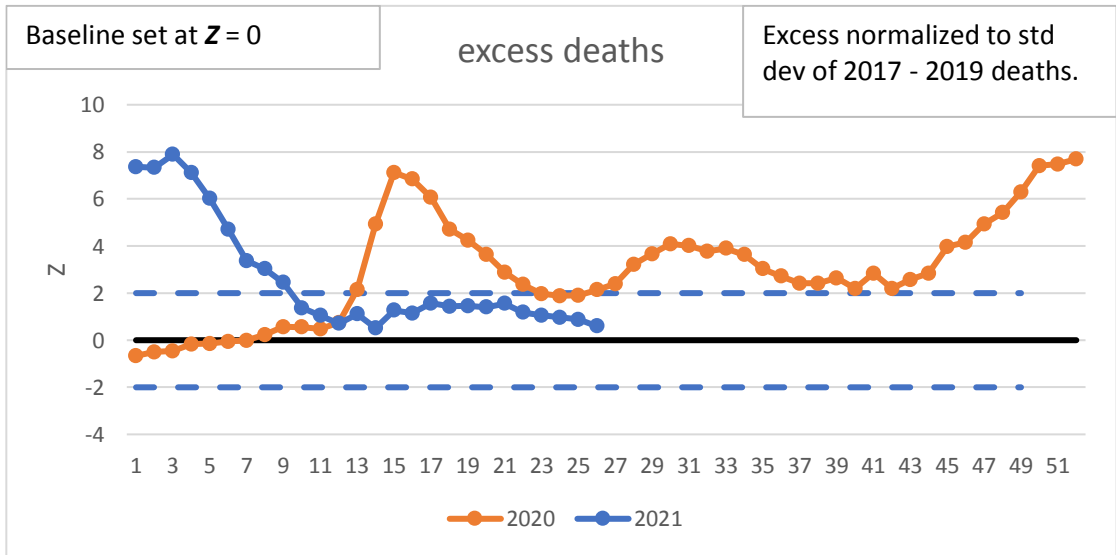


Experimental page : ratios of curve fit deaths to curve fit confirmed cases (CFR)

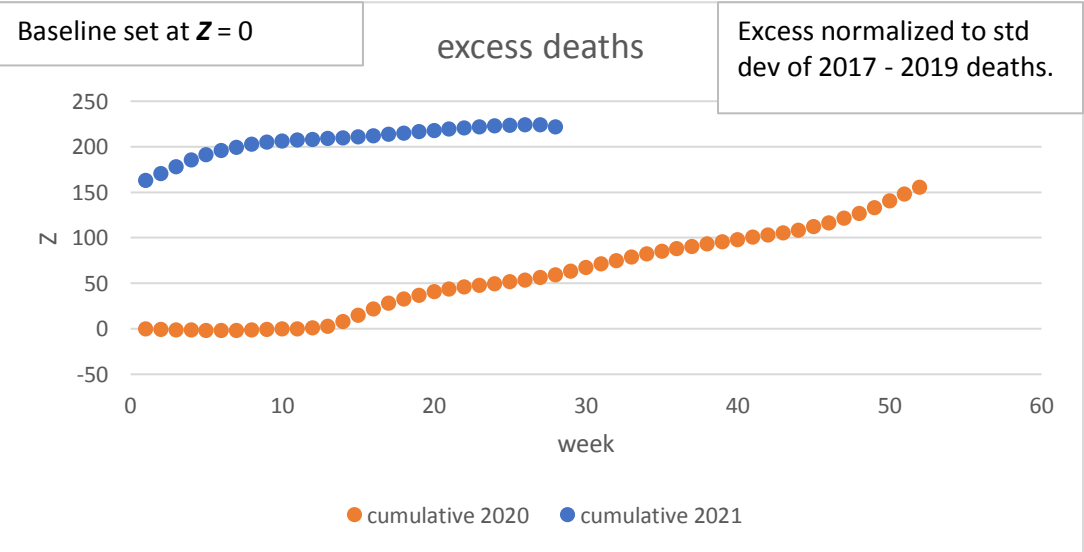


Excess deaths as a Z score:



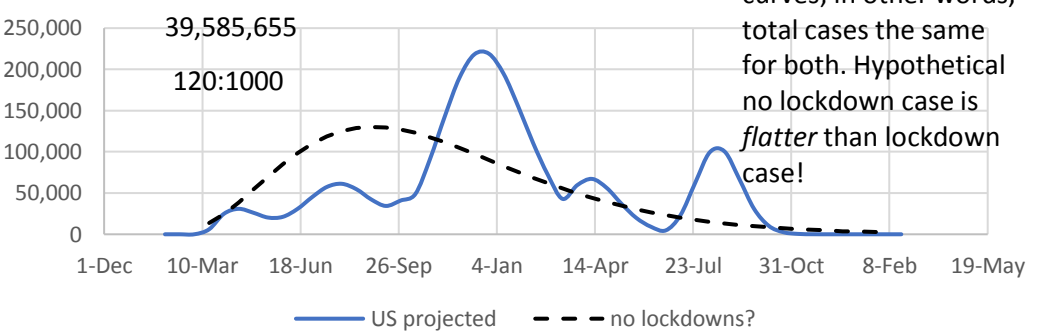
Above based on Z score of two year standard deviation from 2017-2019. What follows is cumulative plot of same.

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

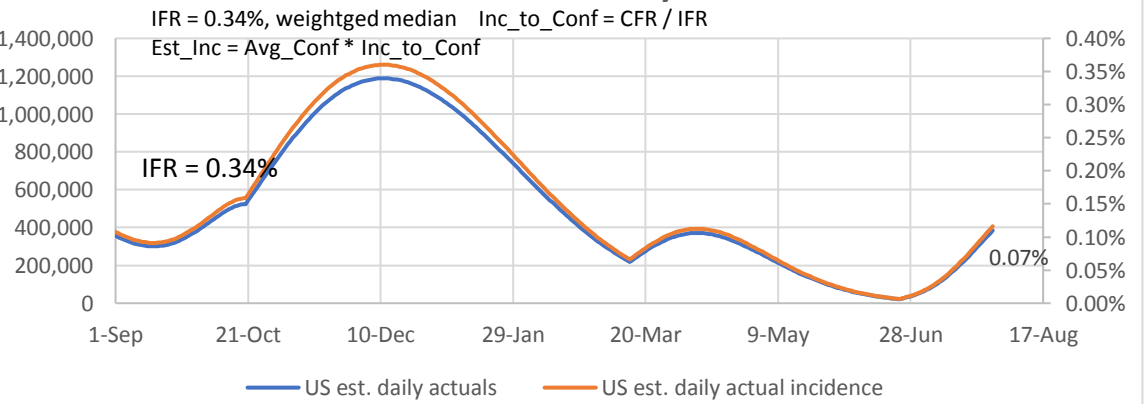
US projected



Count

US estimated actual daily infections

Incidence



False Positives Demonstration

Use 0.07% as estimated daily incidence

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

99% accuracy of test

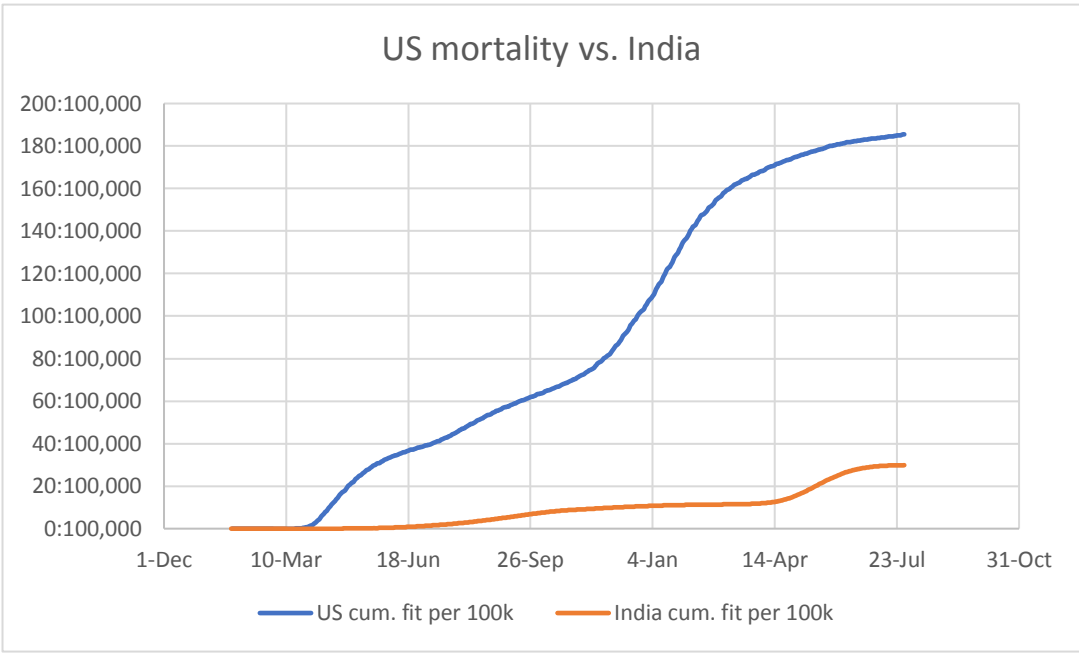
0.07% X 14 = 0.980%

	Positive	Negative	
test pos	0.970%	0.990%	1.96%
test neg	0.010%	98.030%	98.04%
	0.980%	99.020%	100.00%

False pos. is more than half of total positives.

TRUE +	0.97%/1.96%	49.5%
FALSE +	0.99%/1.96%	50.5%
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.



USA Excess Deaths, 2020 (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	29% of All-Cause excess deaths are non-CV19 https://data.cdc.gov/NCHS/Excess-Deaths-Associated-with-COVID-19/xkkf-xrst/data
859:100,000	

USA Excess Deaths to date (from CDC data):

	28 weeks	All Cause	All Cause, excl. CV19	CV19
3 yr average before 2020		455:100,000	455:100,000	-
2021		539:100,000	467:100,000	-
Diff.		84:100,000	12:100,000	72:100,000

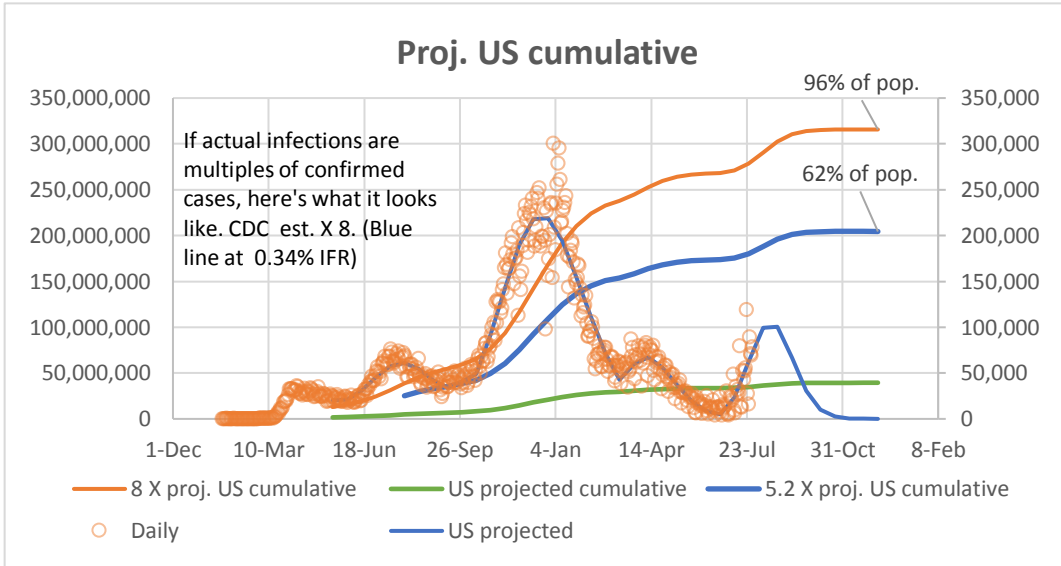
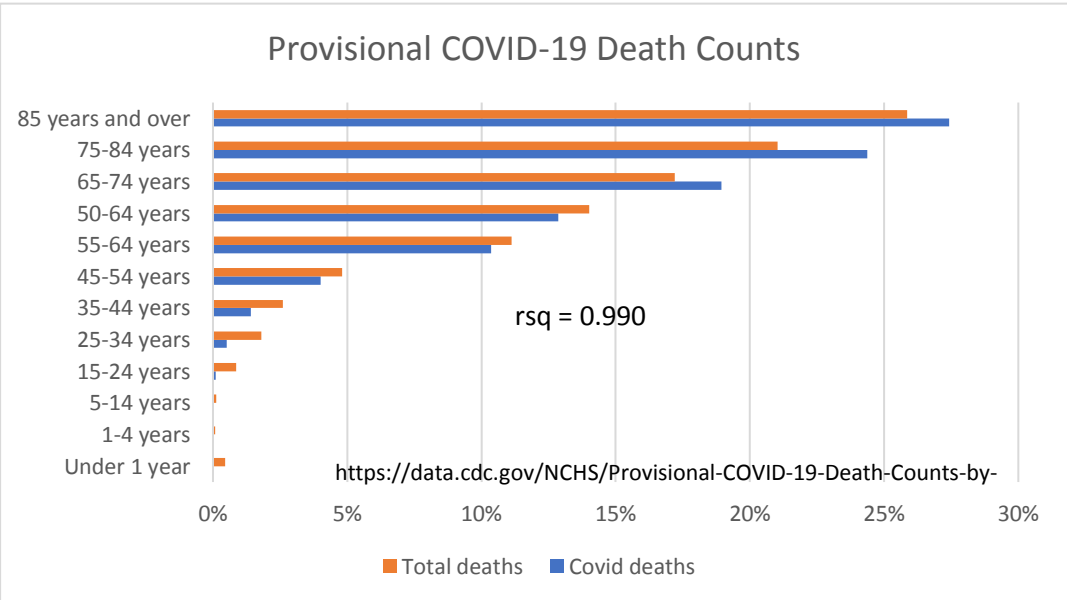
3 yr average	14% of All-Cause excess deaths are non-CV19 https://data.cdc.gov/NCHS/Excess-Deaths-Associated-with-COVID-19/xkkf-xrst/data
859:100,000	

$K = 0.318$ $R_o :$ $R :$

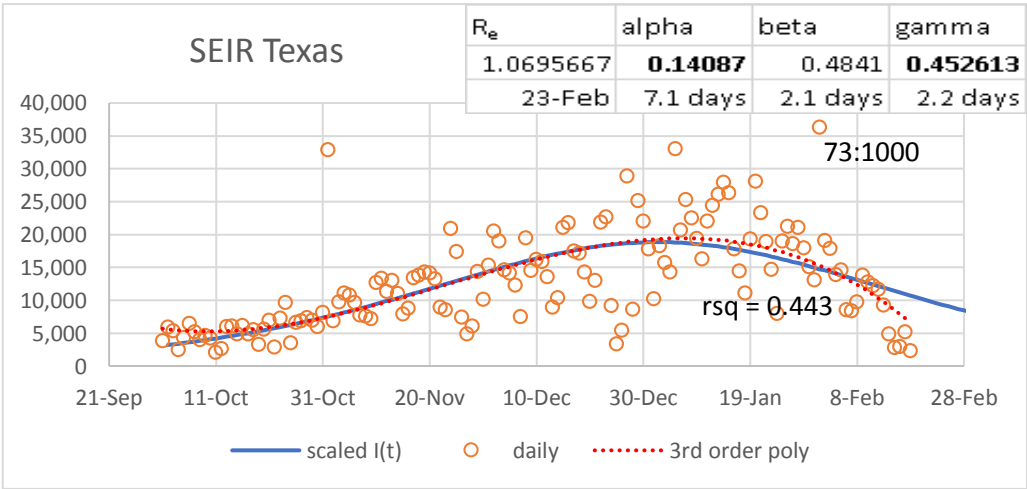
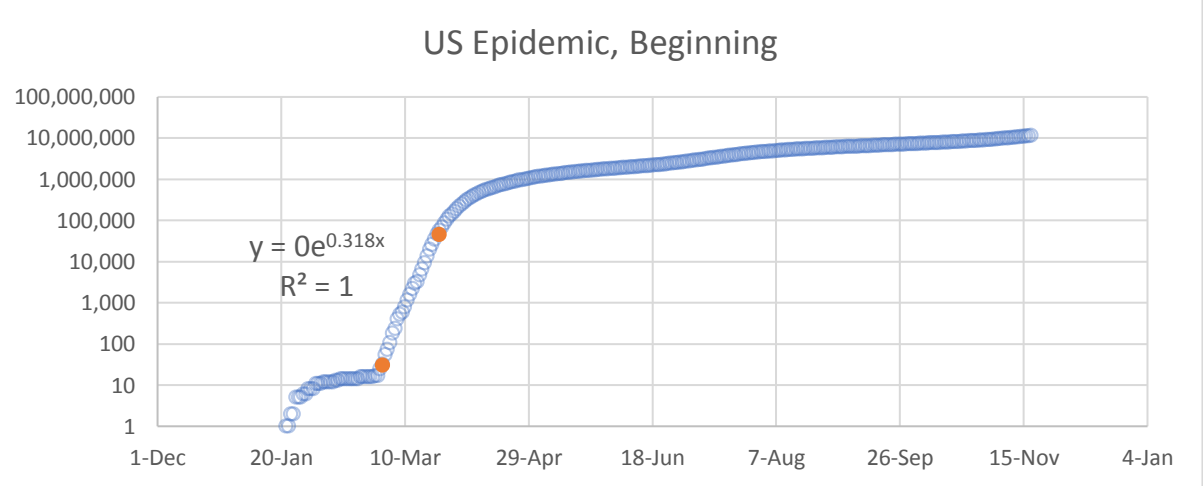
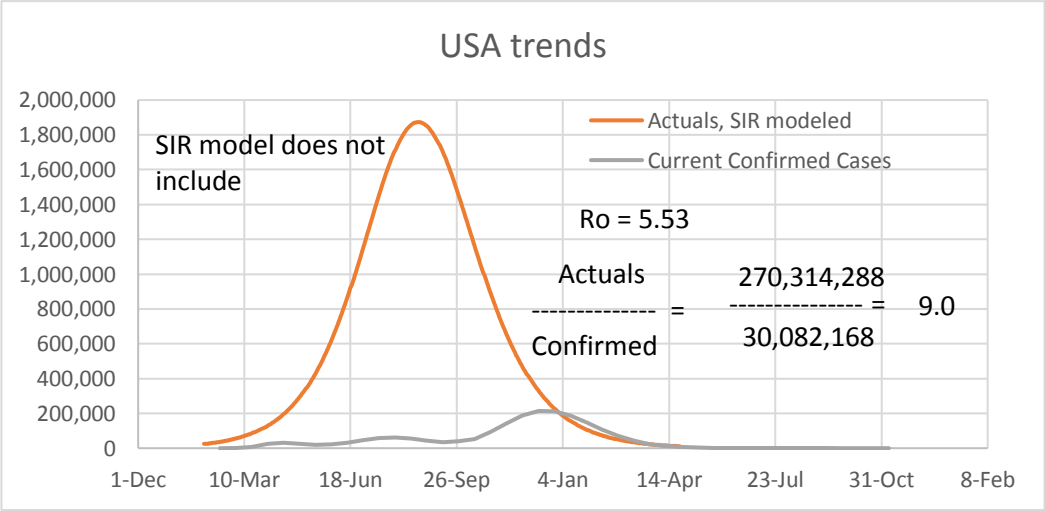
$\gamma = 0.171$ $R_o = \exp(K/\gamma) = 6.42$ 84%

$\gamma = 0.286$ $R > 1 - 1/R_o = 3.04$ 67% \leq Herd immunity

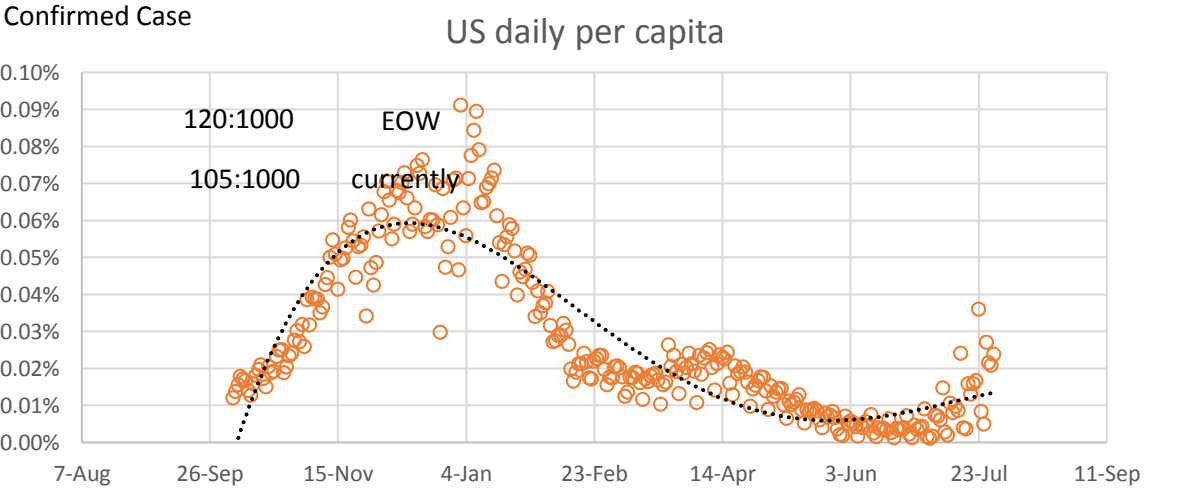
R is recovered variable.



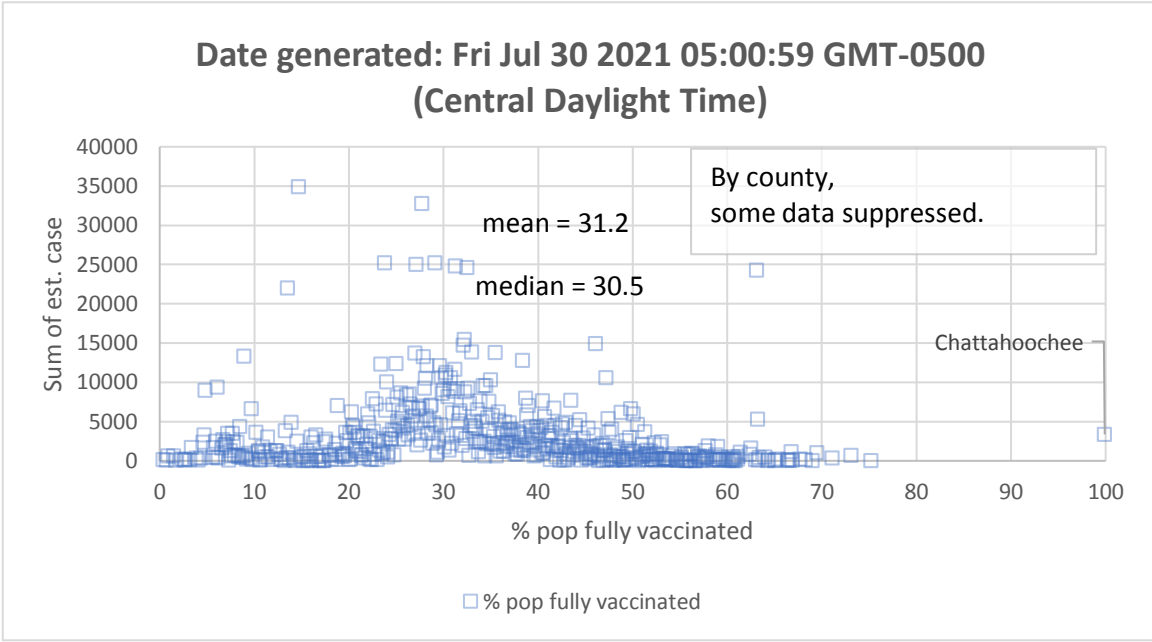
Here are some demonstrations of SIR model, using R_e , gamma, and beta



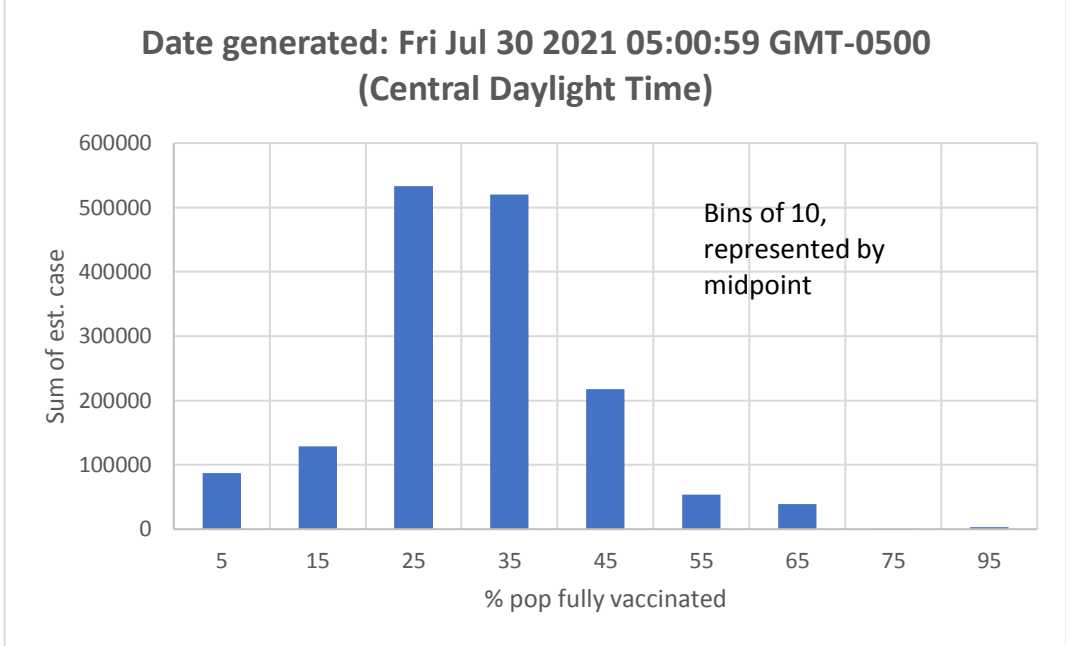
R_e	alpha	beta	gamma
1.0695667	0.14087	0.4841	0.452613
23-Feb	7.1 days	2.1 days	2.2 days



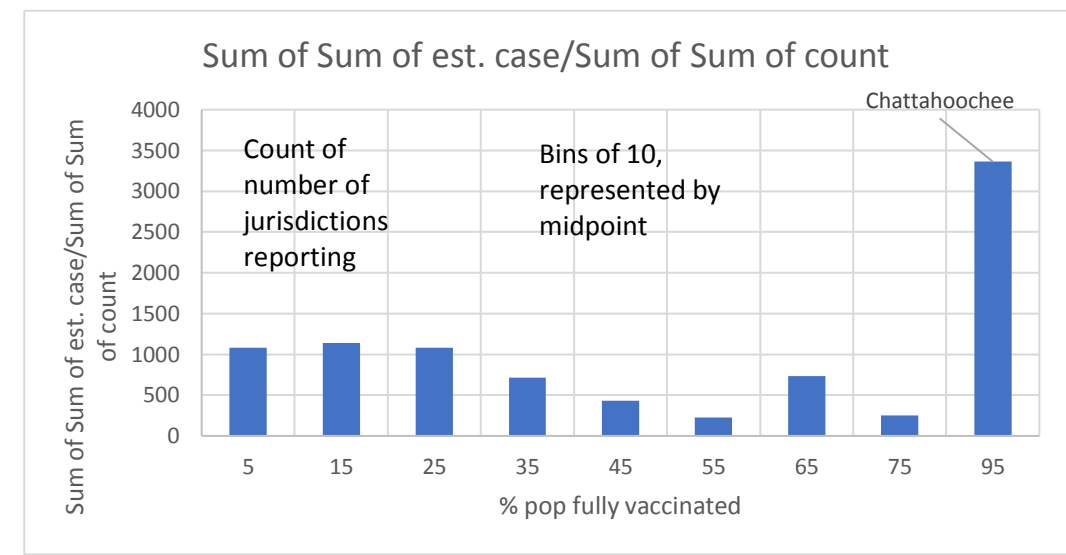
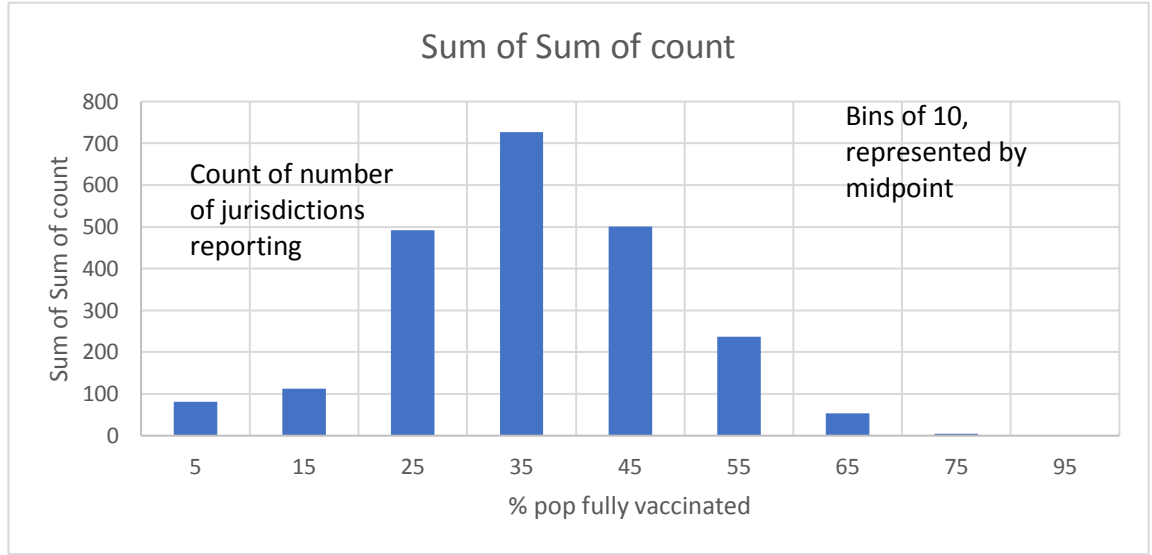
CDC data on week indicated new cases by % fully vaccinated.



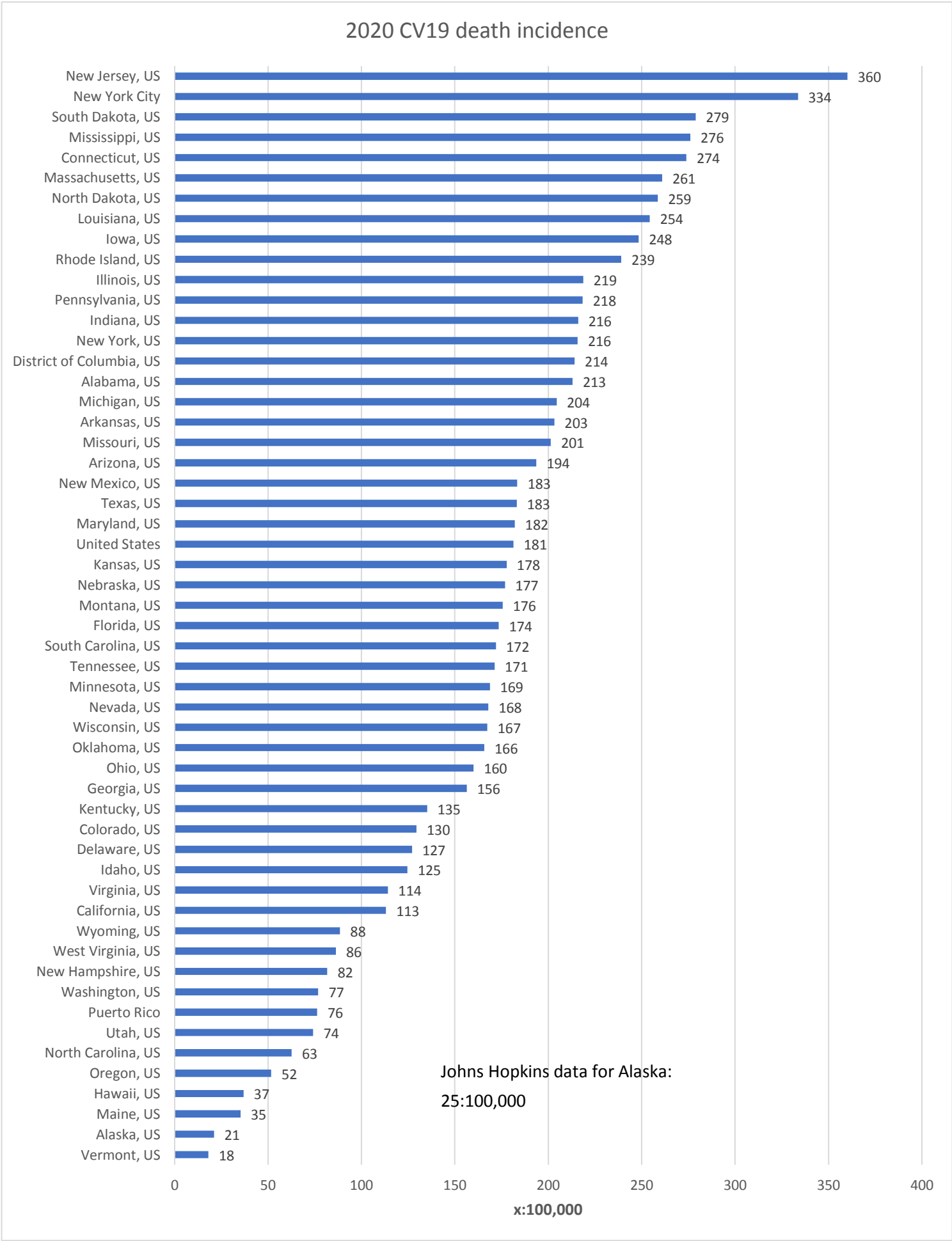
Data within bins:



However, count of % pop fully vaccinated sparse at extremes, so adjust for jurisdiction count:



<https://covid.cdc.gov/covid-data-tracker/#vaccination-case-rate>



<https://data.cdc.gov/NCHS/Weekly-Counts-of-Deaths-by-State-and-Select-Causes/muzy-jte6/data>