

# **Texas Winter Storm & Power-Crisis: Death Toll Excess Mortality Estimate**

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# Outline

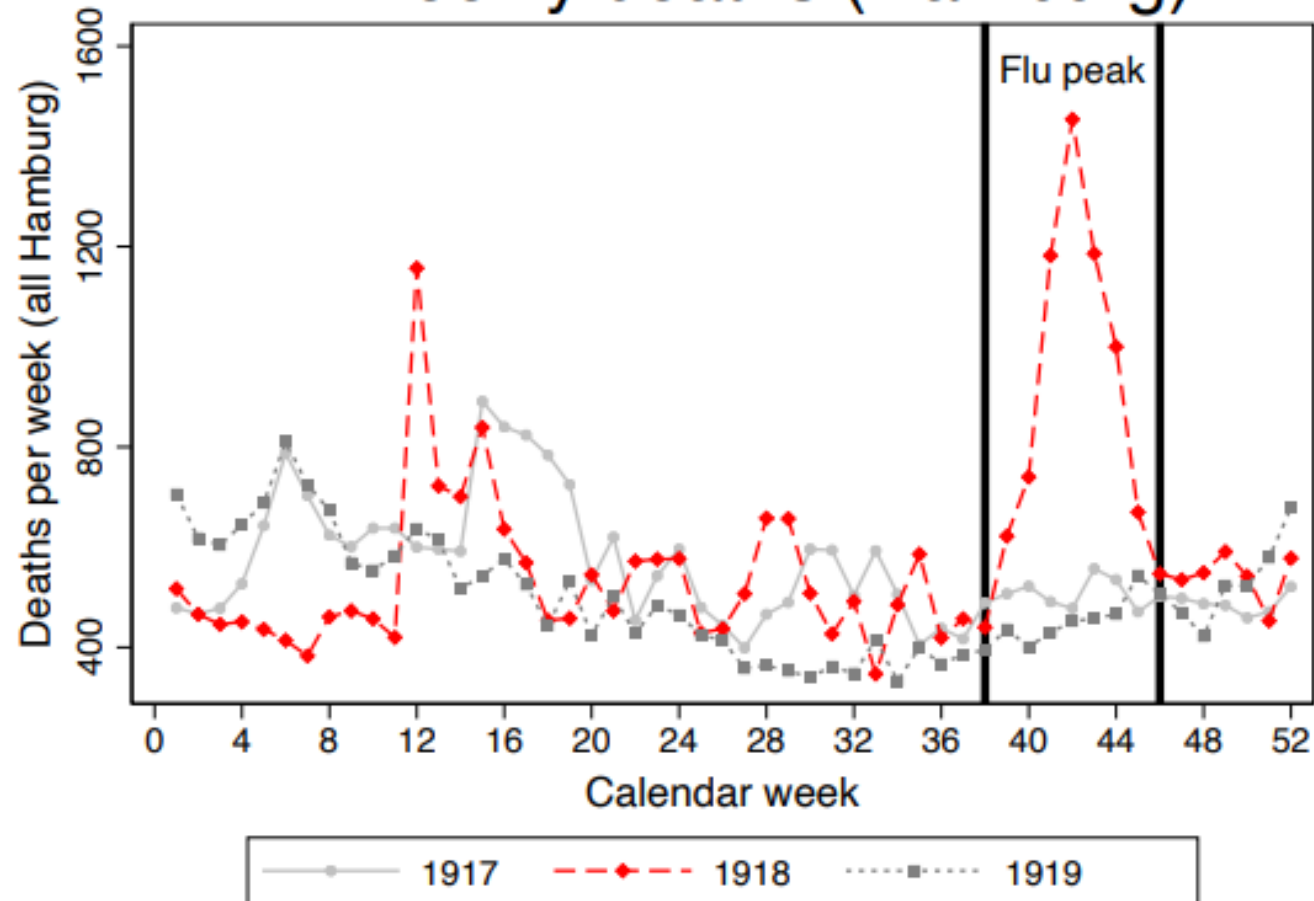
- What is Excess Mortality?
- Excess Mortality and COVID-19.
- Excess Mortality and Natural Disasters.
- Excess Mortality Estimate of Texas 2021 Winter Storm.

# Excess Mortality

- Number of deaths above and beyond what is expected in ordinary times based on historical data.
- Has long been observed and used in research.

# Excess Mortality

## A. Weekly deaths (Hamburg)

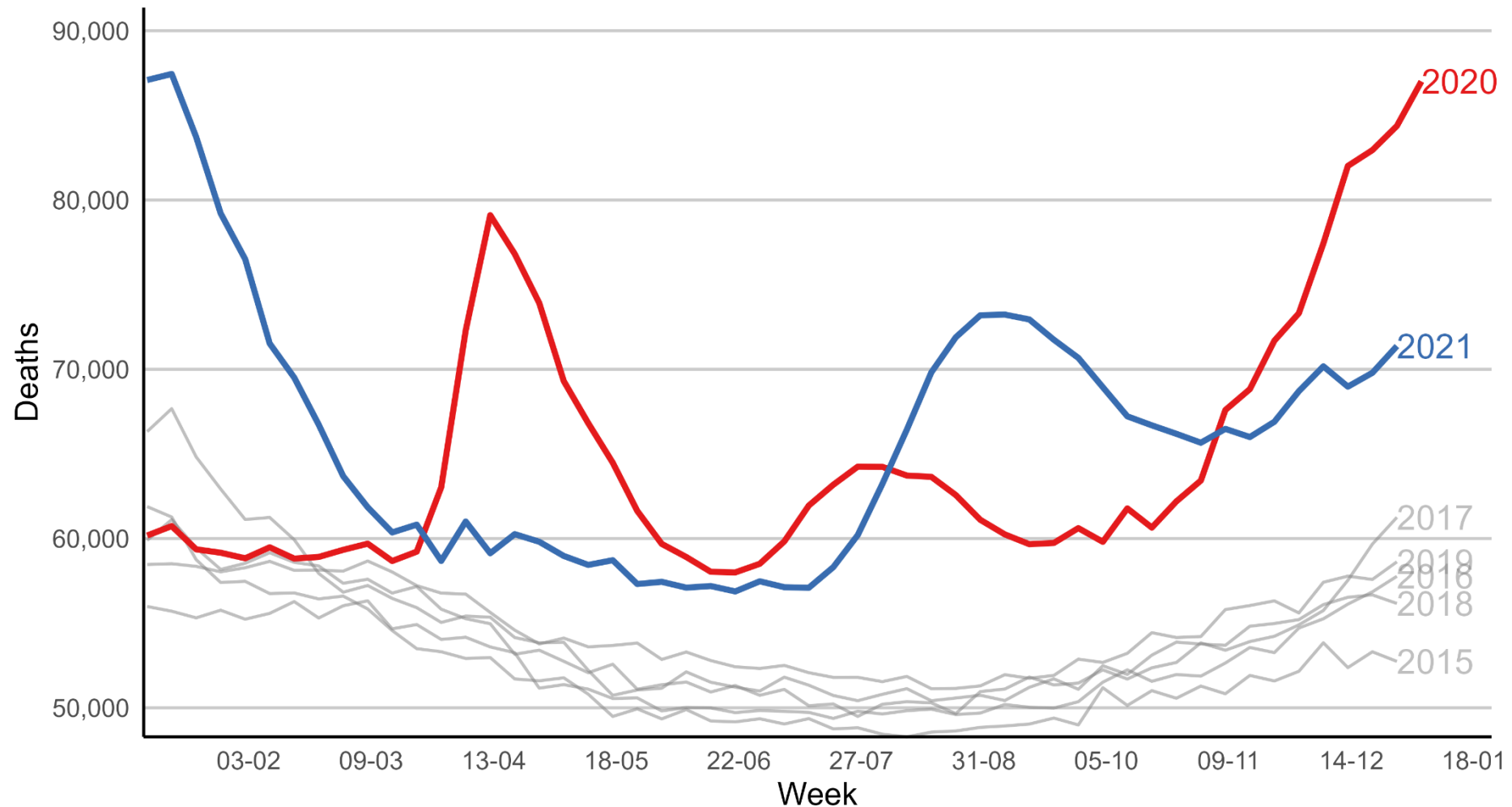


Caesmann, Caprettini, Voth & Yanagizawa-Drott (2021)

# Excess Mortality & COVID-19

United States: Weekly Deaths by Year 2015-2021

Source: Karlinsky & Kobak 2021

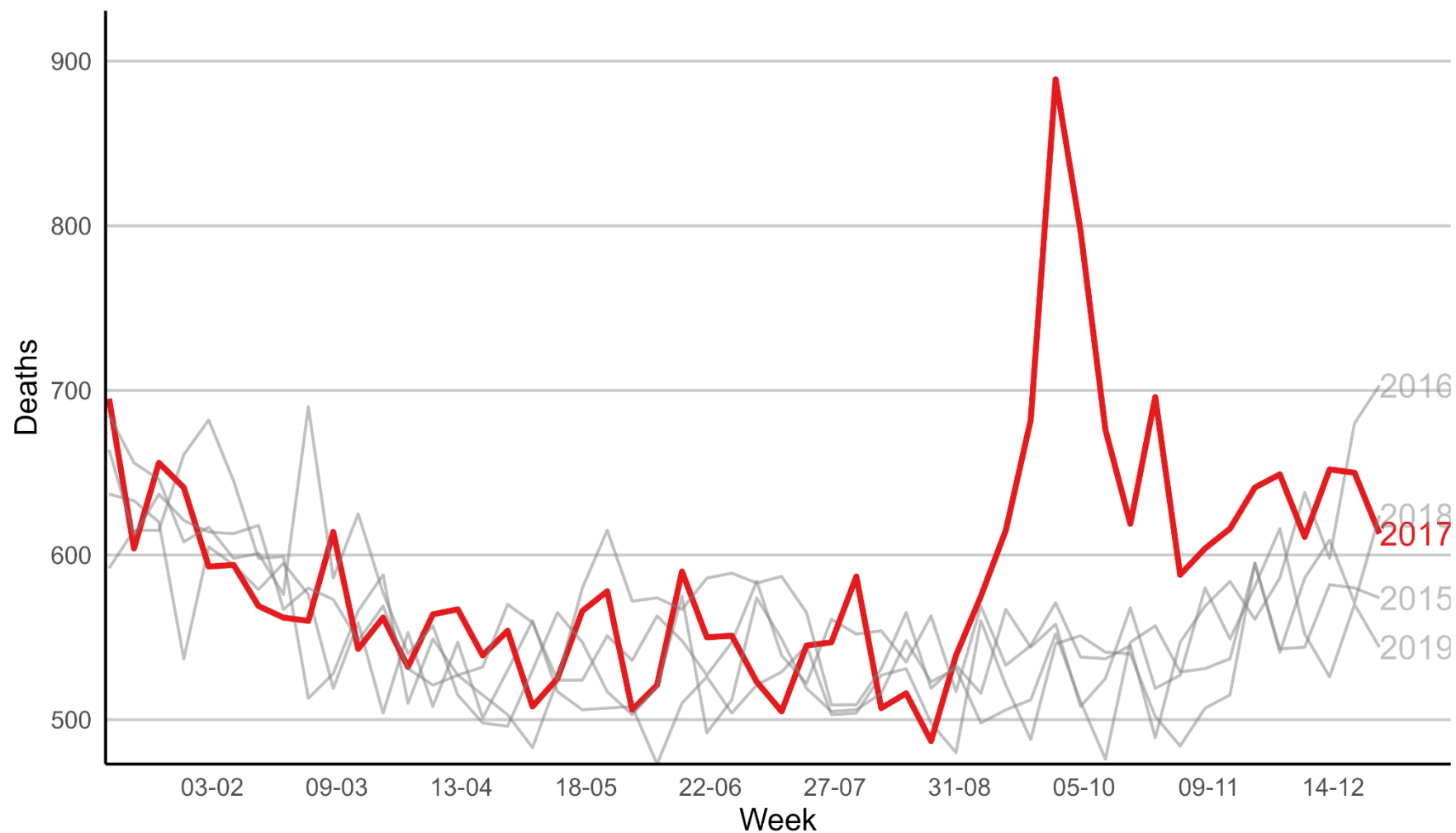


# Excess Mortality & Natural Disasters

- Hurricane Maria in Puerto Rico.
- September 20<sup>th</sup> 2017.
- Original official toll: 64 Deaths.

# Excess Mortality & Natural Disasters

Puerto Rico: Weekly Deaths by Year 2015-2019



# Excess Mortality & Natural Disasters

Milken Institute School  
of Public Health

THE GEORGE WASHINGTON UNIVERSITY



*Total excess mortality post-hurricane* using the migration displacement scenario is estimated to be 2,975 (95% CI: 2,658-3,290) for the total study period of September 2017 through February 2018.

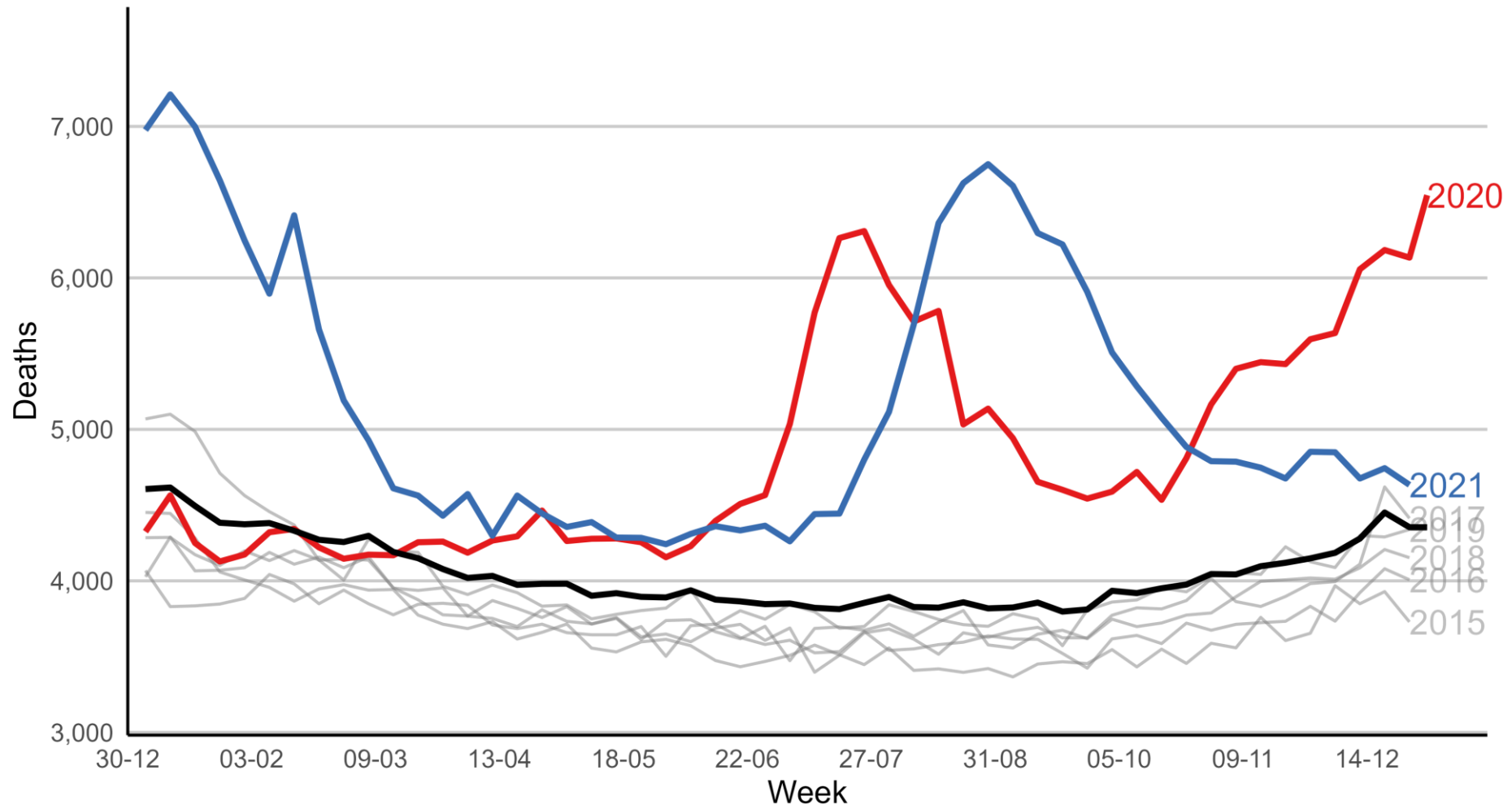
Milken Institute (2018)



# Excess Mortality Estimate of Texas 2021 Winter Storm

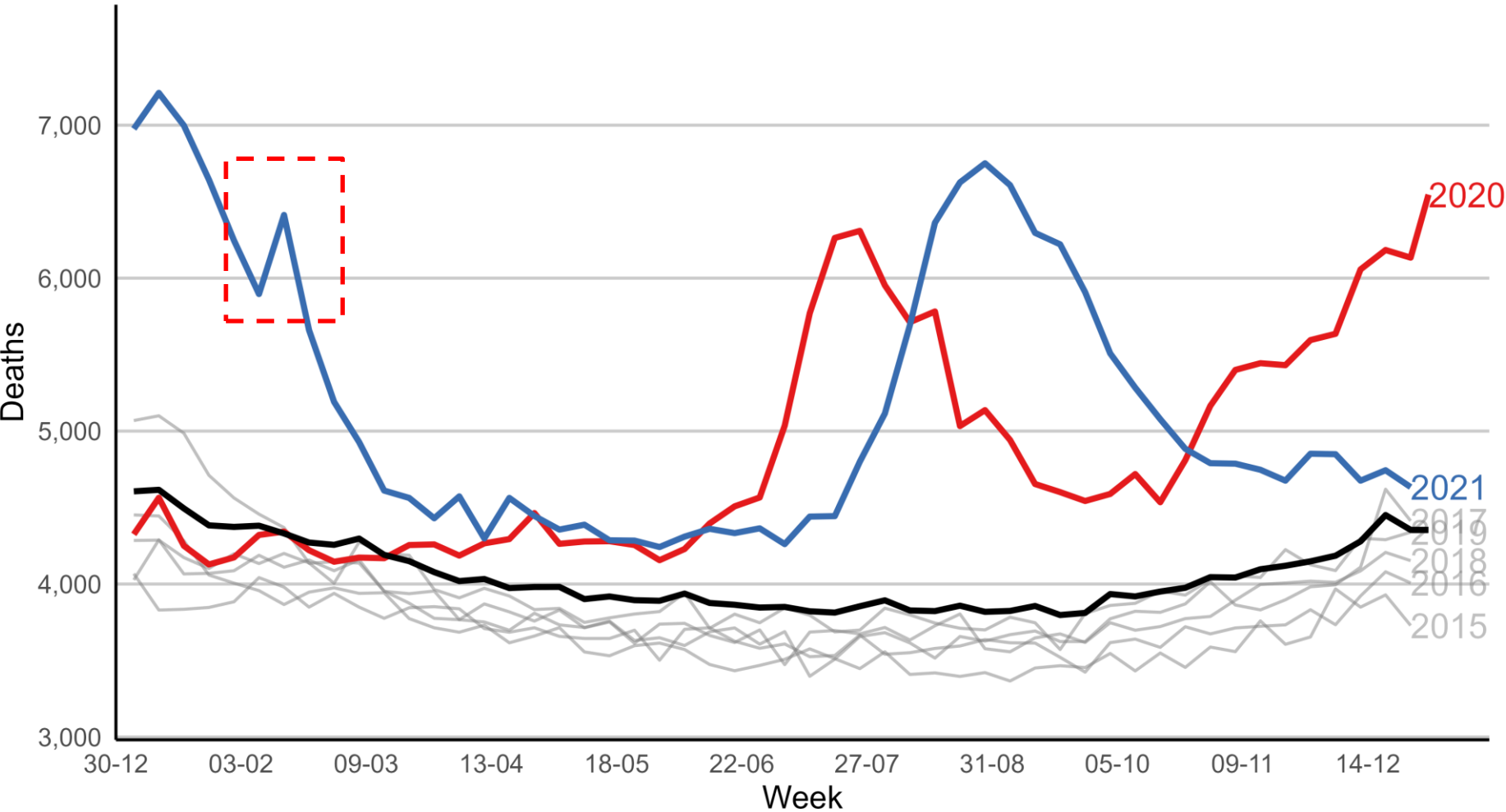
Texas: Weekly Deaths 2015-2021

Black: Expected Deaths in 2020



# Excess Mortality Estimate of Texas 2021 Winter Storm

Texas: Weekly Deaths 2015-2021  
Black: Expected Deaths in 2020

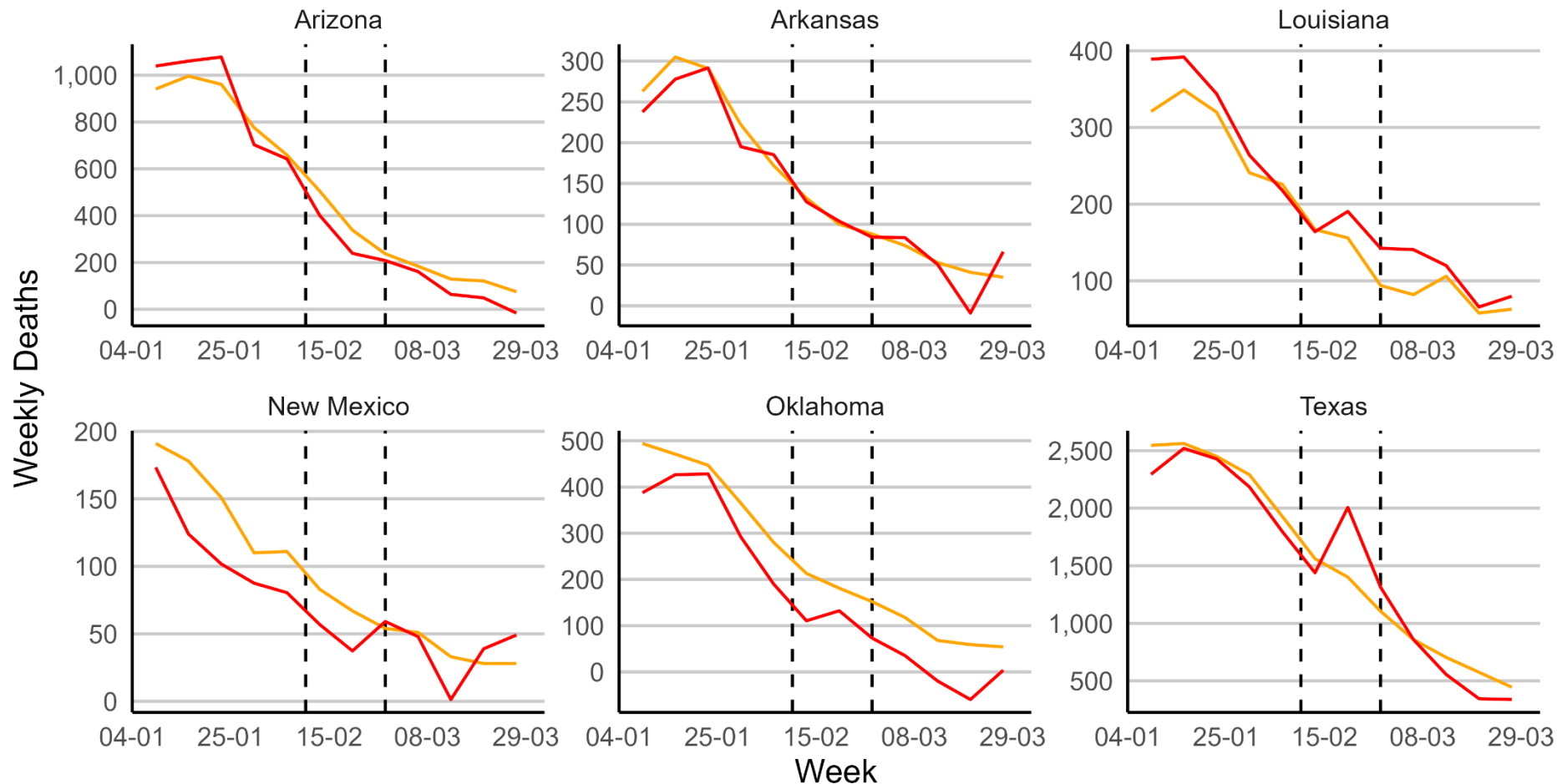


# Excess Mortality Estimate of Texas 2021 Winter Storm

Weekly Deaths in Texas and Neighboring States January 2021 - March 2021

Red: Excess Deaths; Orange: COVID Deaths

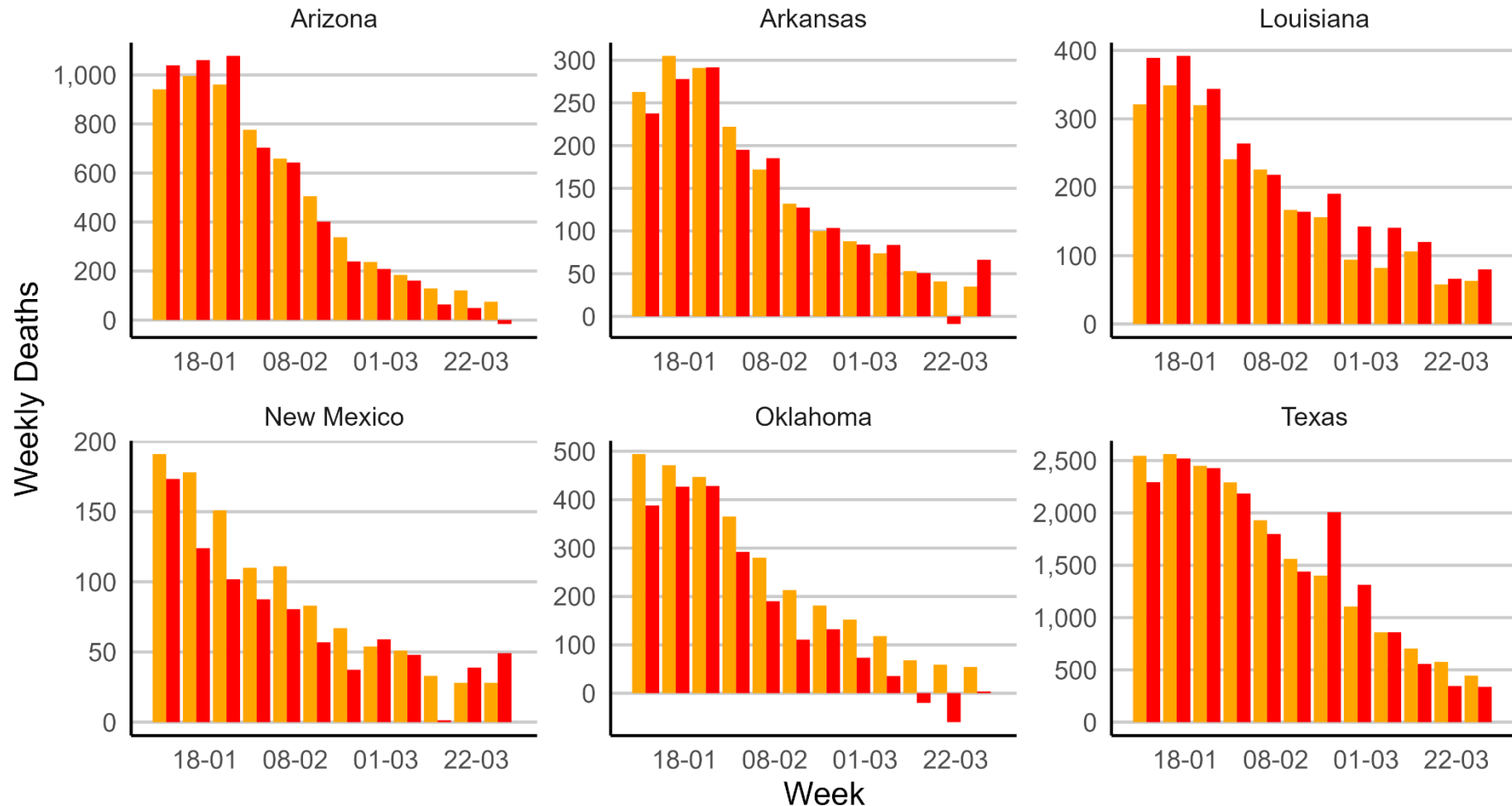
Dashed lines: Feb 10 to Feb 27



# Excess Mortality Estimate of Texas 2021 Winter Storm

Weekly Deaths in Texas and Neighboring States January 2021 - March 2021

Red: Excess Deaths; Orange: COVID Deaths

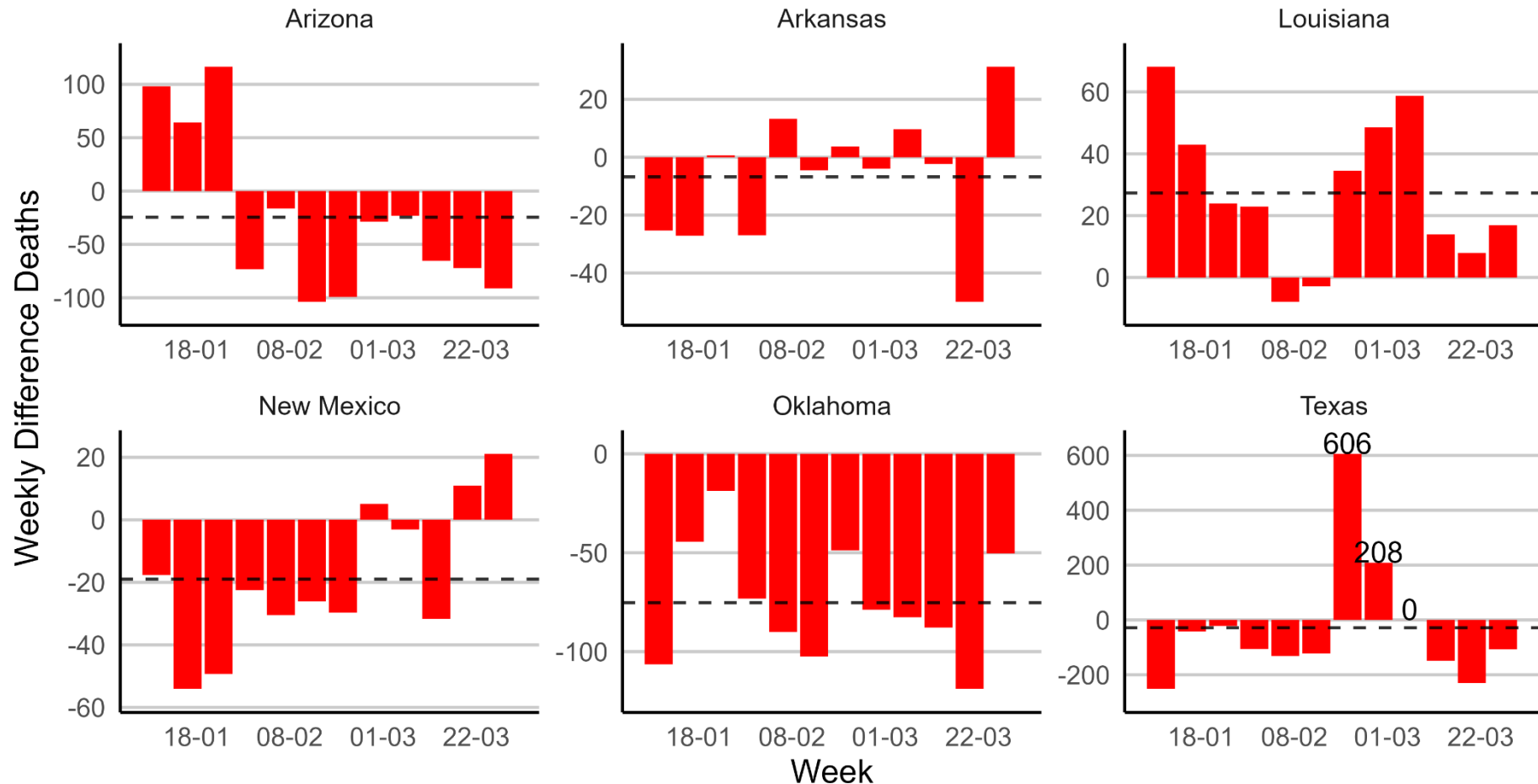


# Excess Mortality Estimate of Texas 2021 Winter Storm

Difference between Excess Deaths to COVID Deaths

Texas and Neighboring States January 2021 - March 2021.

Dashed Line denotes Mean Difference across weeks shown



# Excess Mortality Estimate of Texas 2021 Winter Storm

Preliminary Excess Mortality Estimate Death Toll:

**814**

# References

- Caesmann, Marcel and Caprettini, Bruno and Voth, Hans-Joachim and Yanagizawa-Drott, David (2021) Going Viral: Propaganda, Persuasion and Polarization in 1932 Hamburg. CEPR Discussion Paper No. DP16356, Available at SSRN: <https://ssrn.com/abstract=3886846>
- Milken Institute (2018) Ascertainment of the Estimated Excess Mortality From Hurricane Maria in Puerto Rico Milken Institute School of Public Health.  
<https://publichealth.gwu.edu/sites/default/files/downloads/projects/PRstudy/Acertainment%20of%20the%20Estimated%20Excess%20Mortality%20from%20Hurricane%20Maria%20in%20Puerto%20Rico.pdf>
- Aldhous P, Lee SM, Hirji Z (2021) The Texas Winter Storm and Power Outages Killed Hundreds More People Than the State Says BuzzFeed News. Accessed May 27, 2021. <https://www.buzzfeednews.com/article/peteraldhous/texas-winter-storm-power-outage-death-toll>
- Karlinsky A, Kobak D (2021) Tracking excess mortality across countries during the COVID-19 pandemic with the world mortality dataset eLife 10:e69336. <https://doi.org/10.7554/eLife.69336>