

Climate Driven Natural Disasters and Medical Insurance Premiums in the United States

Data Analysis Summary

(IN PROGRESS)

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PROJECT SCOPE

Climate-driven natural disasters are increasing in frequency and intensity raising questions about their tremendous financial costs, including, its potential impact on medical insurance premiums in the United States.

The goal of this project is to provide data-driven findings for stakeholders to understand the hidden economic implications of these climate-driven natural disasters for insured individuals and plan providers.

Public datasets from FEMA, NOAA, and KFF will be analyzed in conjunction to achieve the following **data analysis objectives**:

1. Identify the relationship between natural disaster costs and medical insurance premiums.
2. Forecast changes in medical insurance premiums over time based on geographic risk of natural disasters.
3. Identify financial risk for different geographic areas, demographics, and medical insurance policy providers.

TERMINOLOGY

- **FEMA:** Federal Emergency Management Agency
- **NOAA:** National Centers for Environmental Information
- **KFF:** Kaiser Family Foundation
- **Insurer / carrier:** Entity selling the health insurance plan, taking on financial risk of providing health coverage in exchange for premium costs
- **Plan providers:** Entity purchasing, and offering health insurance plans

- **Insured:** Individuals enrolled on a health insurance plan, having health insurance coverage

Data Sources

KFF and the Employer Medical Benefits Survey, KFF, accessed January 15th, 2025,
<https://www.kff.org/health-costs/report/2024-employer-health-benefits-survey/>

NOAA National Centers for Environmental Information (NCEI), U.S. Billion-Dollar Weather and Climate Disasters (2025).

<https://www.ncei.noaa.gov/access/billions/>, DOI: [10.25921/stkw-7w73](https://doi.org/10.25921/stkw-7w73)

FEMA Federal Emergency Management Agency, National Risk Index: Future Risk Prototype
<https://fema.maps.arcgis.com/home/item.html?id=41df240466094967bdd48690a9711fa4>

RESULTS AND FINDINGS

LIMITATIONS

RECOMMENDATIONS

