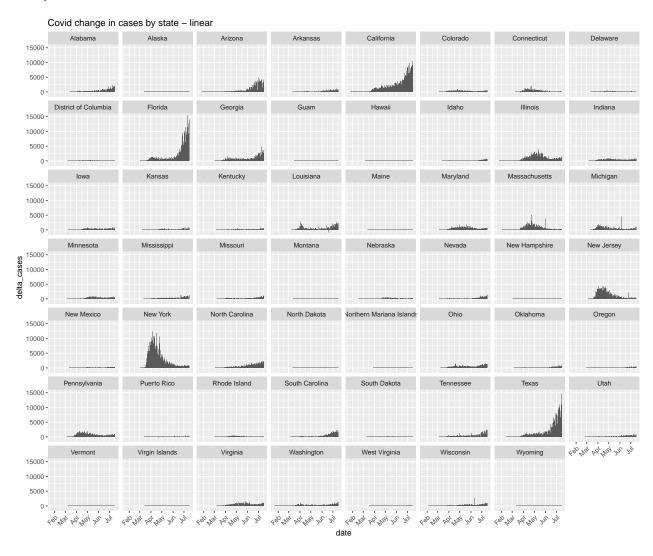
# Change Analysis

Another experiment to look at rate of change. Idea here is to compare the reported change against the cumulative sum.

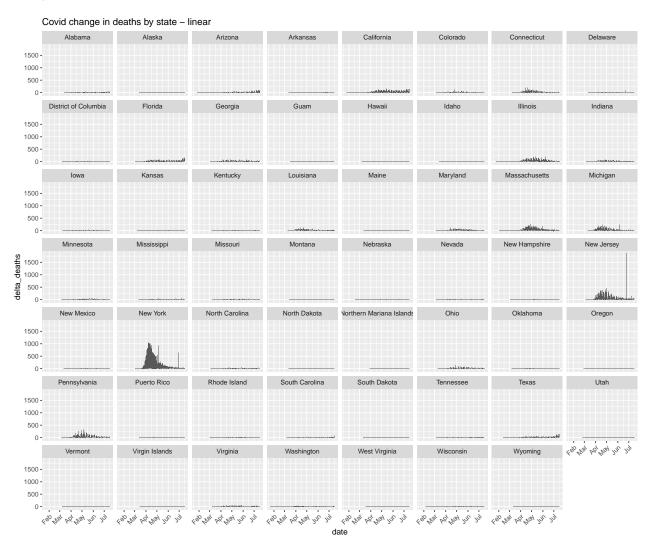
Last date for states data is 2020-07-16

# Extract daily changes

#### Daily Cases



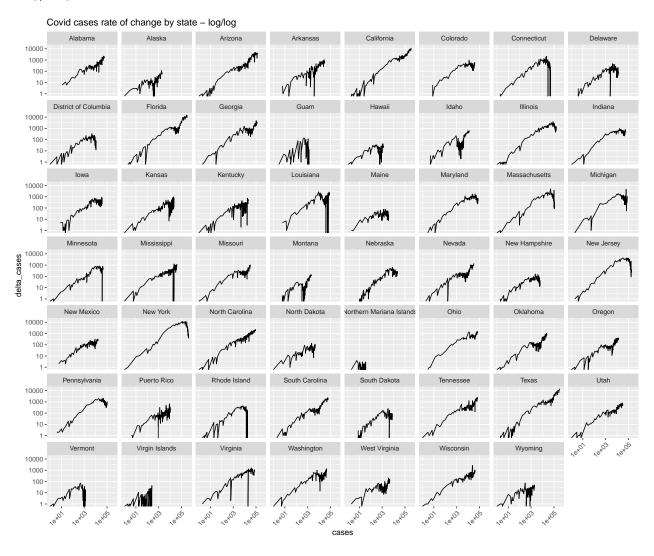
#### Daily Deaths



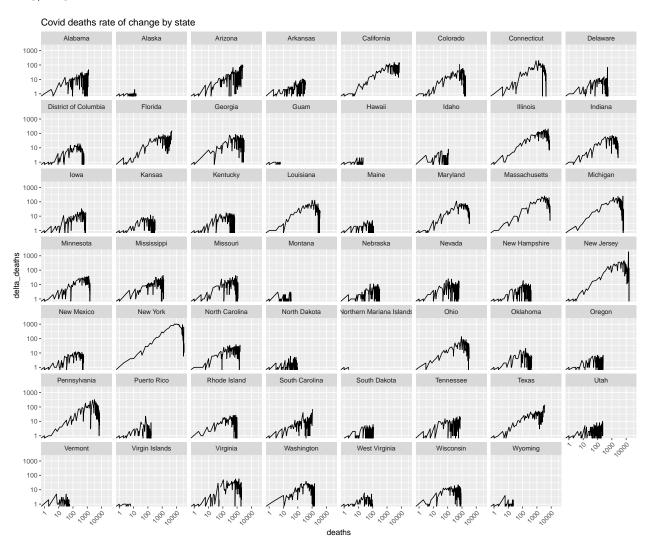
# Log of Change Over Cumulative Sum

Linear values are skewed by higher-magnitude values, so use a log(10) on each axis. this better fits the exponential nature of the data anyway.

#### Log/Log of Cases Over Cumulative Sum



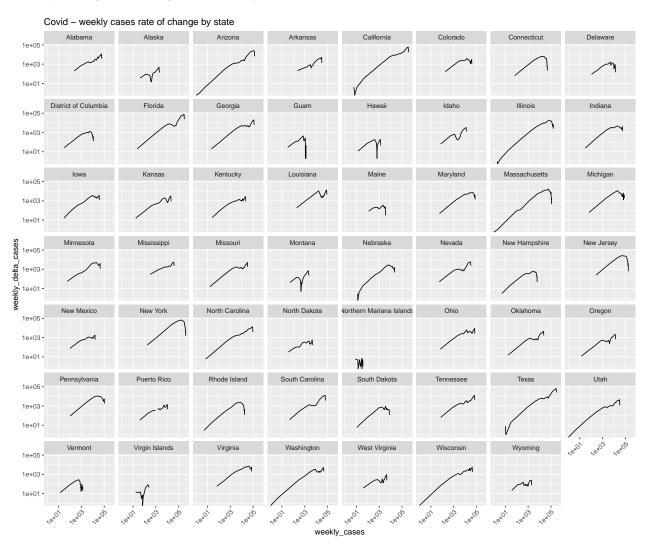
# Log/Log of Deaths over Cumulative Sum



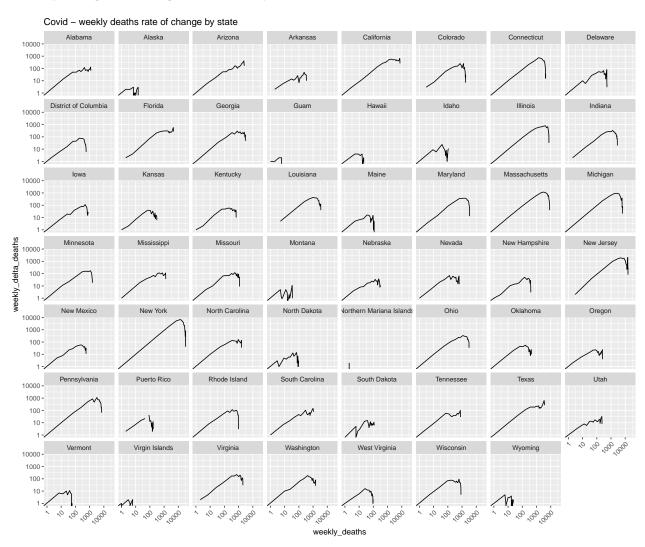
# Weekly Rate of Changes

In order to smooth out the curves in the previous graphs, look at them on a weekly basis.

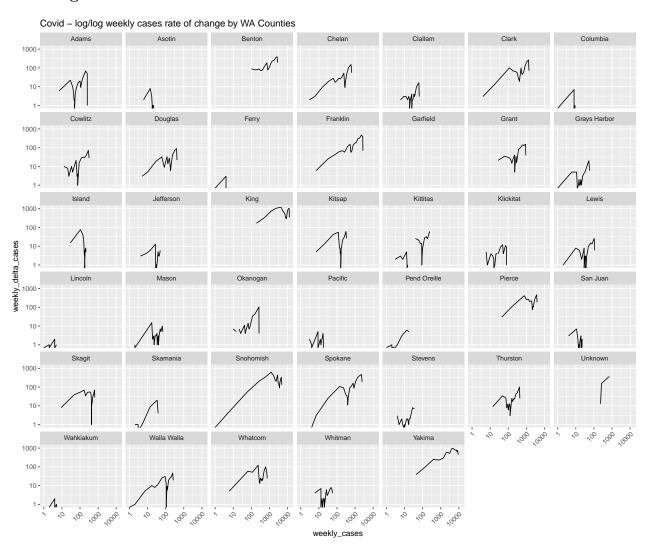
# Weekly Range of Change of Cases by State

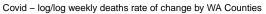


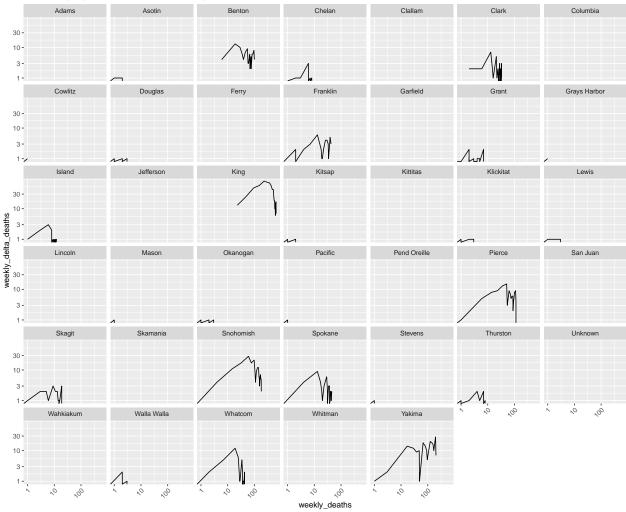
#### Weekly Range of Change of Deaths by State



# Washington Counties







# California Counties

Covid – log/log weekly cases rate of change by CA Counties Alameda Alpine Amador Colusa Contra Costa Del Norte 10000 **-**1000 **-**100 -10 -1 -Fresno El Dorado Glenn Humboldt Imperial Kings 10000 -1000 -100 -10 -1 νĮn Los Angeles Mendocino Lake Lassen Marin Mariposa 10000 -1000 -100 -M 10 -1 h Mono Orange Plumas Placer Riverside 10000 weekly\_delta\_cases 100 -10 -1 -₩^ San Luis Obispo San Bernardino San Francisco San Benito San Mateo 10000 -1000 -100 -10 -1 -Santa Clara Solano Santa Barbara Santa Cruz Shasta Sierra Siskiyou Sonoma 10000 -1000 -100 -10 -1 -Sutter Trinity Tulare Unknown Ventura Stanislaus Tuolumne 10000 **-**100 -10 -10 -Yolo 10000 **-**100 -10 -1 -

weekly\_cases

