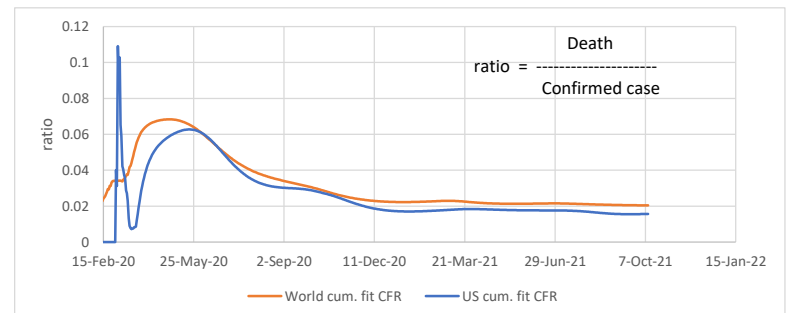
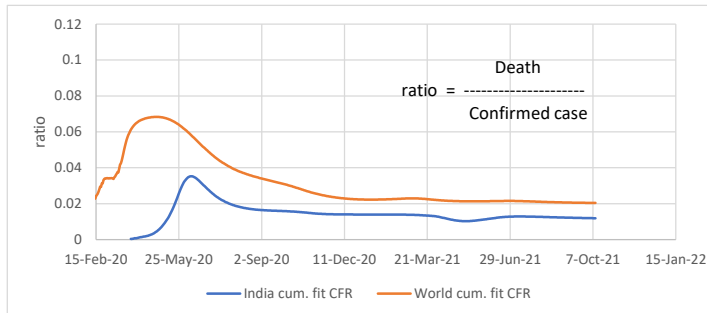
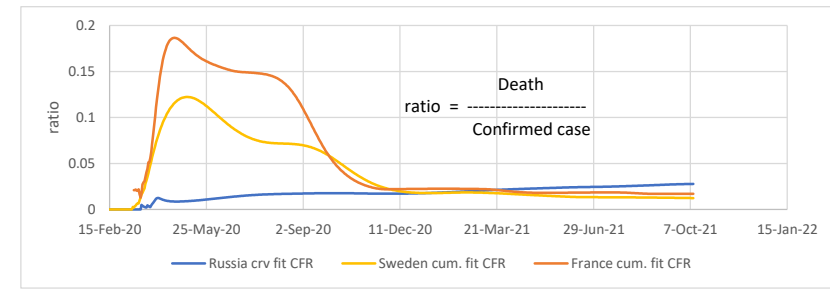
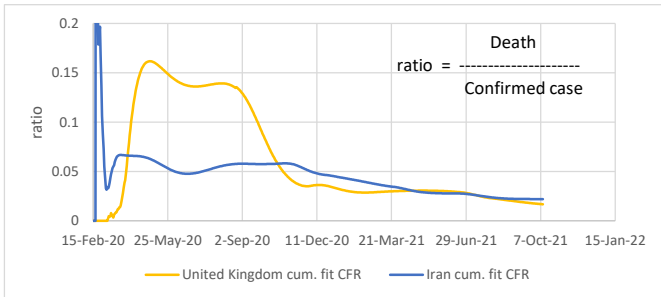
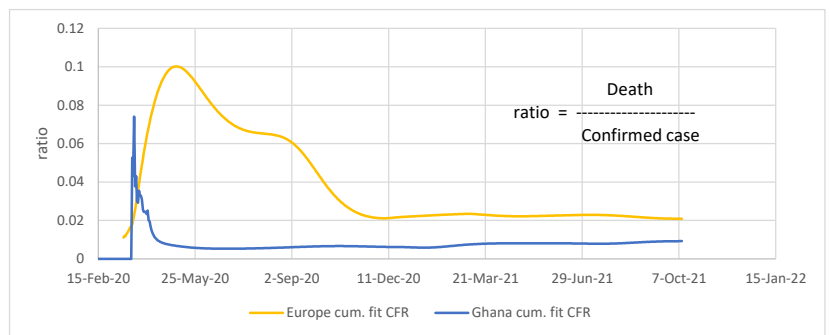
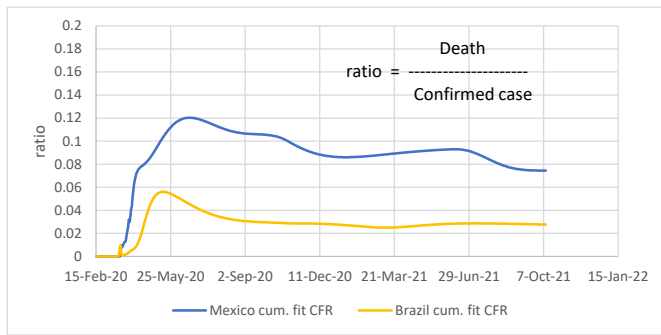
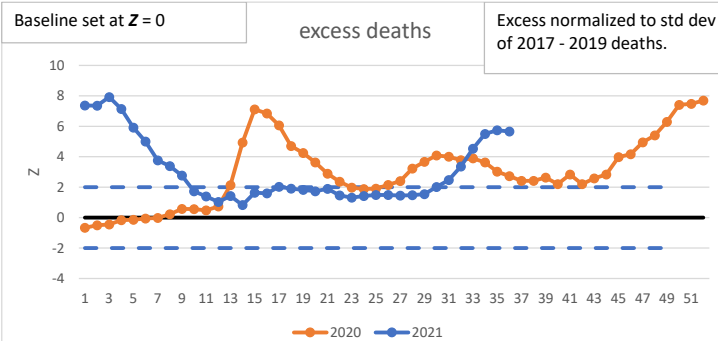


## Experimental page : ratios of curve fit deaths to curve fit confirmed cases (CFR)

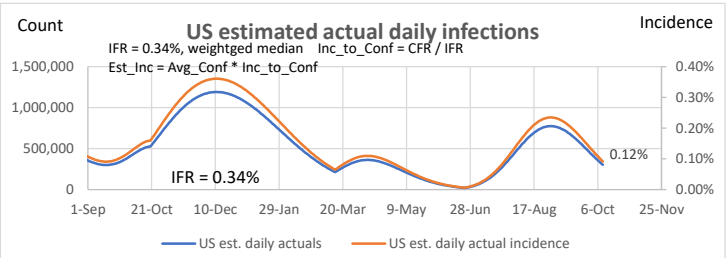
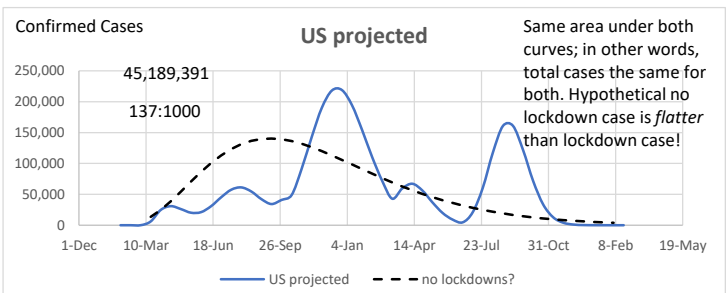
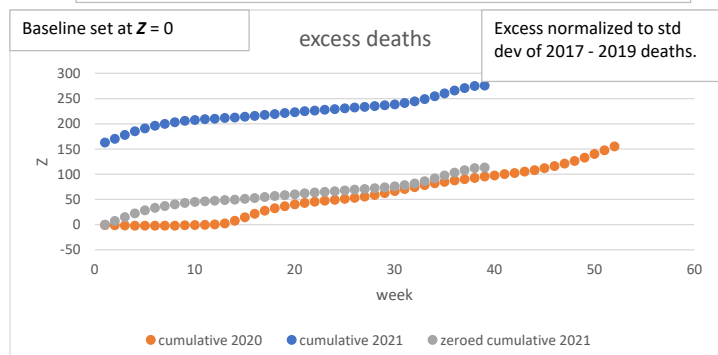


### Excess deaths as a Z score:



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



### False Positives Demonstration

Use 0.11% as estimated daily incidence

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

95% accuracy of test

	Positive	Negative
test pos	1.463%	4.923%
test neg	0.077%	93.537%

0.11% X 14 = 1.540%

1.540%	98.460%	100.00%
--------	---------	---------

**Sensitivity**  
Probability of detection where condition exists  
True + / (True + & False -)  
95%

False pos. is more than half of total positives.

TRUE +	1.463%/6.39%	22.9%
FALSE +	4.923%/6.39%	77.1%
Total	6.39%	100.00%

**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

Diff.

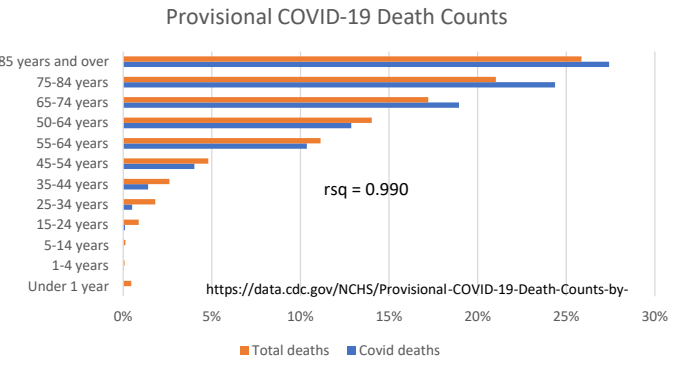
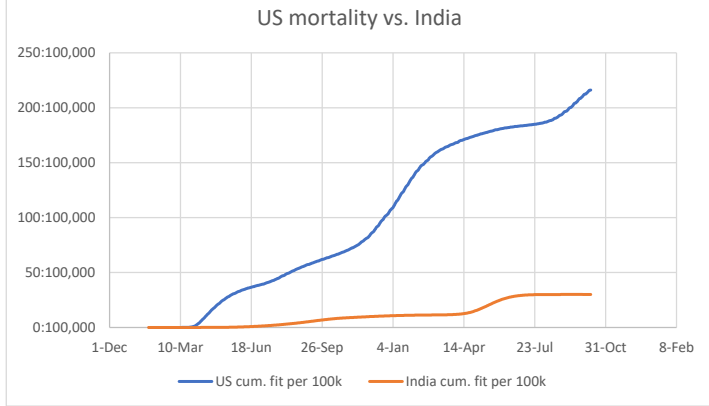
# USA Excess Deaths to date (2021, from CDC data):

39 weeks	All Cause	All Cause, excl. CV19	CV19
3 yr average before 2020	640:100,000	640:100,000	-
2021	764:100,000	660:100,000	-
Diff.	124:100,000	20:100,000	104:100,000

3 yr average
859:100,000

16% of All-Cause excess deaths are non-CV19

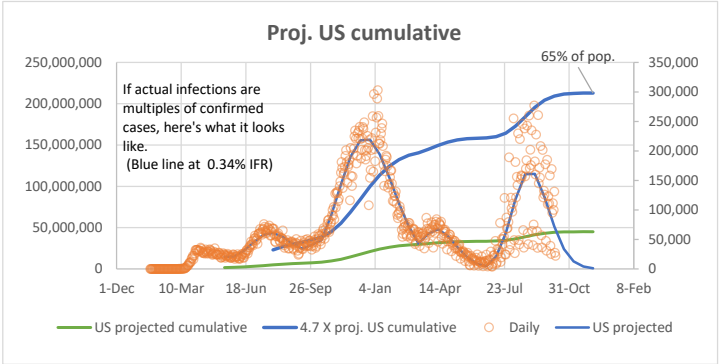
Diff.



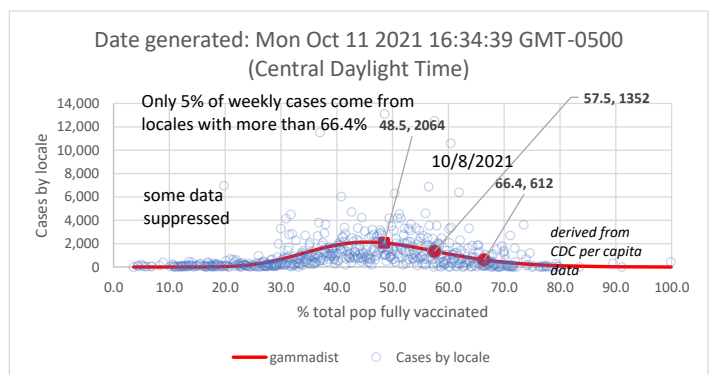
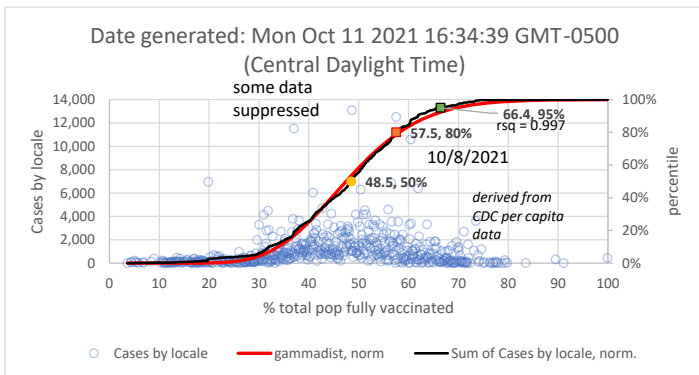
$$K = 0.318 \quad R_o = \exp(K/\gamma) = 6.42 \quad R = 84\% \quad \leq \text{Herd immunity}$$

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

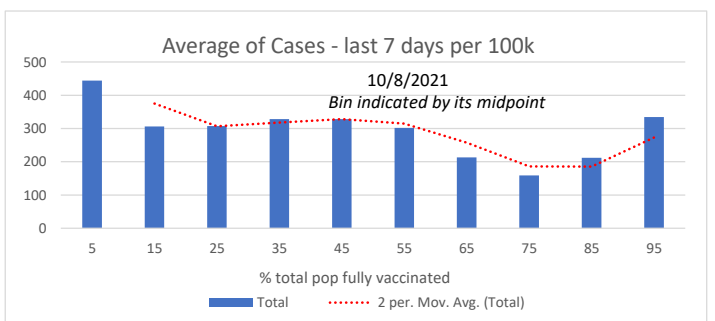
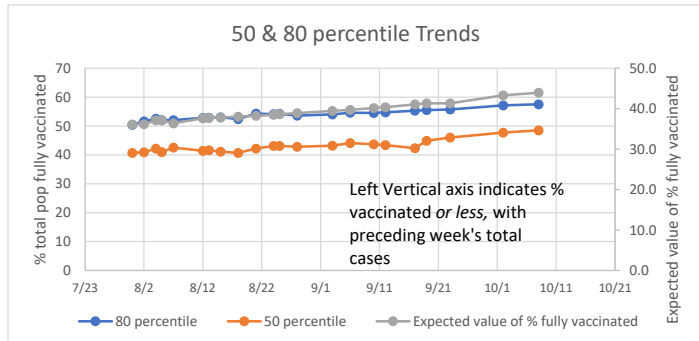
$R$  is recovered variable.



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



reporting jurisdictions not uniformly distributed; some data suppressed, for example, Texas



Estimates of Cases per 100k

<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>