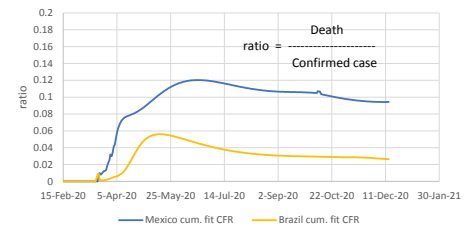
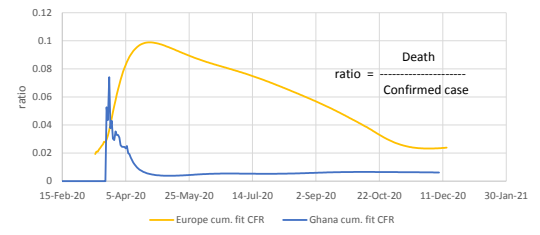
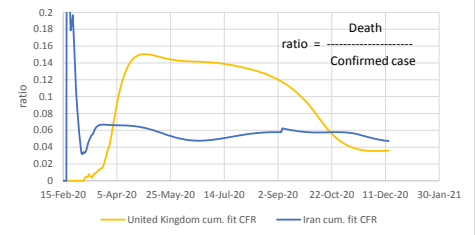
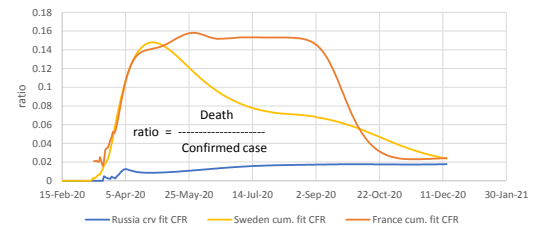
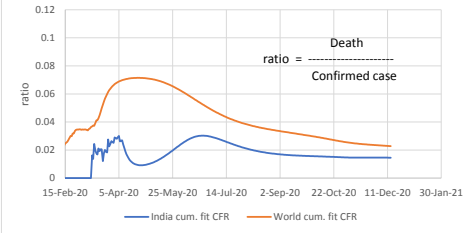
Experimental page : ratios of curve fit deaths to curve fit confirmed cases (CFR)

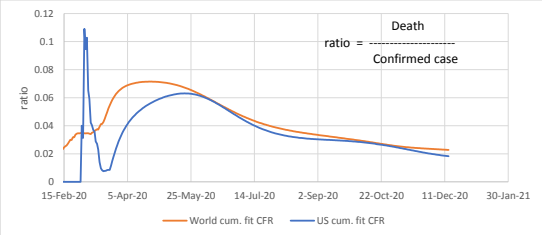


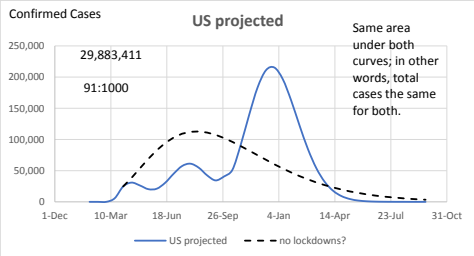



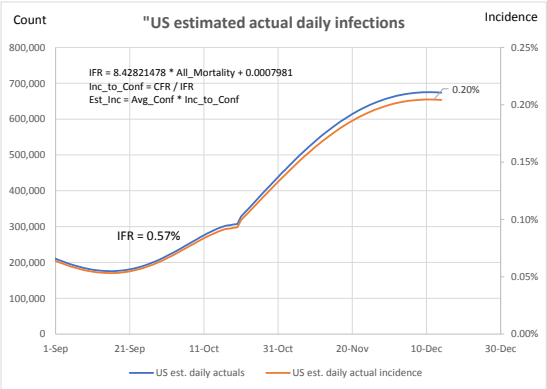



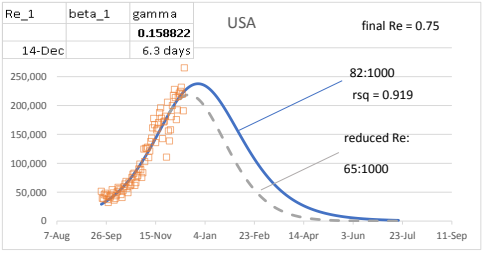



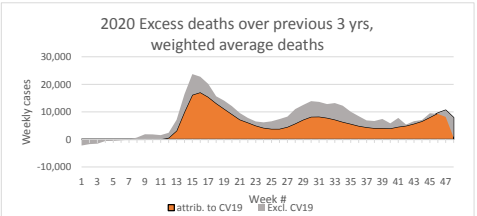




Demonstration of SIR model where $R_e$ is linearly reduced to 0.75 at the end of the sequence:




Reducing the $R_e$ while keeping gamma constant is the same as reducing contact rate. Contact rate is reduced through isolation, lockdowns, and vaccinations. This case about 17:1000 benefit (21%).




False Positives Demonstration

Use 0.21% from US est. incidence above as estimated daily incidence

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

99% accuracy of test 0.21% X 14 = 2.940%

| | Positive | Negative | |
|---|---|---|---|
| test pos | 2.911% | 0.971% | 3.88% |
| test neg | 0.029% | 96.089% | 96.12% |
| | 2.940% | 97.060% | 100.00% |

False pos. is a bit over 1/4 of total positives!

| | | |
|---|---|---|
| TRUE + | 2.911%/3.88% | 75.0% |
| FALSE + | 0.971%/3.88% | 25.0% |
| 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 (from CDC data):**

Annualized on 48 weeks

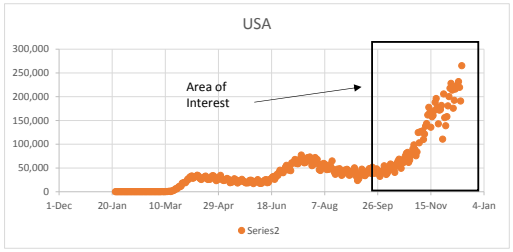
| | All Cause | All Cause, excl. | CV19 |
|---|---|---|---|
| 3 yr average before 2020 | 855:100,000 | 855:100,000 | - |
| 2020 | 978:100,000 | 890:100,000 | - |
| Diff. | 123:100,000 | 35:100,000 | 88:100,000 |
| Diff. | +14.4% | +4.1% | +10.3% |

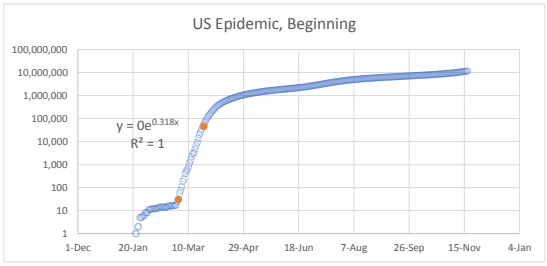
3 yr average weighted

| |
|---|
| 859:100,000 |

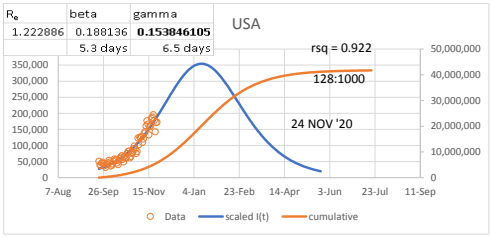
29% of All-Cause excess deaths are non-CV19

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

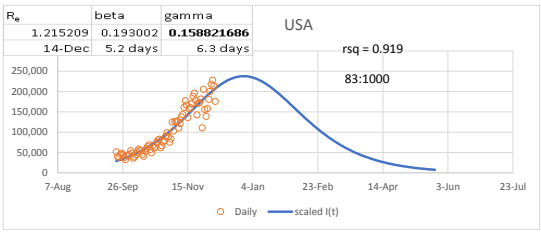


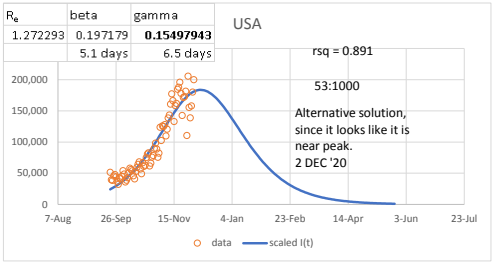

| $R_e$ | beta | gamma |
|---|---|---|
| 1.222886 | 0.188136 | **0.153846105** |
| | 5.3 days | 6.5 days |

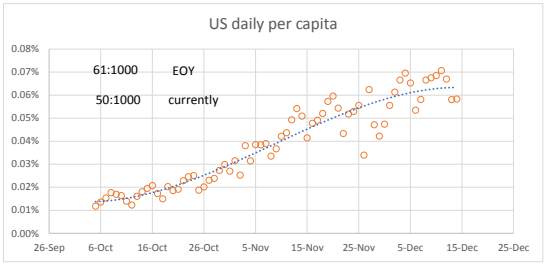


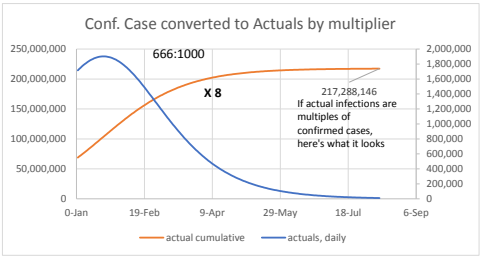

| $R_e$ | beta | gamma |
|---|---|---|
| 1.215209 | 0.193002 | **0.158821686** |
| 14-Dec | 5.2 days | 6.3 days |



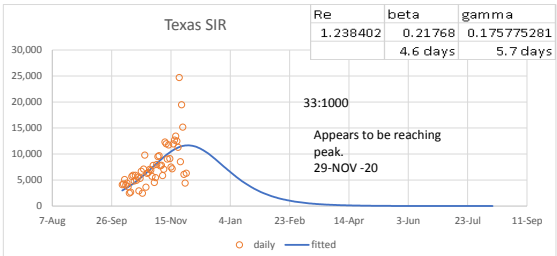

| $R_e$ | beta | gamma |
|---|---|---|
| 1.272293 | 0.197179 | **0.15497943** |
| | 5.1 days | 6.5 days |



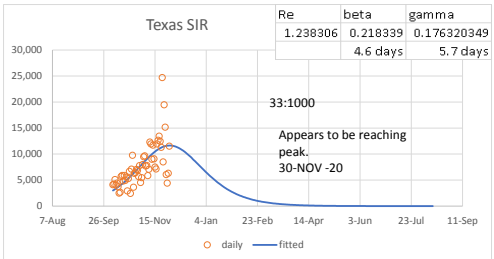



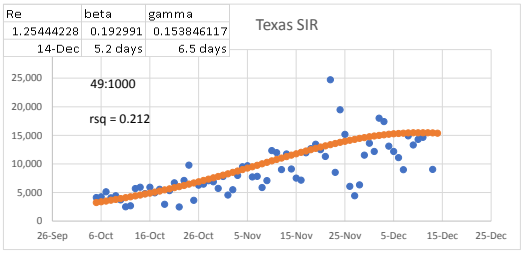

| Re | beta | gamma |
|---|---|---|
| 1.238402 | 0.21768 | 0.175775281 |
| | 4.6 days | 5.7 days |



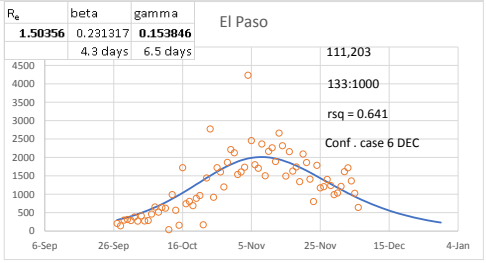

| Re | beta | gamma |
|---|---|---|
| 1.238306 | 0.218339 | 0.176320349 |
| | 4.6 days | 5.7 days |



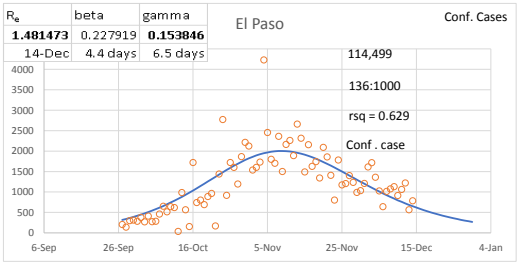

| Re | beta | gamma |
|---|---|---|
| 1.25444228 | 0.192991 | 0.153846117 |
| 14-Dec | 5.2 days | 6.5 days |



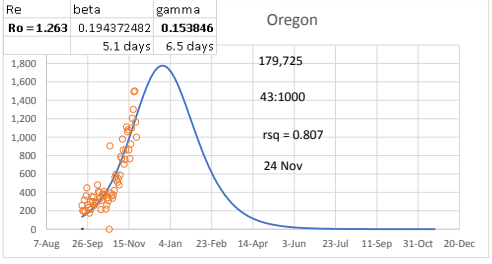

| $R_e$ | beta | gamma |
|---|---|---|
| **1.50356** | 0.231317 | **0.153846** |
| | 4.3 days | 6.5 days |




| $R_e$ | beta | gamma |
|---|---|---|
| **1.481473** | 0.227919 | **0.153846** |
| 14-Dec | 4.4 days | 6.5 days |




| Re | beta | gamma |
|---|---|---|
| **Ro = 1.263** | 0.194372482 | **0.153846** |
| | 5.1 days | 6.5 days |




| Re | beta | gamma |
|---|---|---|
| **Ro = 1.245** | 0.304992455 | **0.244999** |
| 12/14/2020 | 3.3 days | 4.1 days |