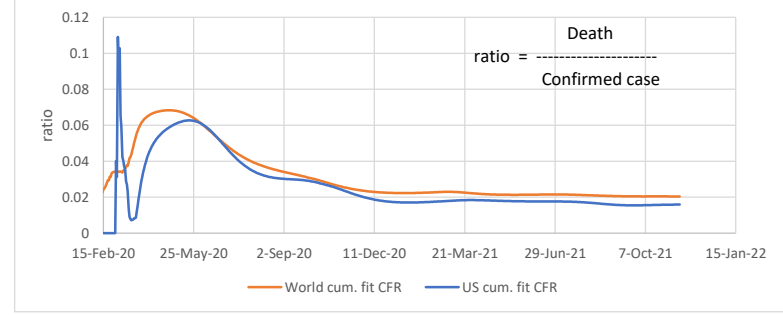
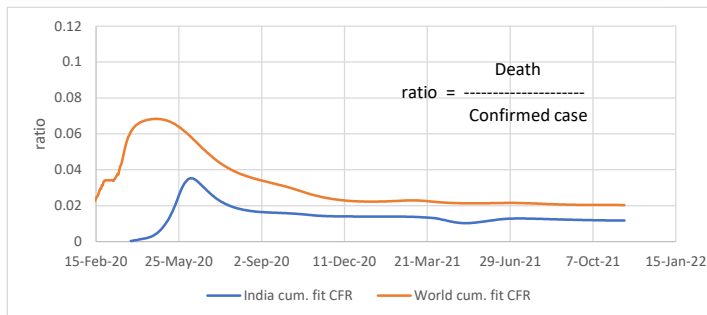
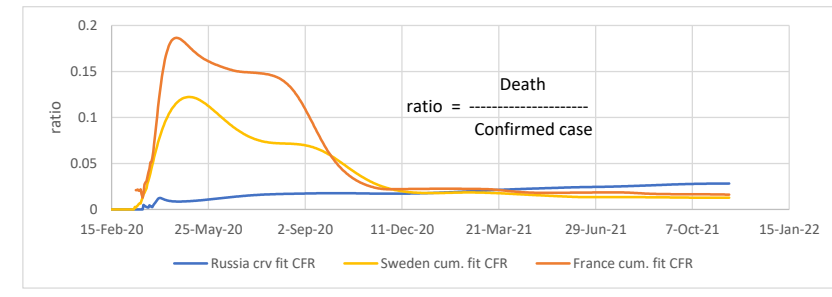
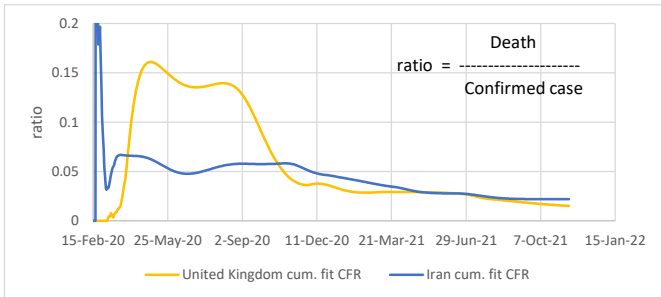
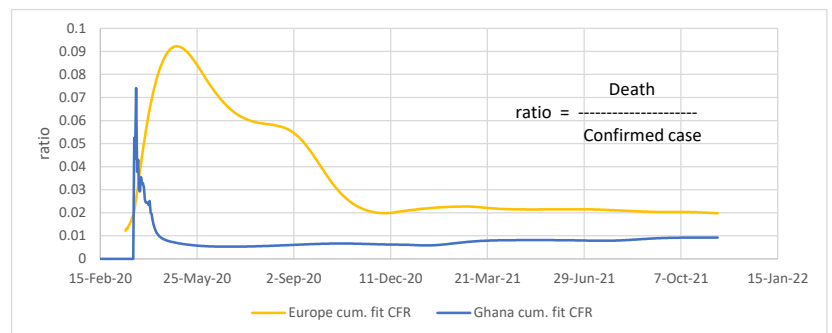
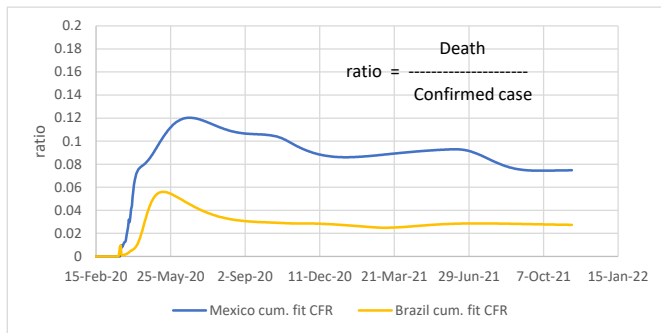
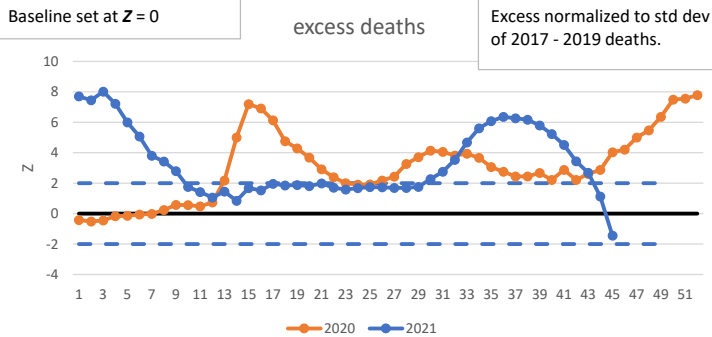


## Experimental page : ratios of curve fit deaths to curve fit confirmed cases (CFR)

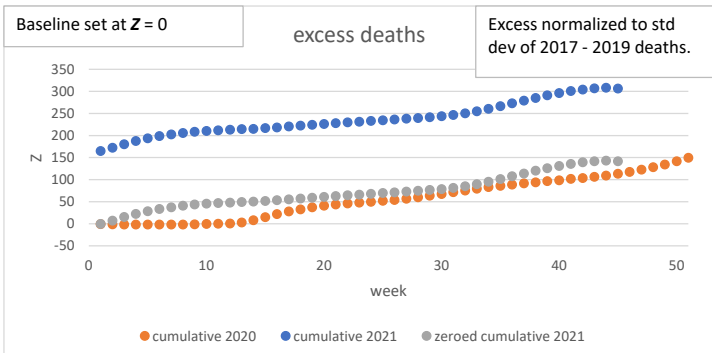


### Excess deaths as a Z score:



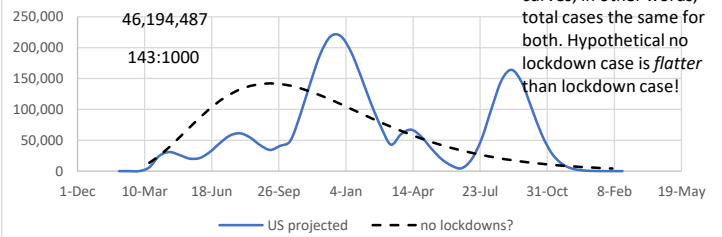
Above based on Z score of two standard deviation from 2017-2019. What follows is cumulative plot of same.

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

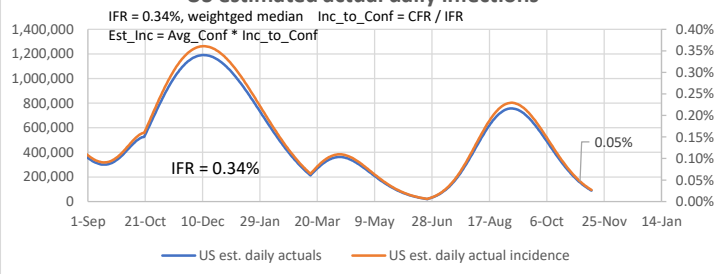


Same area under both curves; in other words, total cases the same for both. Hypothetical no lockdown case is flatter than lockdown case!

### Count

### US estimated actual daily infections

### Incidence



### False Positives Demonstration

Use 0.04% as estimated daily incidence

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

95% accuracy of test

	Positive	Negative	
test pos	0.532%	4.972%	5.50%
test neg	0.028%	94.468%	94.50%
	0.560%	99.440%	100.00%

False pos. is more than half of total positives.

TRUE + 0.532%/5.5% 9.7%

FALSE + 4.972%/5.5% 90.3%

Total 100.00%

0.04% X 14 = 0.560%

### Sensitivity

Probability of detection

where condition exists

True + / (True + & False -)

95%

### Specificity

Probability of not detecting where

condition doesn't exist

True - / (True - & False +)

95%

Example only; sensitivity and specificity not necessarily equal.

# USA Excess Deaths, 2020 (from CDC data):

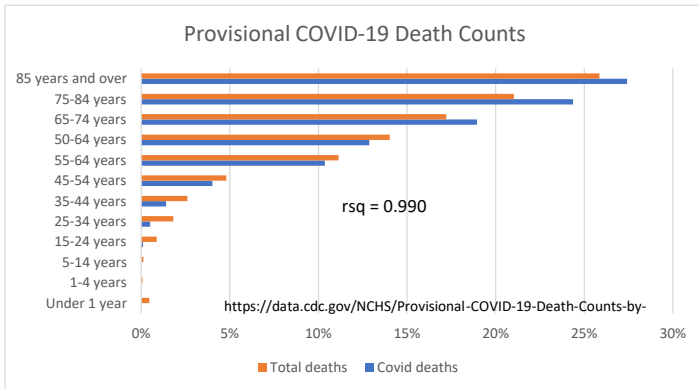
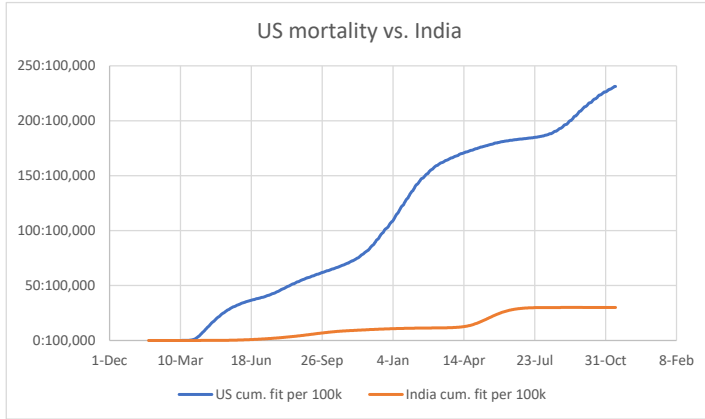
Annualized on 52 weeks			
	All Cause	All Cause, excl. CV19	CV19
3 yr average before 2020	859:100,000	859:100,000	-
2020	1016:100,000	905:100,000	-
Diff.	157:100,000	46:100,000	111:100,000

3 yr average	859:100,000
29% of All-Cause excess deaths are non-CV19	
<a href="https://data.cdc.gov/NCHS/Excess-Deaths-Associated-with-COVID-19/xkxf-xrst/data">https://data.cdc.gov/NCHS/Excess-Deaths-Associated-with-COVID-19/xkxf-xrst/data</a>	

# USA Excess Deaths to date (2021, from CDC data):

45 weeks	All Cause	All Cause, excl. CV19	CV19
3 yr average before 2020	741:100,000	741:100,000	-
2021	889:100,000	766:100,000	-
Diff.	148:100,000	25:100,000	123:100,000

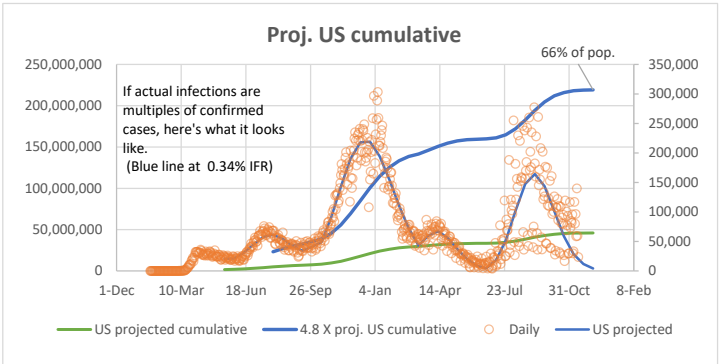
3 yr average	859:100,000
17% of All-Cause excess deaths are non-CV19	
<a href="https://data.cdc.gov/NCHS/Excess-Deaths-Associated-with-COVID-19/xkxf-xrst/data">https://data.cdc.gov/NCHS/Excess-Deaths-Associated-with-COVID-19/xkxf-xrst/data</a>	



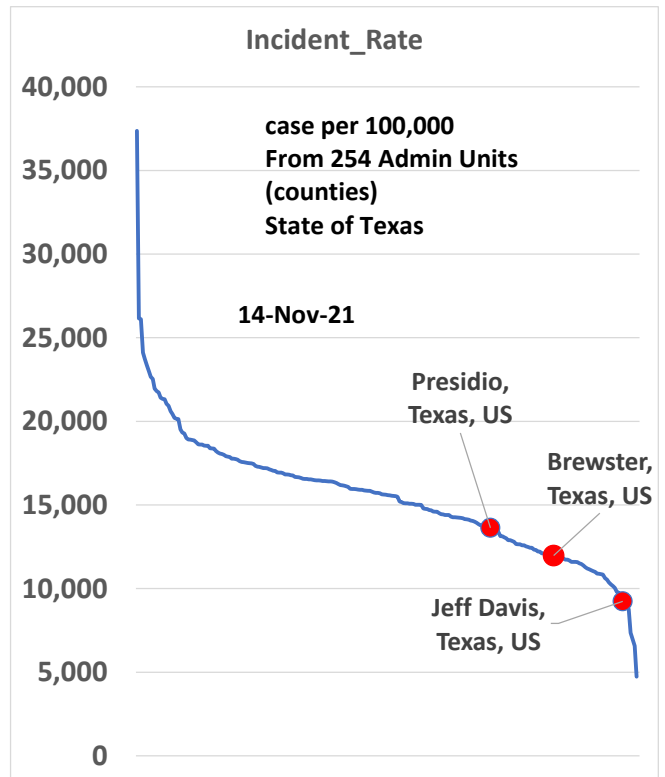
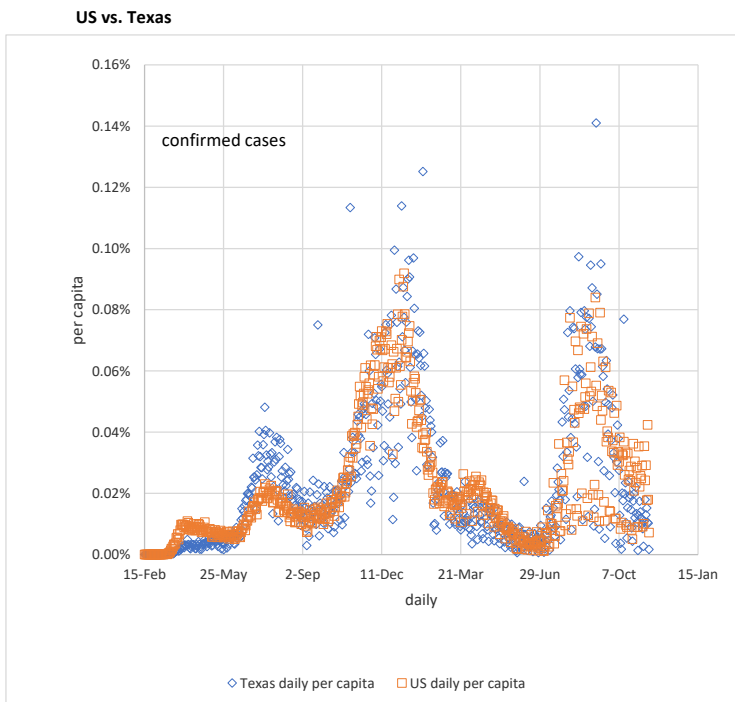
$$K = 0.318 \quad R_o = \exp(K/\gamma) = 6.42 \quad R = 84\% \leq \text{Herd immunity}$$

$$\gamma = 0.171 \quad R > 1 - 1/R_o = 3.04 \quad 67\%$$

$R$  is recovered variable.



# Tri-Counties in Texas:





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