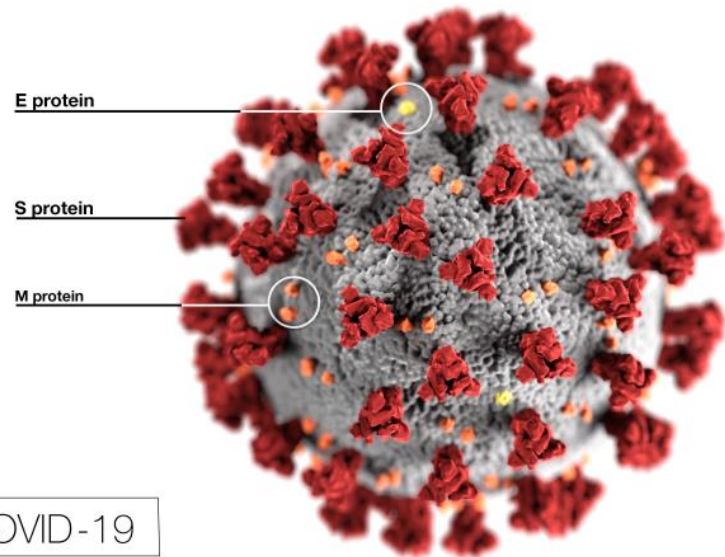


# Healthcare

Dr. Robert Sonora

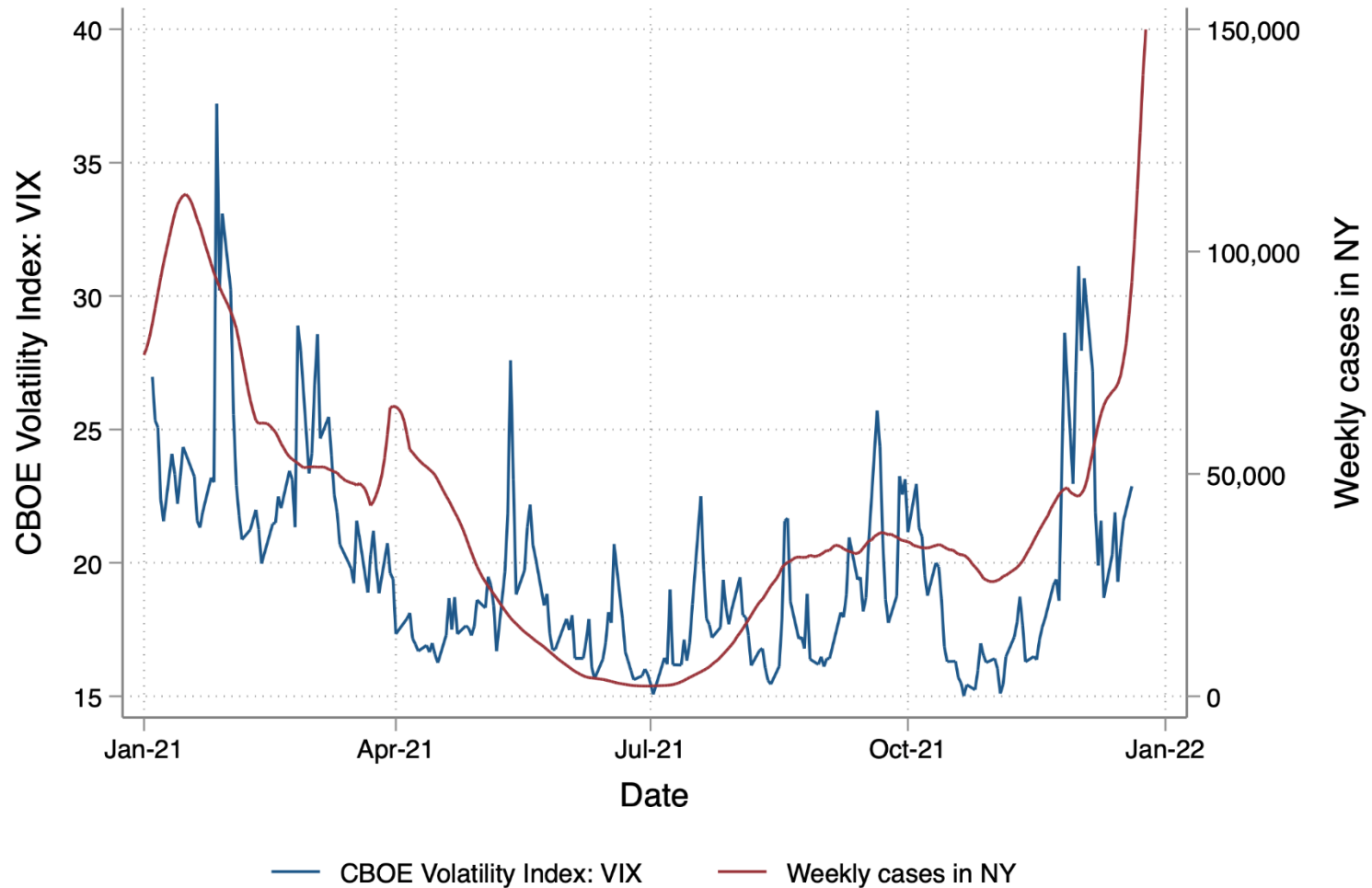
Associate Director | Director Health Research  
Bureau of Business and Economic Research  
Senior Research Professor  
University of Montana



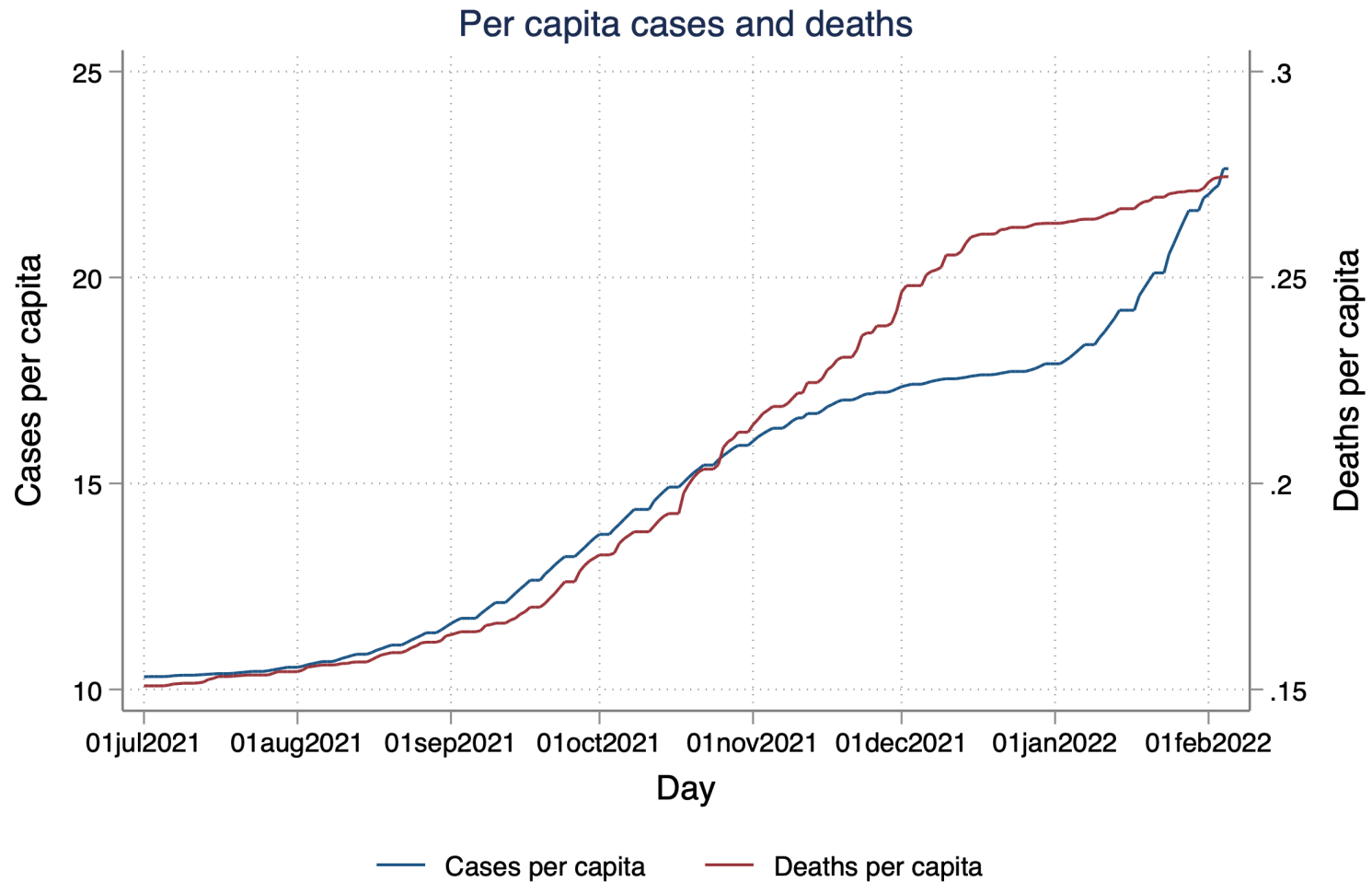
**BUREAU OF BUSINESS AND  
ECONOMIC RESEARCH**  
UNIVERSITY OF MONTANA

Healthcare

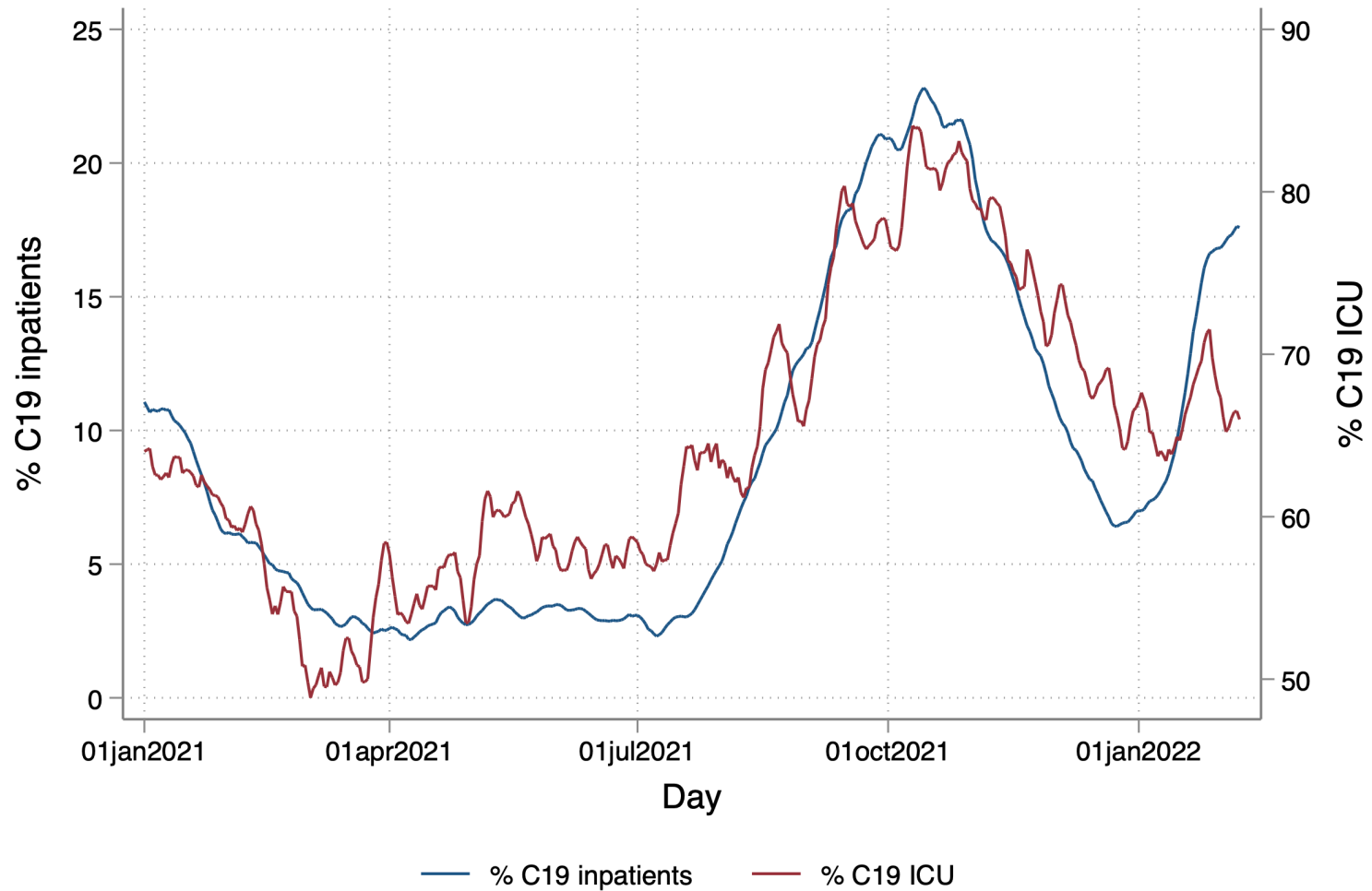
## Financial market impact: the VIX index and new weekly cases in NY



# COVID in Montana: per capita

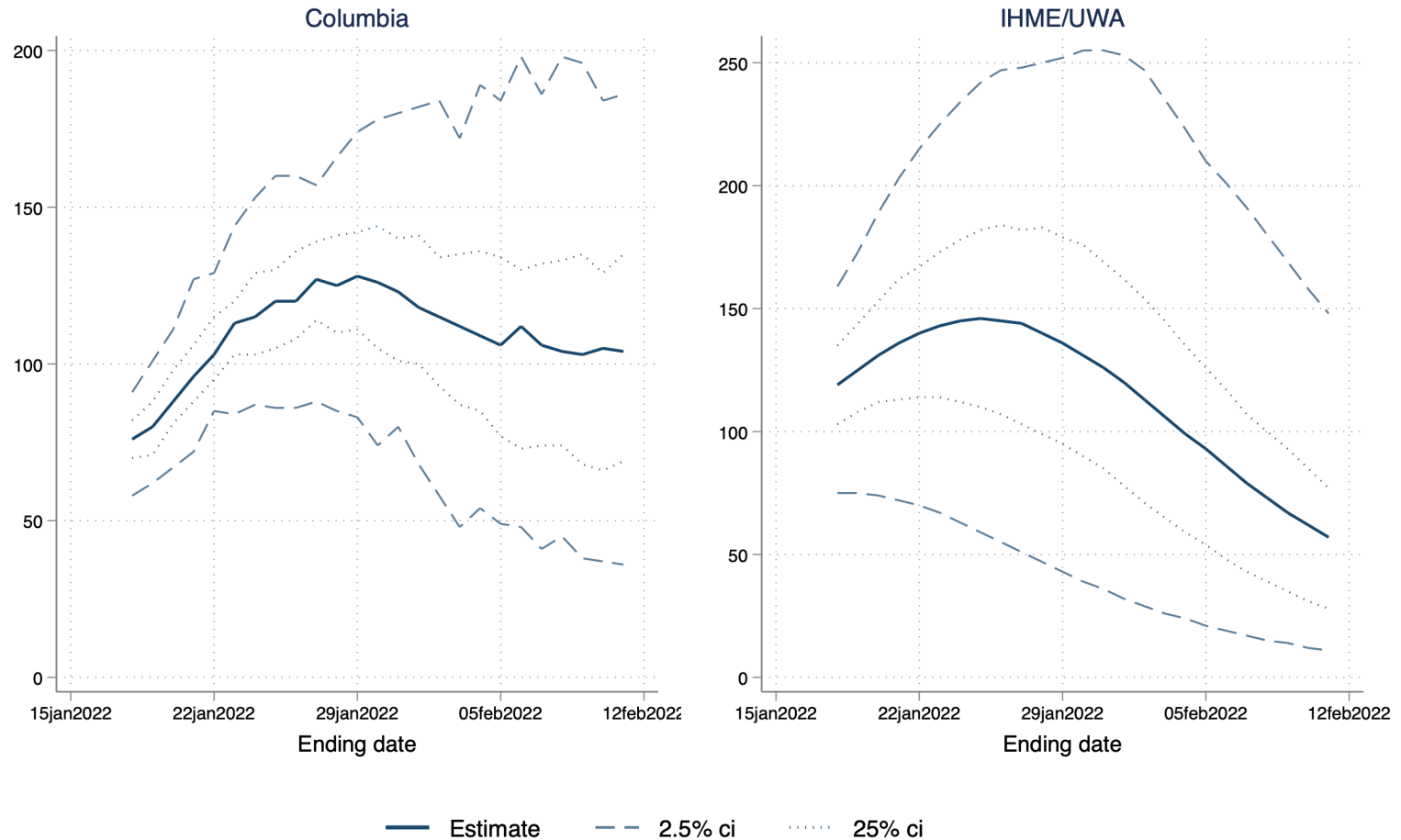


# COVID in Montana: Hospitalization & ICU



# COVID in Montana: Forecast hospitalization

## Forecast hospitalizations



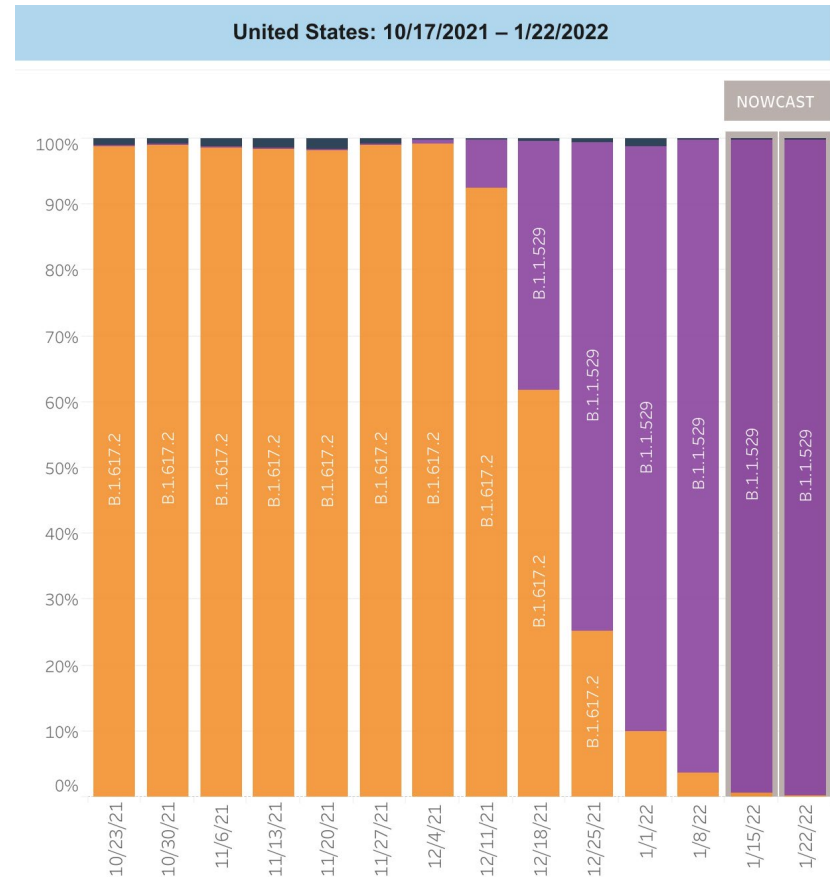
# CDC: Omicron (purple) and Delta (orange): percent of total

## Region 8: CO, MT, ND, SD, UT, WY



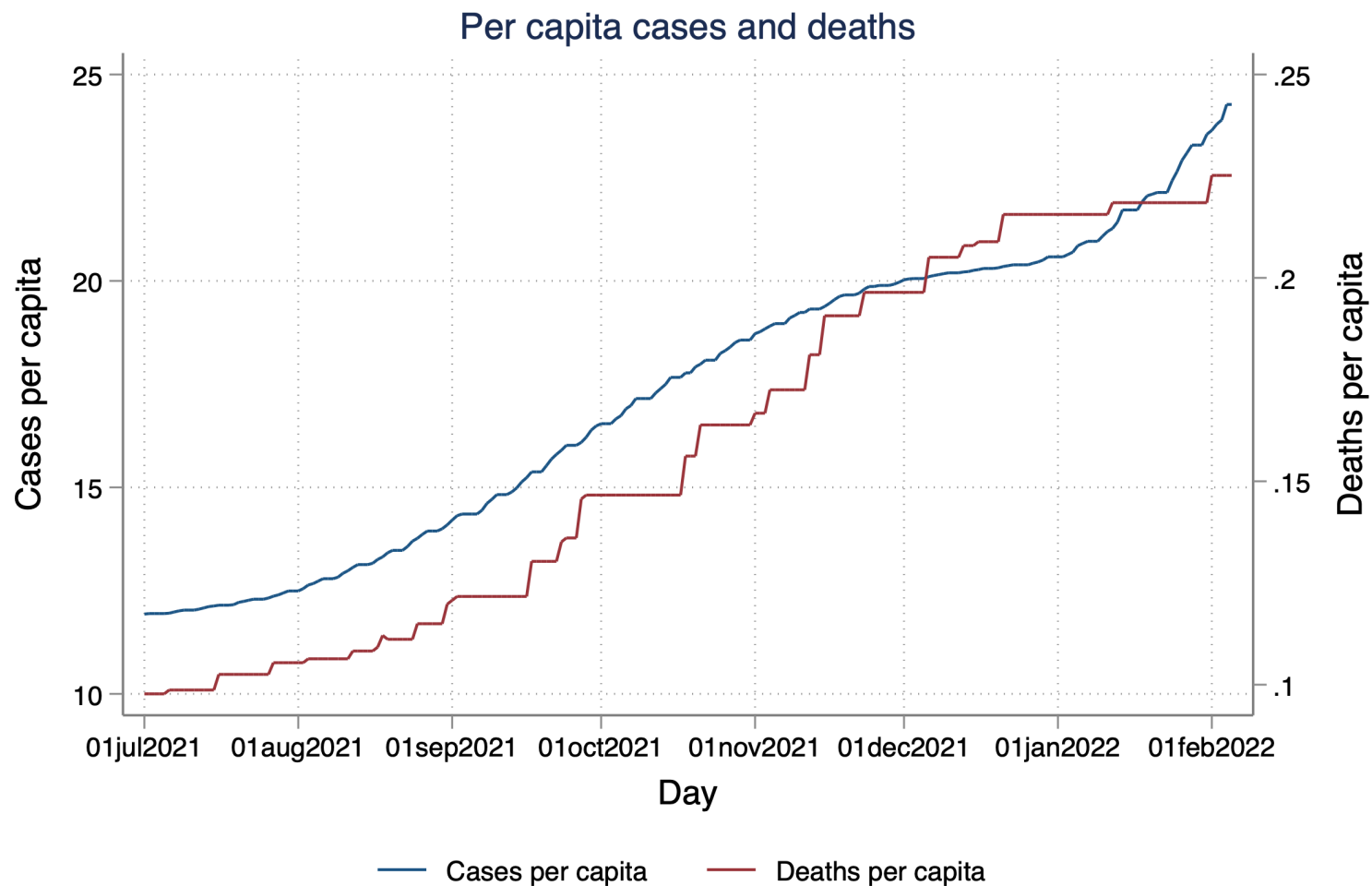
Cases: Omicron = 5 × Δ

## Region 1: New England



Hospitalizations: Omicron = 1.8 ×

# Flathead County



# Repercussions of COVID

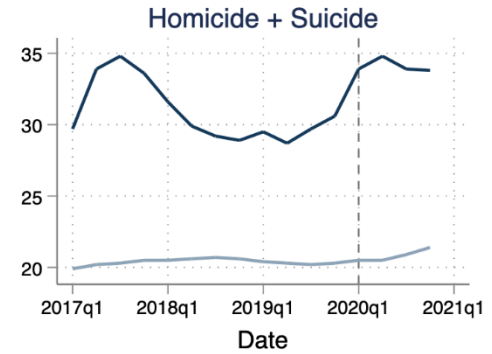
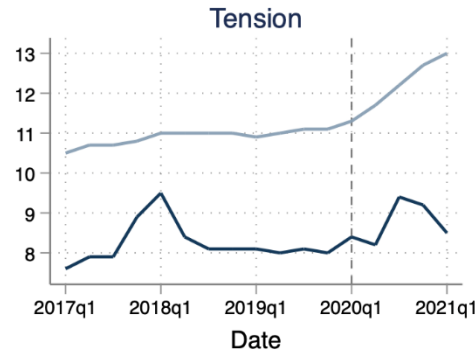
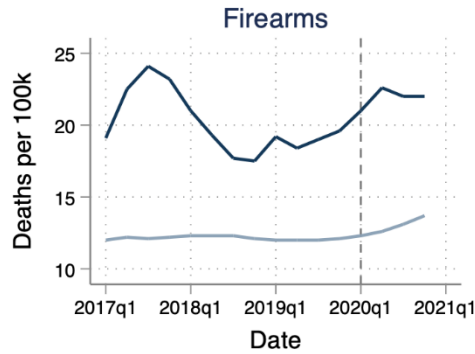
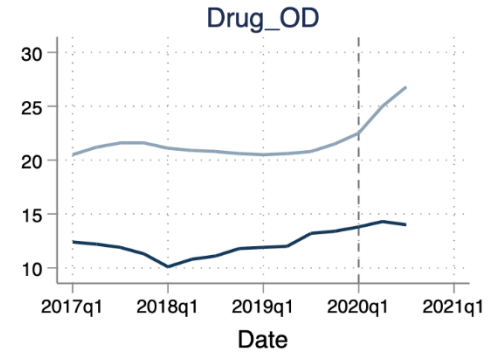
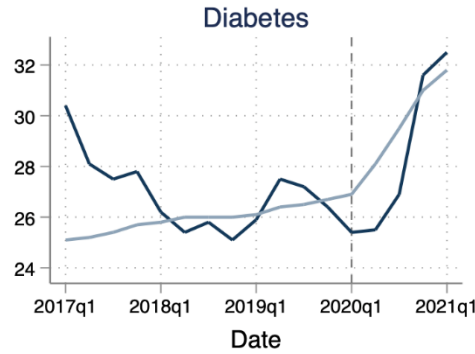
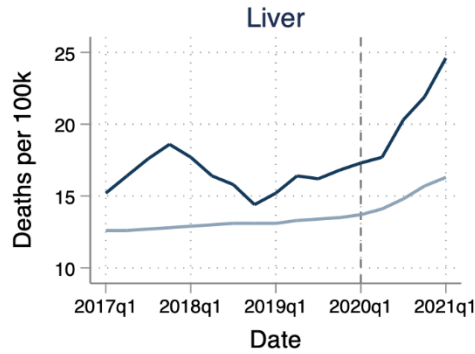
- Mental health declining: anxiety, depression, PTSD
- Alcohol and drug use on the rise
- Homicide/Suicide/Violence
- Fewer hospital visits for non-COVID medical needs
- Long (COVID) term effects: lasting impact on healthcare system and economy – no such thing a mild case (25-50%)
  - Organ damage
  - Lung, artery and blood vessel
  - Fatigue/Mental acuity
  - ????





# Secondary impacts in MT

## Causes of Death

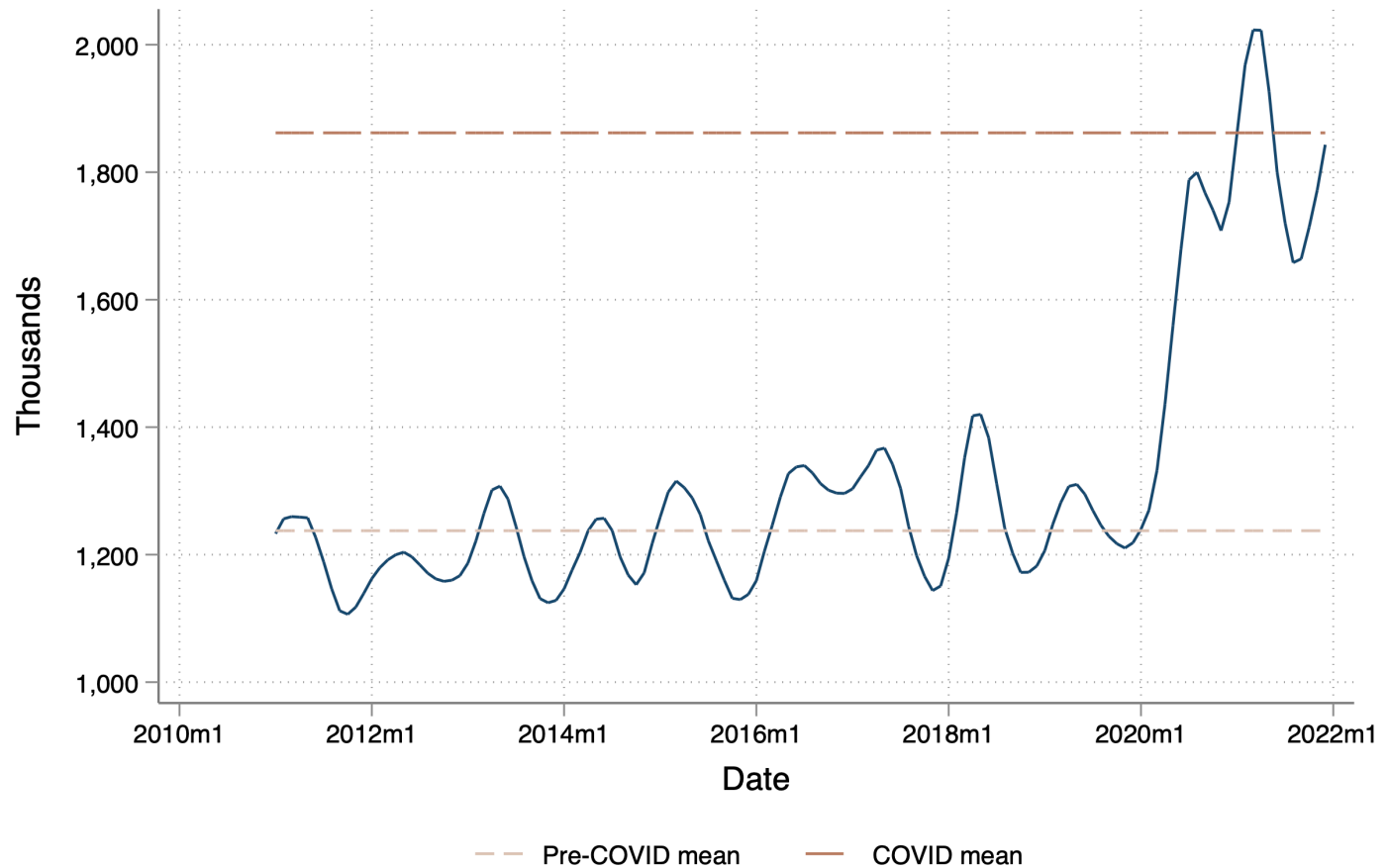


— Montana — United States

(Source CDC. Horizontal line: beginning of Covid)



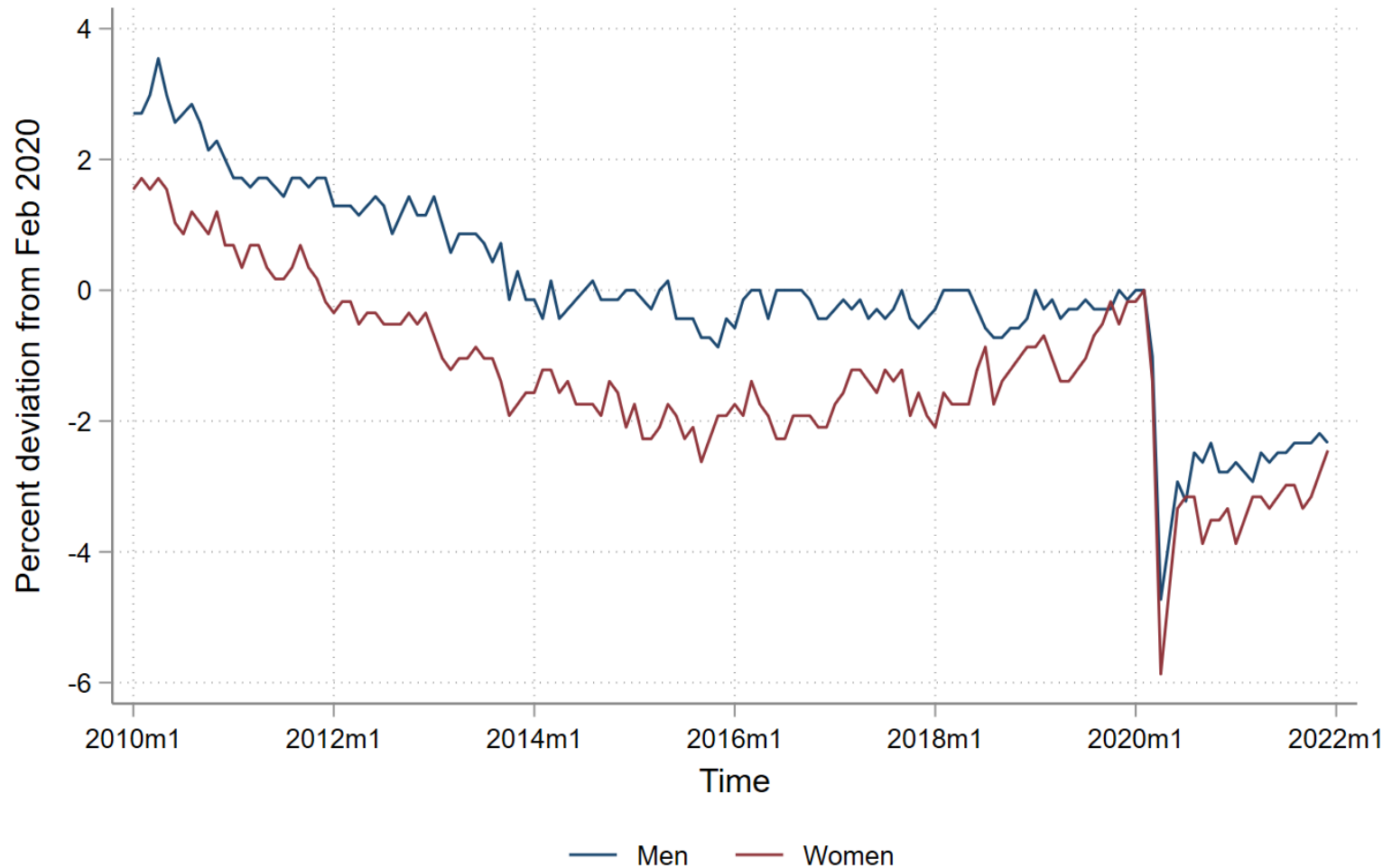
# Work absences: short and long term economic consequences



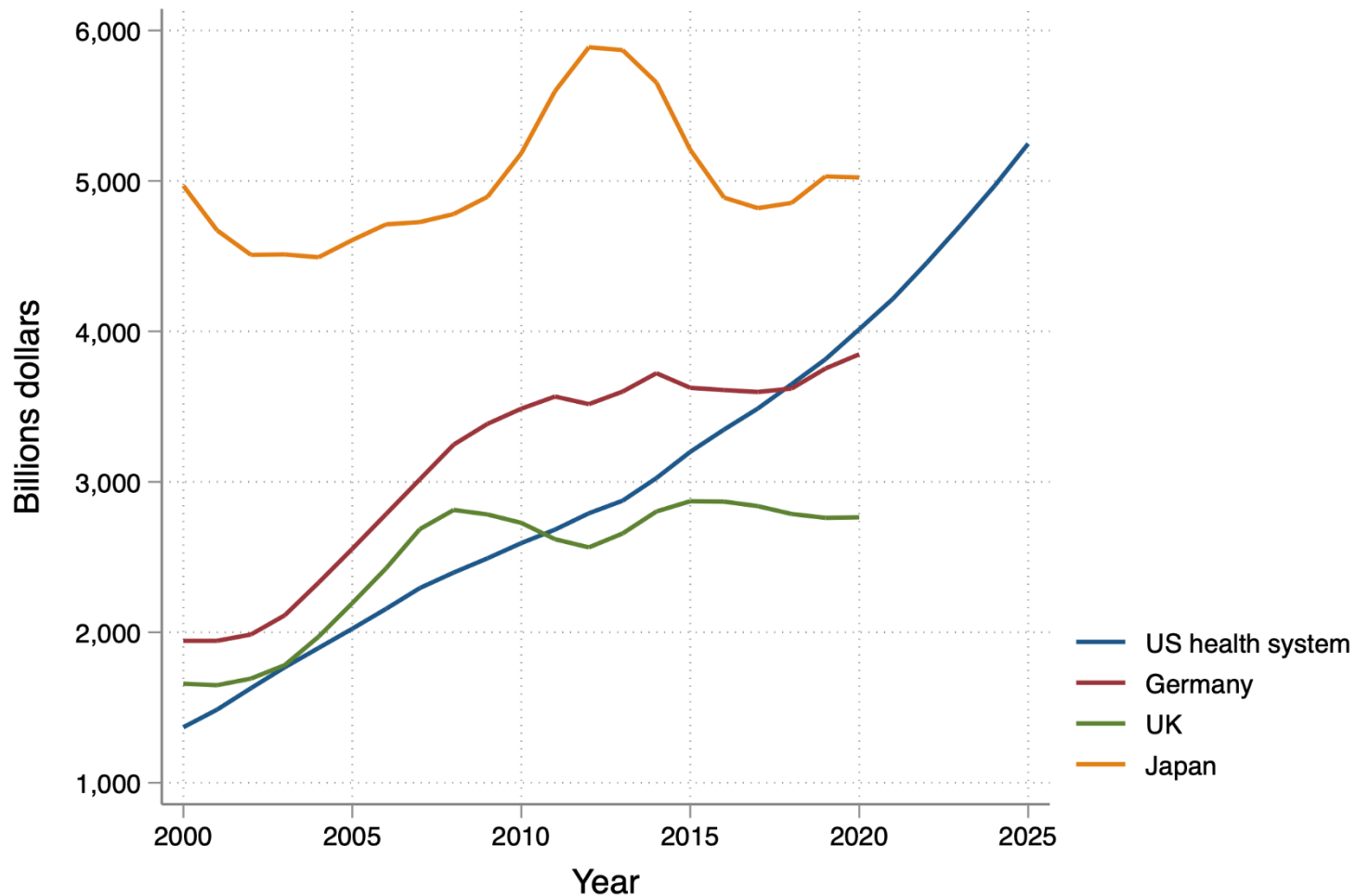
Dashed lines are averages for pre and with C19: affected about 6% labor force overall



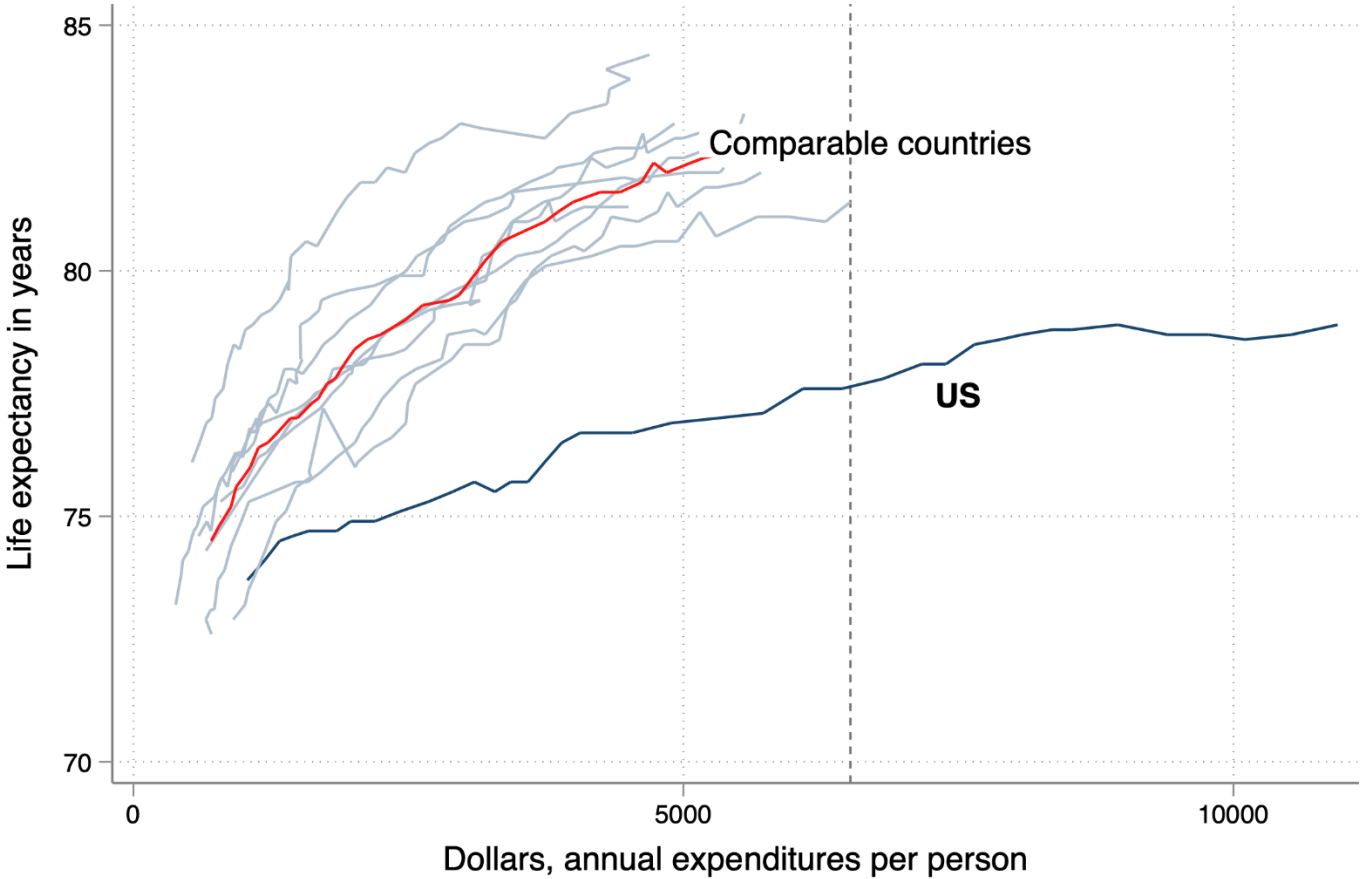
## Labor force participation rate: percent difference from Feb 2021



# “A-Medic-a” is growing: in 2021 4<sup>th</sup> largest global economy



# US Expenditure and Life Expectancy

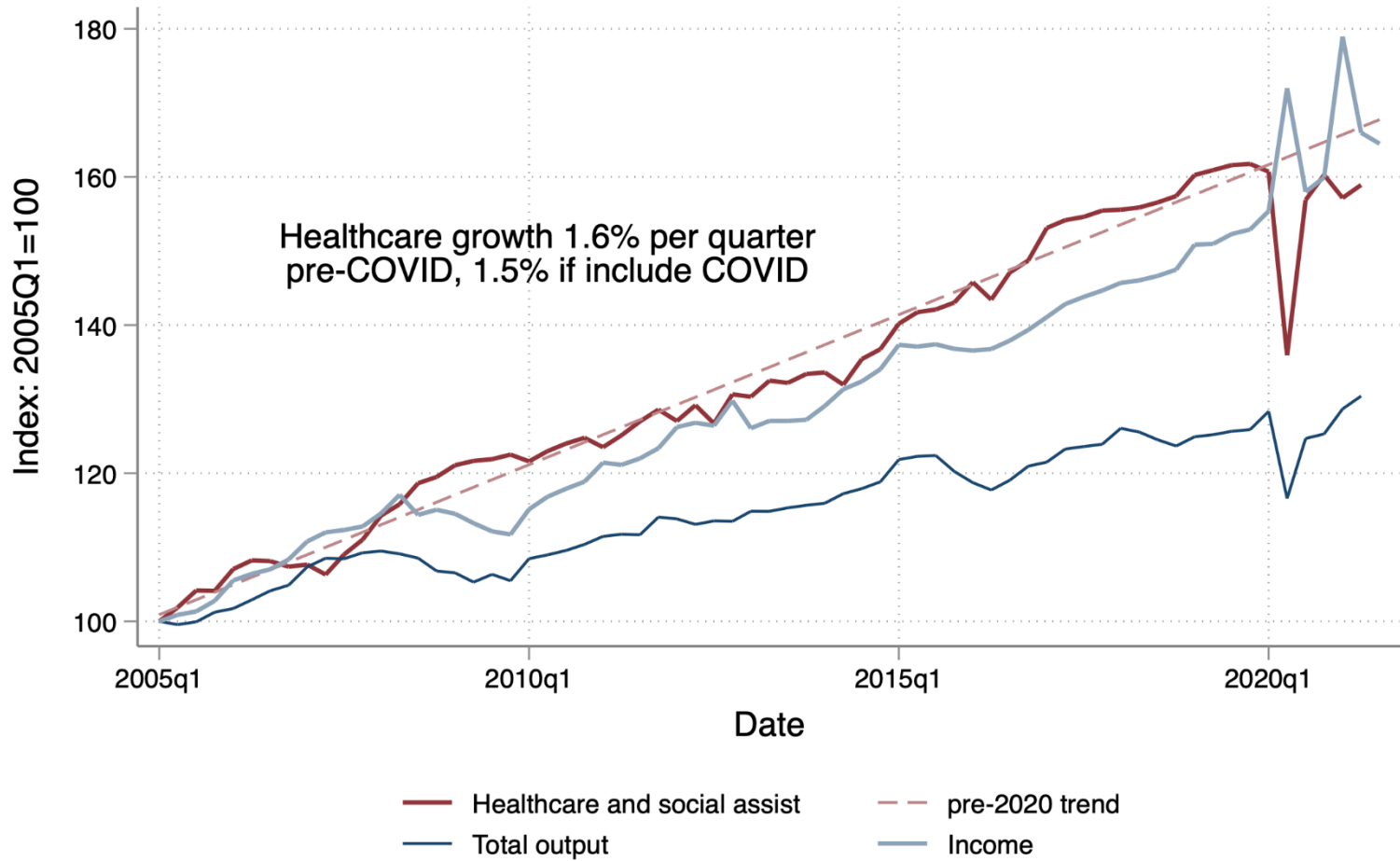


Why?

- Opioids
- Homicide/suicide
- Obesity
- Access to healthcare
- Road accidents
- COVID



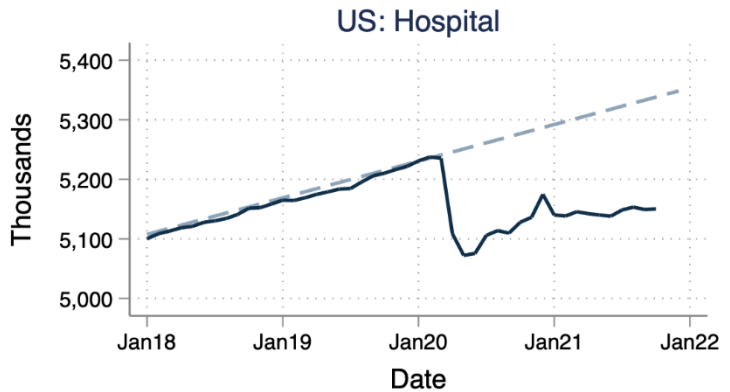
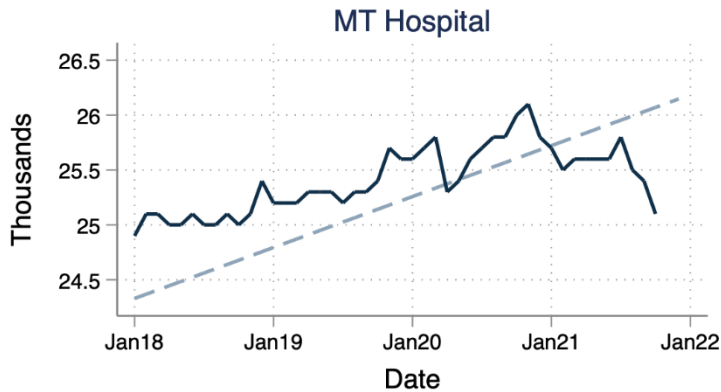
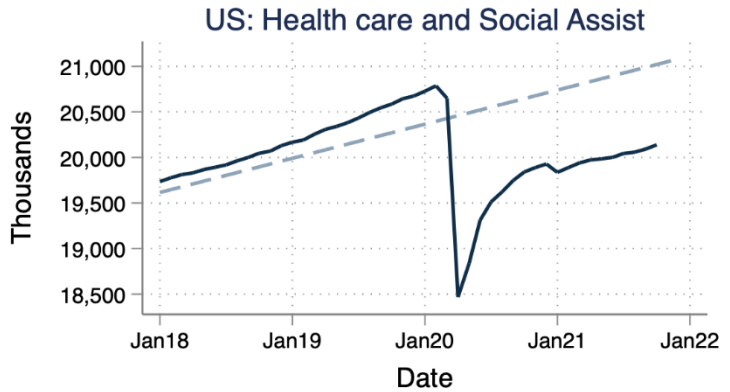
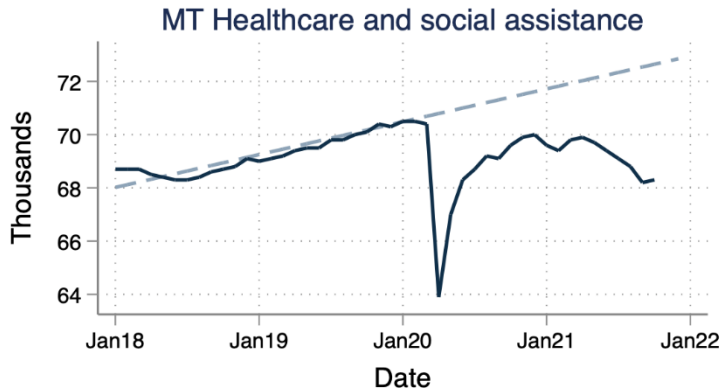
# MT: Health Care, Real GSP, Population



In 2012 prices



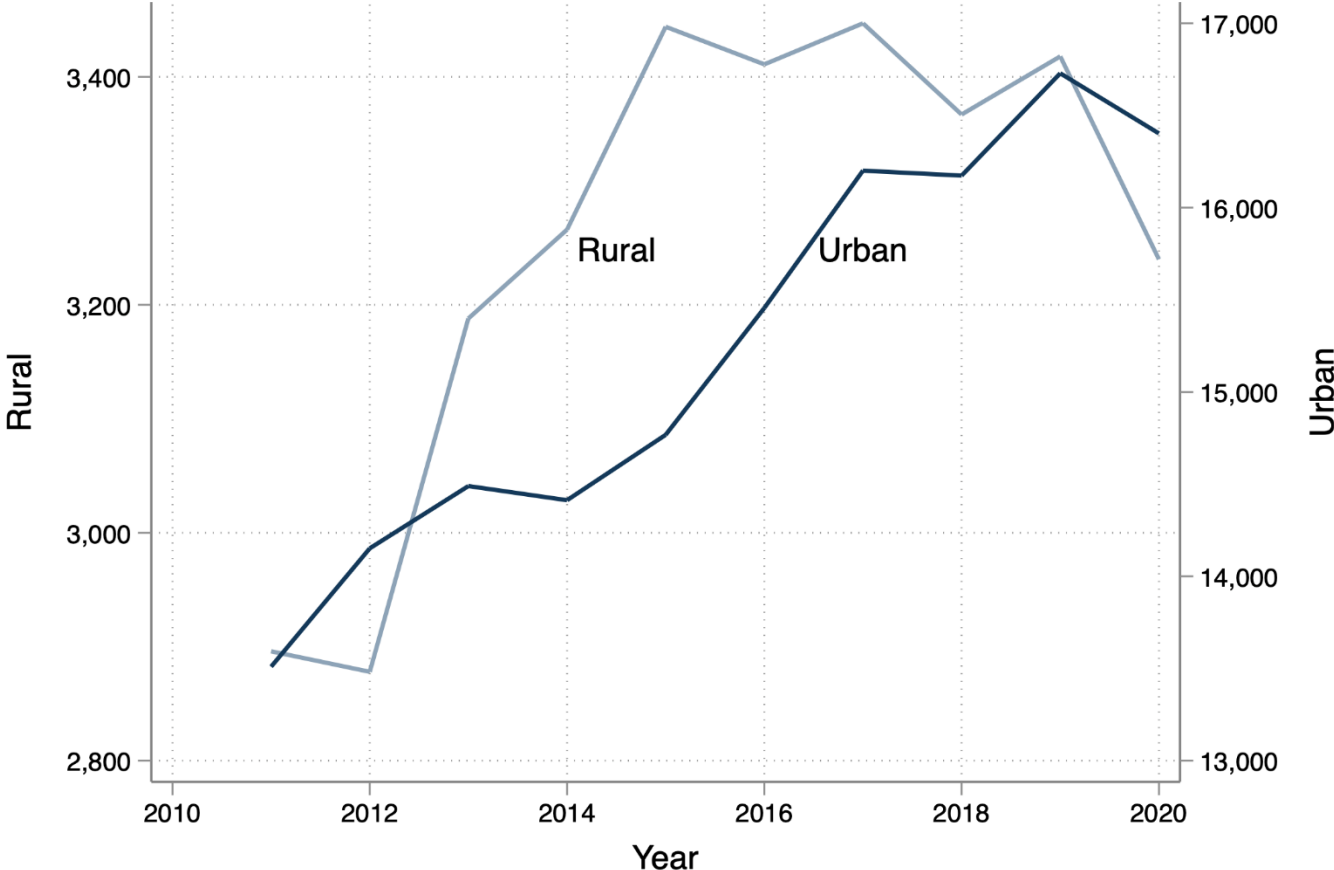
# Employment in Montana vs US



— pre Feb 2020 Trend      — Employees

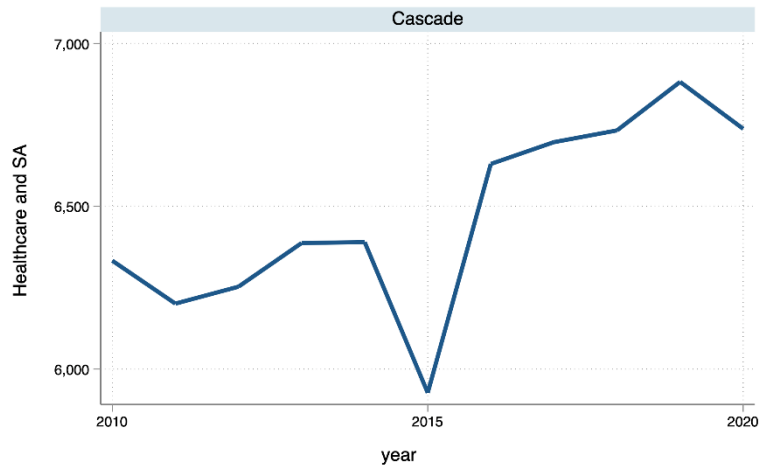


# Montana: urban vs rural healthcare employment

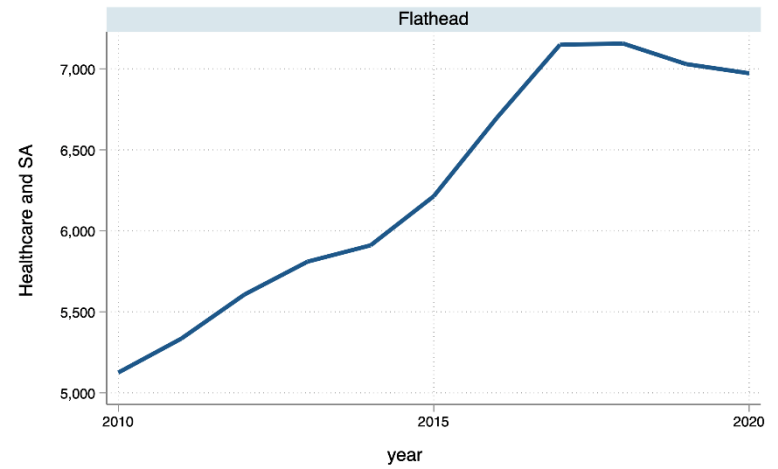




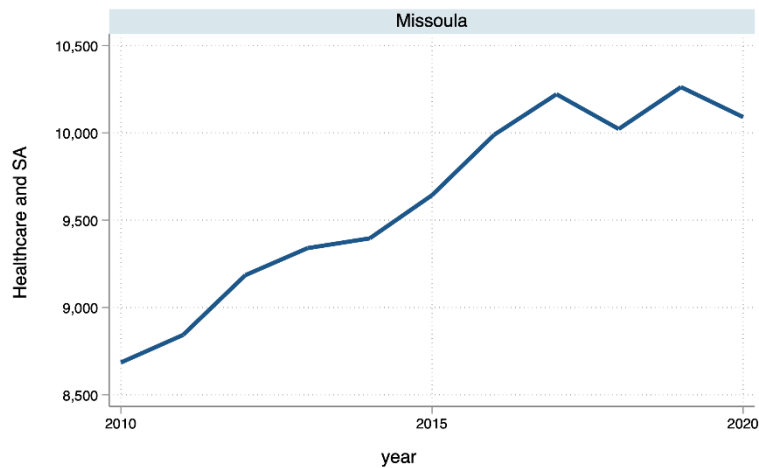
# Employment: Four largest hospital counties



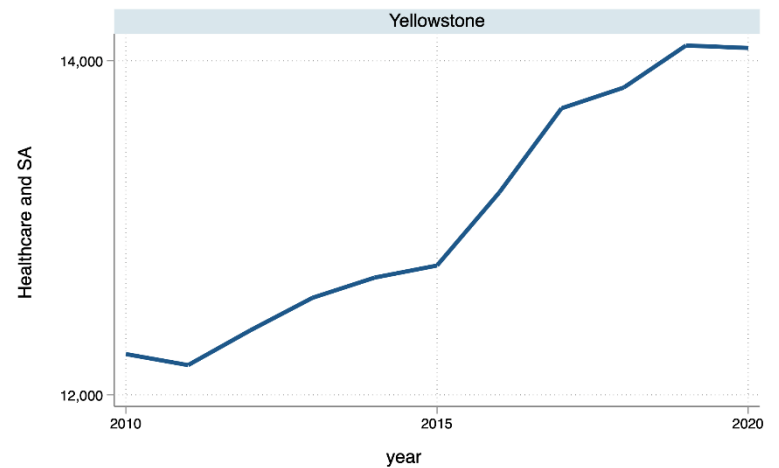
Graphs by County



Graphs by County



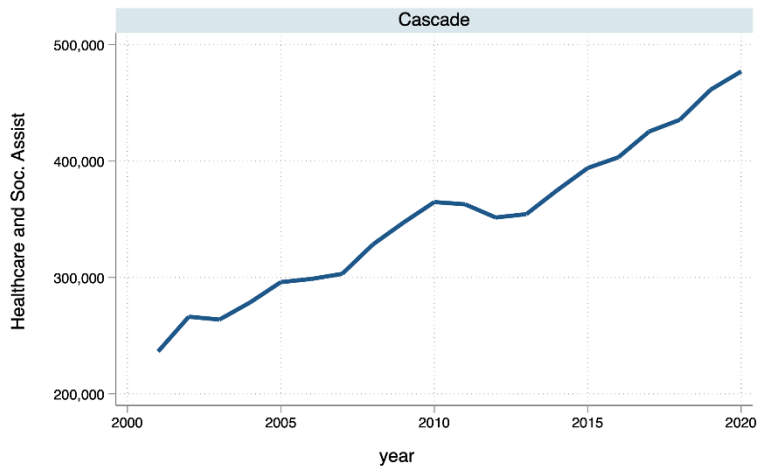
Graphs by County



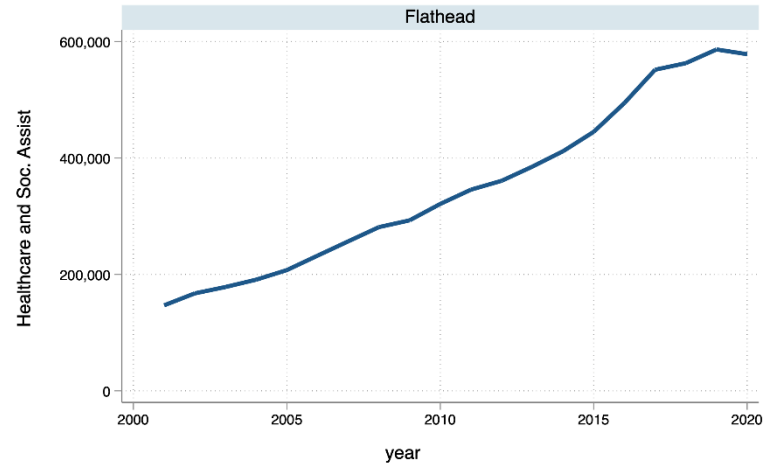
Graphs by County



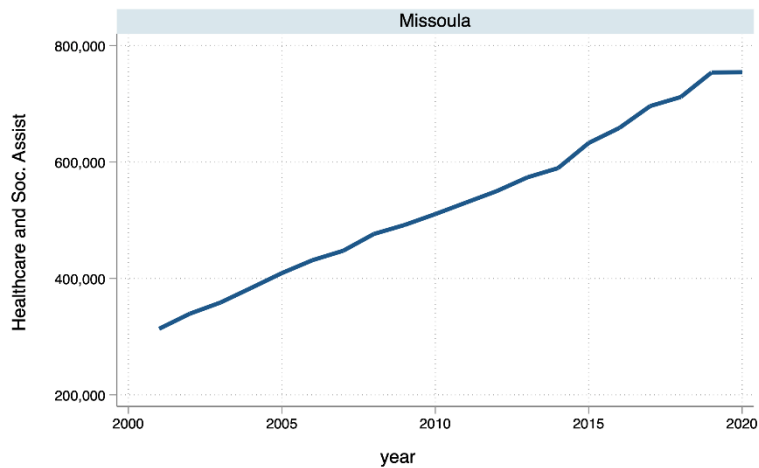
# Income: Four largest hospital counties (thousands \$)



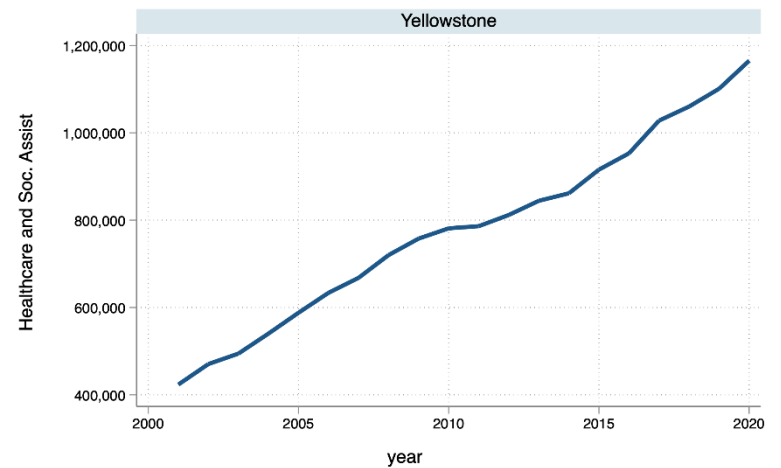
Graphs by County



Graphs by County

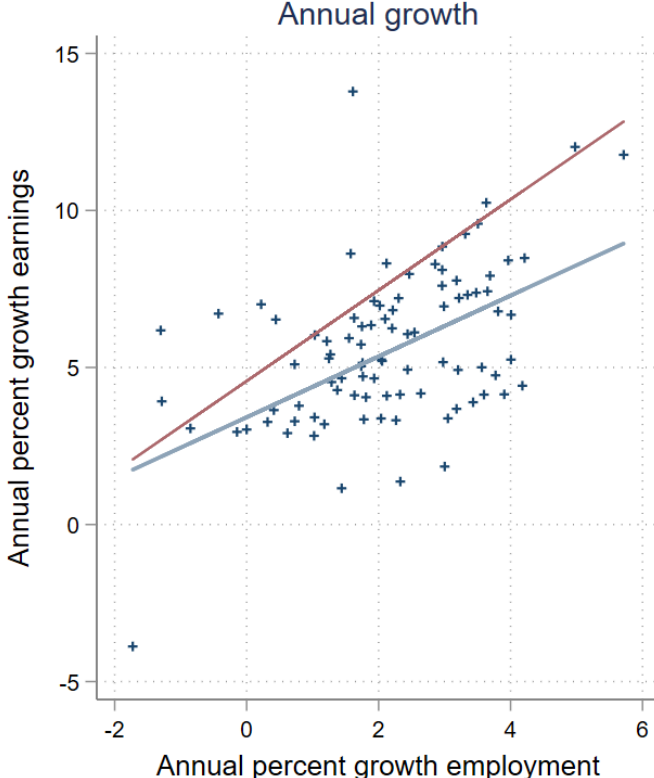
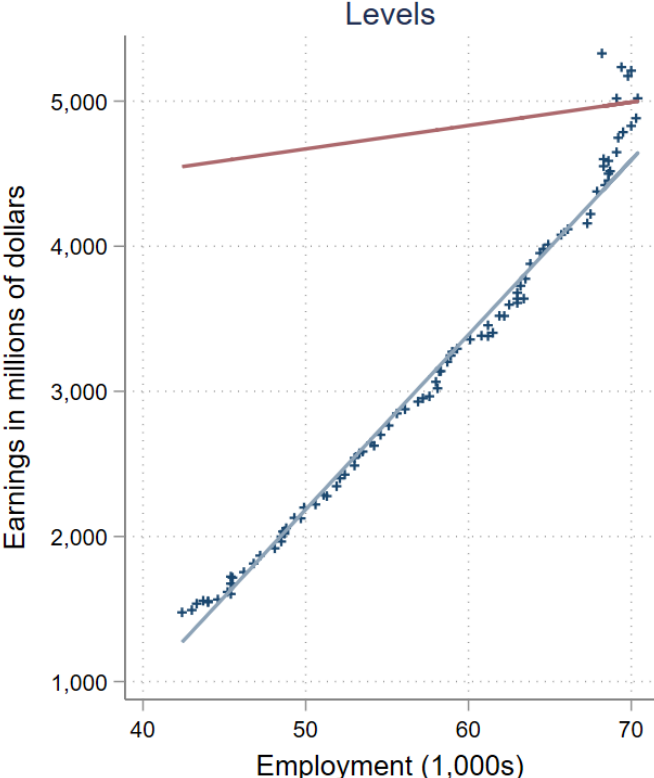


Graphs by County



Graphs by County

# Montana healthcare and social assistance: Earnings and employment



+ Earnings    — Pre-C19    — C19

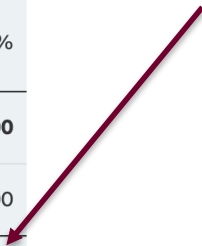


# KFF: Unvaccinated cost to US healthcare system

Preventable COVID-related hospitalization costs for unvaccinated people in the U.S., June-August 2021

	June 2021	July 2021	August 2021	Total
New hospital admissions of adult patients with confirmed COVID-19	60,000	125,000	345,000	530,000
Estimated share of adults hospitalized with COVID-19 who were unvaccinated	86%	86%	86%	86%
Estimated number of unvaccinated adults hospitalized for COVID-19	51,000	108,000	297,000	456,000
Estimated share of hospitalizations primarily for COVID-19	75%	75%	75%	75%
Estimated number of unvaccinated adults hospitalized primarily for COVID-19	39,000	81,000	222,000	342,000
Estimated share of unvaccinated hospitalizations for COVID-19 that were preventable	84%	84%	84%	84%
<b>Estimated number of preventable COVID-19 hospitalizations</b>	<b>32,000</b>	<b>68,000</b>	<b>187,000</b>	<b>287,000</b>
Approximate cost per COVID-related hospital admission	\$20,000	\$20,000	\$20,000	\$20,000
<b>Estimated preventable cost for unvaccinated COVID-related adult hospitalizations</b>	<b>\$0.6 Billion</b>	<b>\$1.4 Billion</b>	<b>\$3.7 Billion</b>	<b>\$5.7 Billion</b>

Estimated cost to healthcare system between June-August: \$5.7 billion



Note: Numbers may not sum due to rounding.

Source: KFF analysis of CDC, CMS, and HHS Protect data

Peterson-KFF  
**Health System Tracker**



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Healthcare

# Direct healthcare costs to Montana

- July-November, 42,000 Montanans hospitalized for COVID-19

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Adult admissions with confirmed COVID-19	42,000
Estimated number of unvaccinated adults	36,120
Estimated number of unvaccinated hospitalizations primarily for COVID	27,090
Estimated number of preventable hospitalizations	22,756
Average cost per COVID related hospitalization (national average)	\$20,000
Estimated cost of unvaccinated hospitalizations	\$35 million

Adjusted for length of stay



# Thank You

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[www.bber.umt.edu](http://www.bber.umt.edu)

