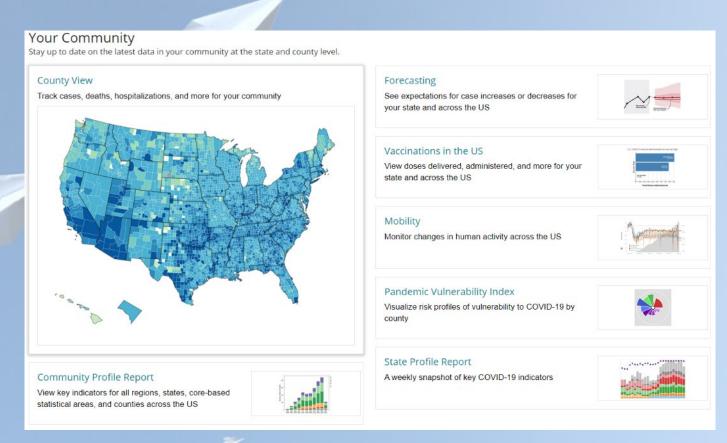


Dave Bellusci, FCAS, MAAA WCIRB California

Rick Poulin, FCAS, CPCU Travelers

Neal Leibowitz, FCAS, MAAA Liberty Mutual

Reliable Sources for COVID Data:





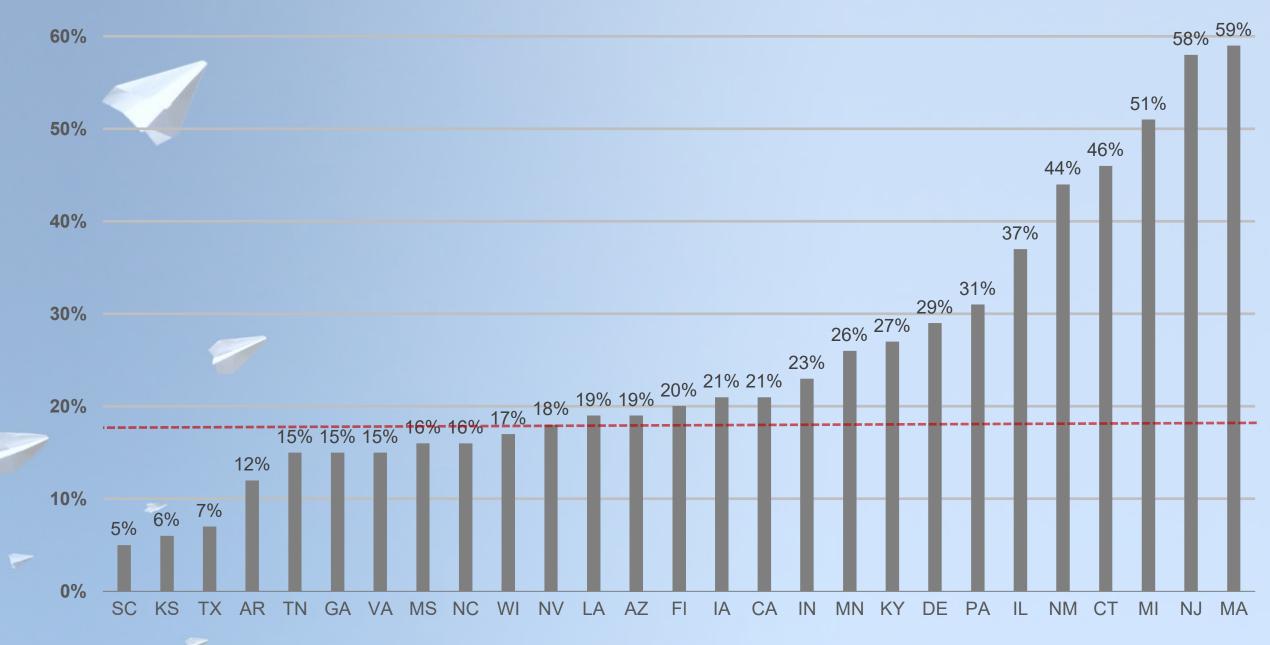
<u>covid.cdc.gov/covid-data-tracker/#datatracker-home</u>
<u>worldometers.info/coronavirus/country/us/</u>
<u>coronavirus.jhu.edu/</u>

Snapshot of the CDC COVID-19 Data Tracker:



COVID-19
NOVEL CORONAVIRUS PNEUMONIA (NCP)

COVID-19 Lost-Time Claim Share of All Lost Time Claims by State – Q2 2020



Source: The Early Impact of COVID-19 on Workers' Compensation Claim Composition. WCIRB

California COVID-19 Claims in 2020

110,000

Number of COVID-19 claims reported as of January 25, 2021

20%

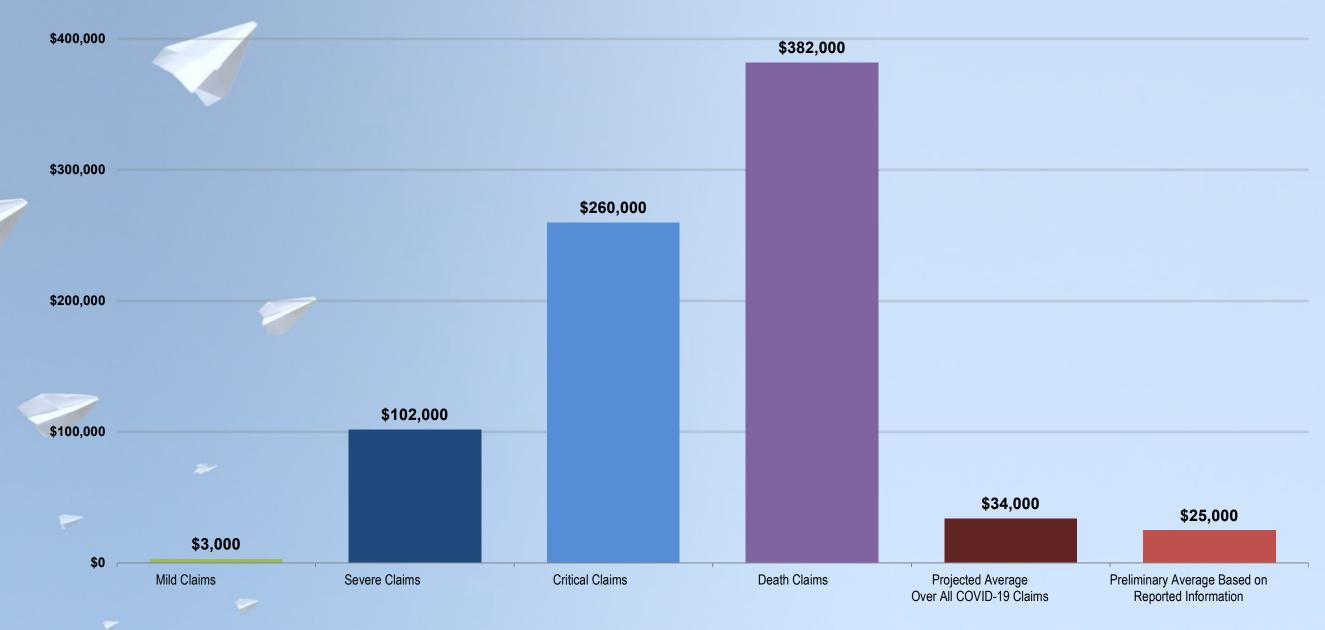
COVID-19 share of all indemnity claims filed for April to December

28%

Share of COVID-19 claims initially denied

Source: WCIRB transactional indemnity data, Division of Workers' Compensation data

Estimated Average Cost of California Accident Year 2020 COVID-19 Claims







Wholesale Trade



Agriculture and Mining



Manufacturing



Educational Services



Arts, Entertainment and Recreation



Office and Clerical

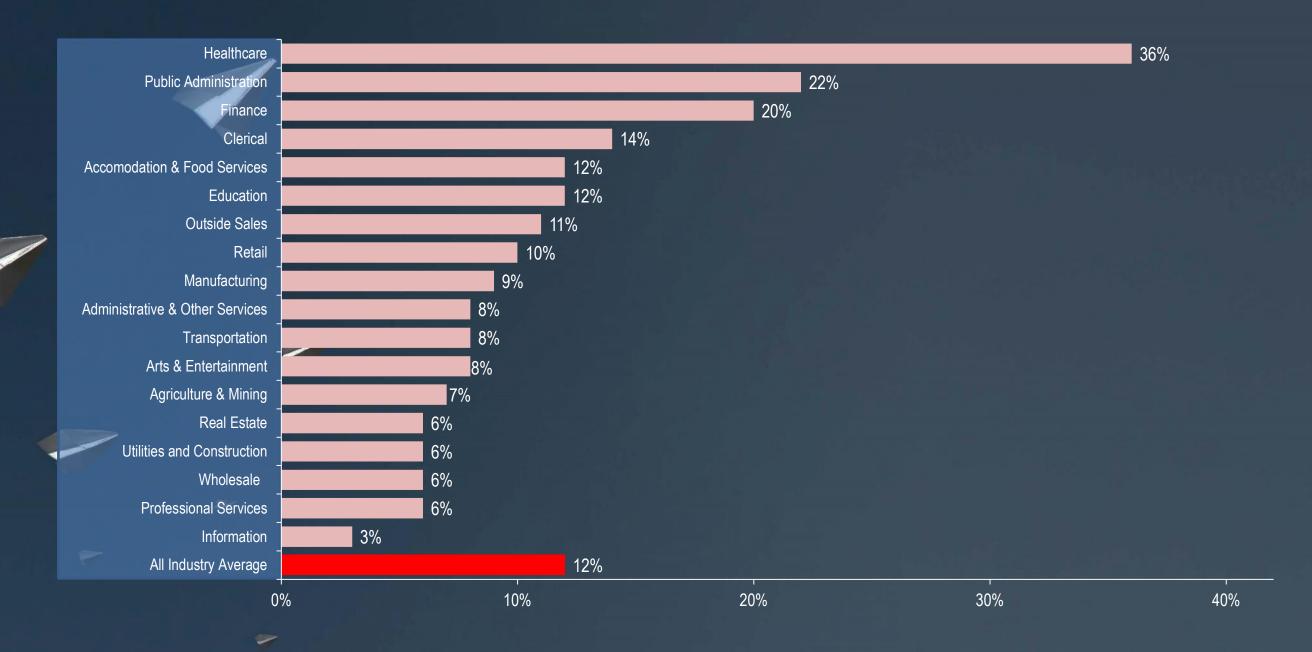


Accommodation and Food Services

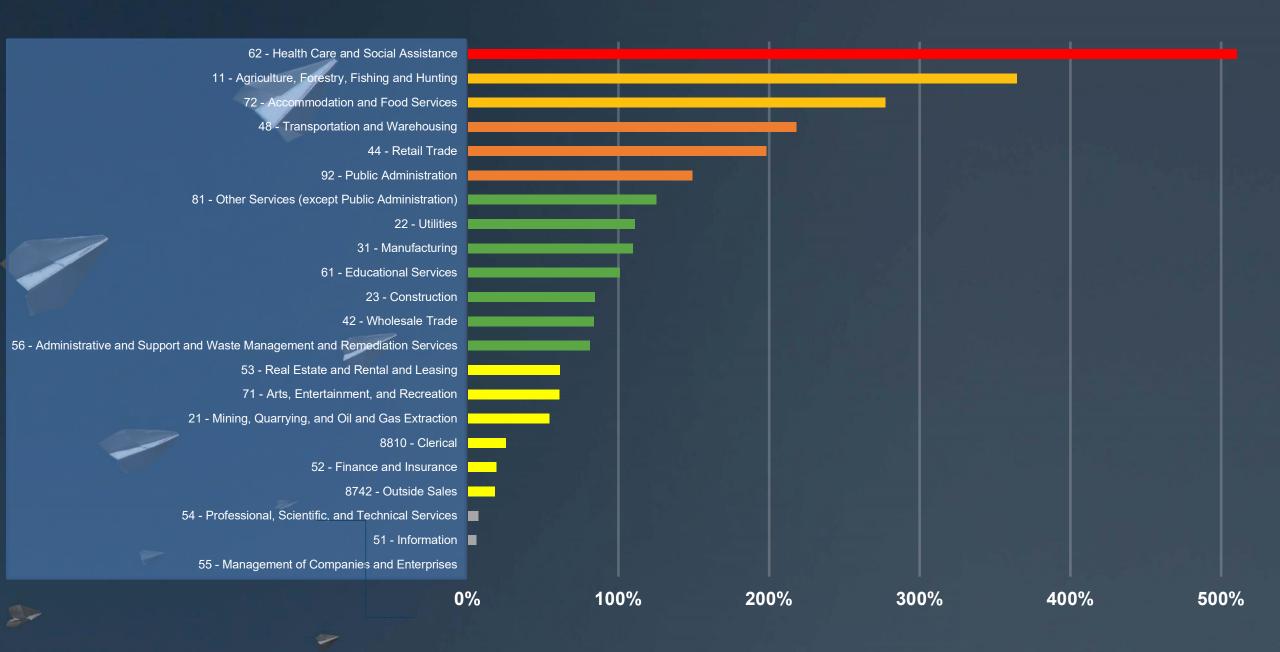
What Industries are

most affected?

Share of Total California Claims Due to COVID-19 by Industry



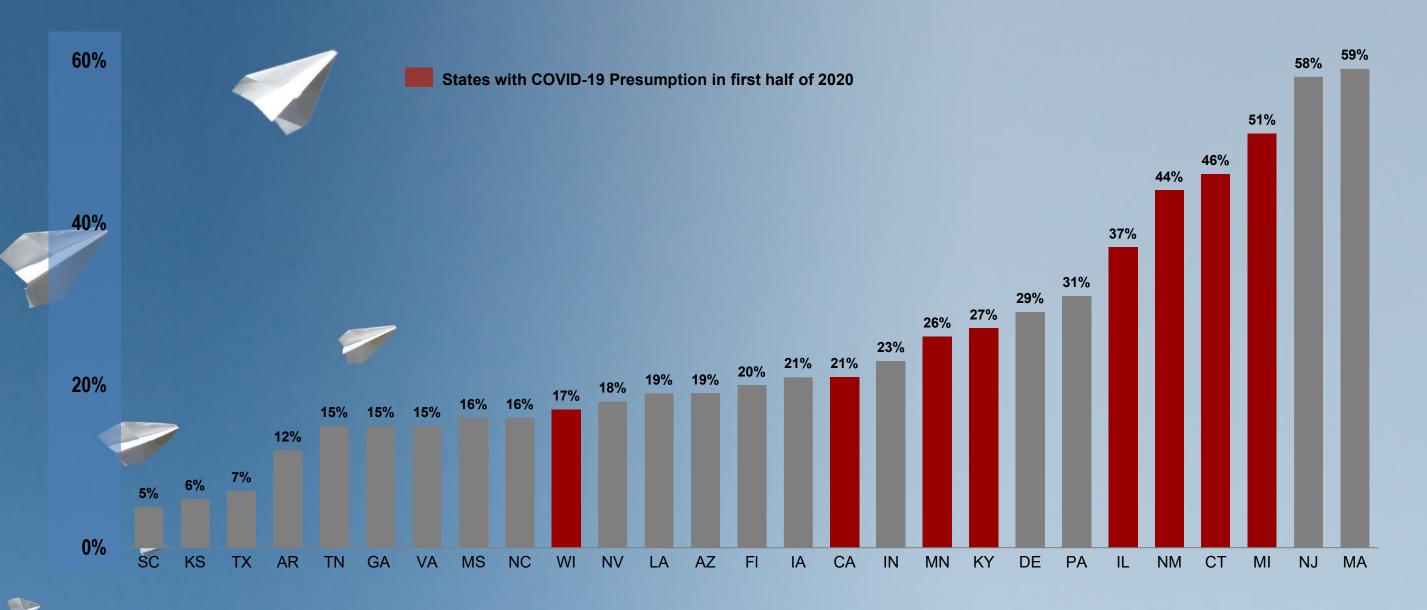
Industry California COVID-19 Claim Count to Payroll Relativities



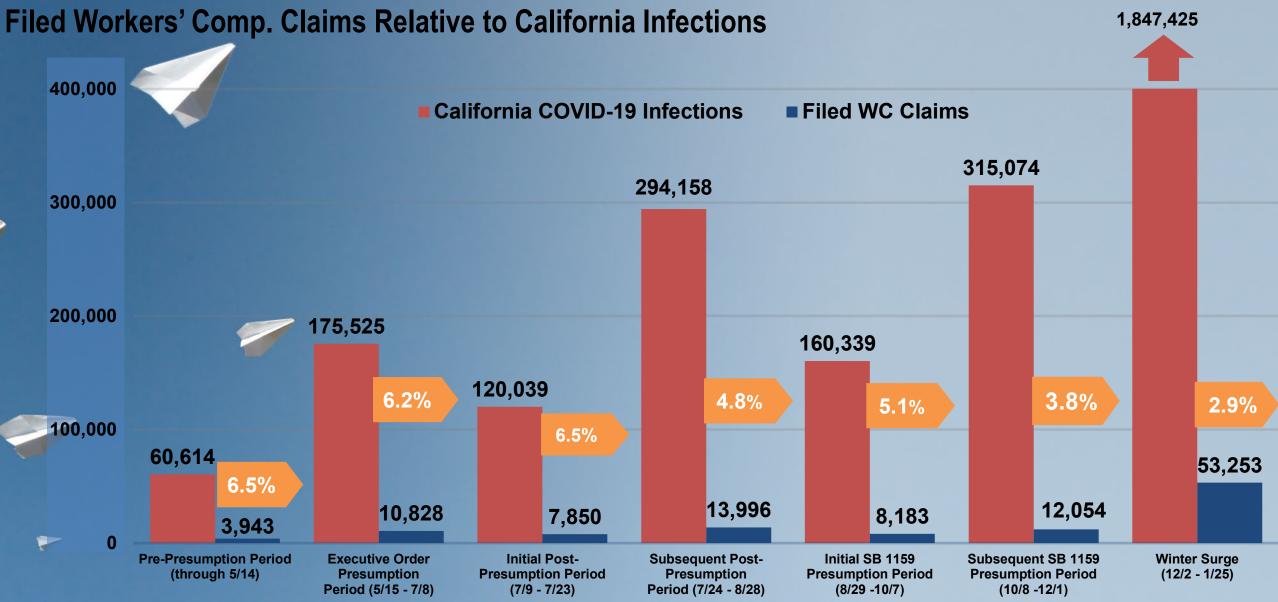
Source: California Division of Workers' Compensation FROI records from WCIS as of 8/23/2020 and UCLA Anderson wage forecasts.



COVID-19 Lost-Time Claim Share of All Lost Time Claims by State – Q2 2020



California Workers' Compensation COVID-19 Claims



Sources: California DWC and COVID Tracking Project. Infection counts reflect data 7 days prior to the DWC claim counts to reflect the typical delays in workers' compensation claim filings.

Longer-Term Health Uncertainties

Type, proportion and duration of persistent COVID-19 symptoms		
Persistent symptom	Patients affected by symptom	Time to symptom resolution
Common physical symptoms		
Fatigue	15 - 87 %	3 months
Shortness of breath	10 - 71 %	2 - 3 months
Chest discomfort	12 - 44 %	2 - 3 months
Cough	17 - 26 %	2 - 3 months
Impaired smell sensation	13%	1 month
Less common physical symptoms		
Joint pain, headache, dry mouth, runny nose, impaired taste, poor appetite, dizziness, others	< 10 %	Unknown (likely weeks)
Psychological and neurocognitive		
PTSD	24%	6 weeks to 3 months
Impaired memory	18%	
Poor concentration	16%	
Anxiety / depression	22%	
Quality of life reduction	> 50%	Unknown (likely weeks)

Data are from earlier period in the pandemic; data is evolving

More than 1/3 of patients with COVID-19 experience more than one symptom

Recovery varies depending on premorbid risk factors and illness severity; hospitalized patients--especially in ICU--are more likely to have a protracted course than those with mild disease.

Adapted from McIntosh K. Coronavirus disease 2019 (COVID-19): Clinical features. UpToDate, 2021. Accessed Jan 21, 2021. © UpToDate.

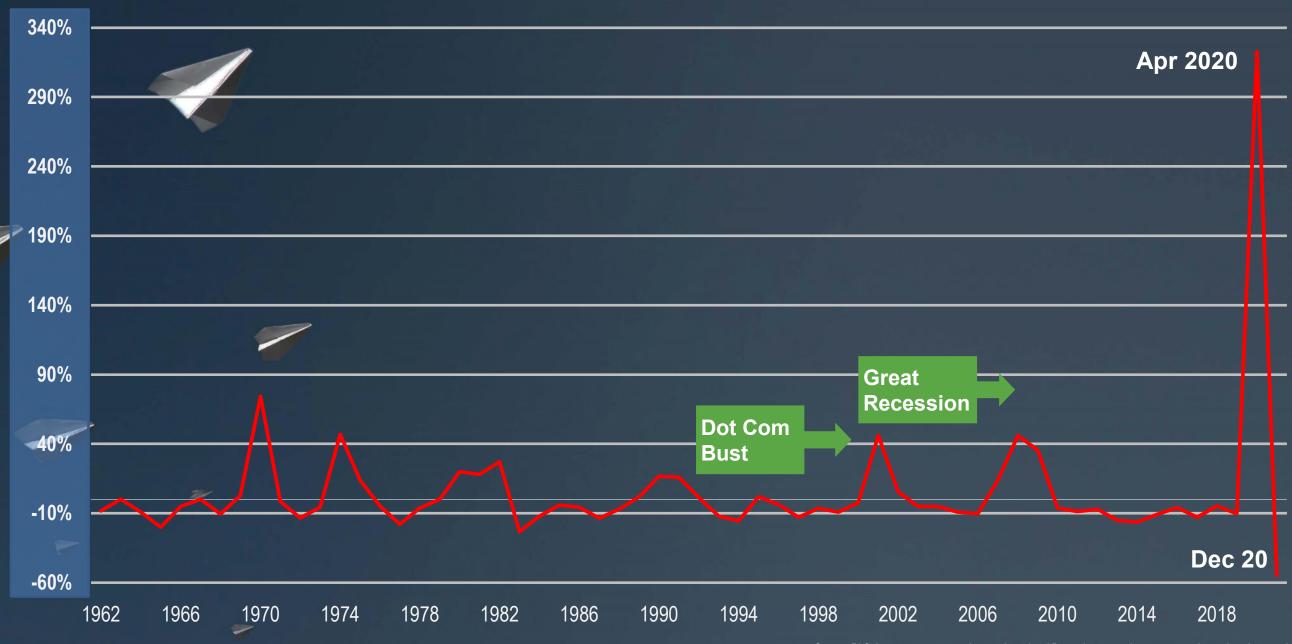
Post-Acute Syndromes

- 1. Reinfection 0.1% [Abu-Raddad LJ, medRxiv, 2021.]
- 2. Post-intensive care syndrome (PICS) [Mikkelsen, UpToDate, 2021]
- a. Rehospitalization common (up to 25% at 30-days)
- b. High morbidity physical (9%; 2-yr), cognitive (24-34%; 1-yr), psychiatric (25%; 5-yr)
- c. High mortality 32% at 5 years
- 3. Medical complications
- a. Pulmonary, cardiac
- b. Neurologic (taste/smell loss, stroke, seizures)
- c. Renal
- 4. Medical symptoms (see Table)
- a. Hospitalized patients 83% at 60 days [Carfi A, JAMA, 2020.]
- b. Outpatients 32% at 43 days [Nehme M, Ann Int Med, 2020.]
- 5. "Long-Hauler" vague, generalized symptoms*
- a. Similar to chronic fatigue syndrome
- b. Fatigue (78%), post-exertional malaise (72%), brain fog (55%) at 6 months
- c. CAVEAT recall bias (retrospective study); sampling bias (+/- lab confirmation, excluded individuals < 28 d symptoms, recruited in online support groups)

^{*} International study [Davis HE, medRxiv, 2020.]

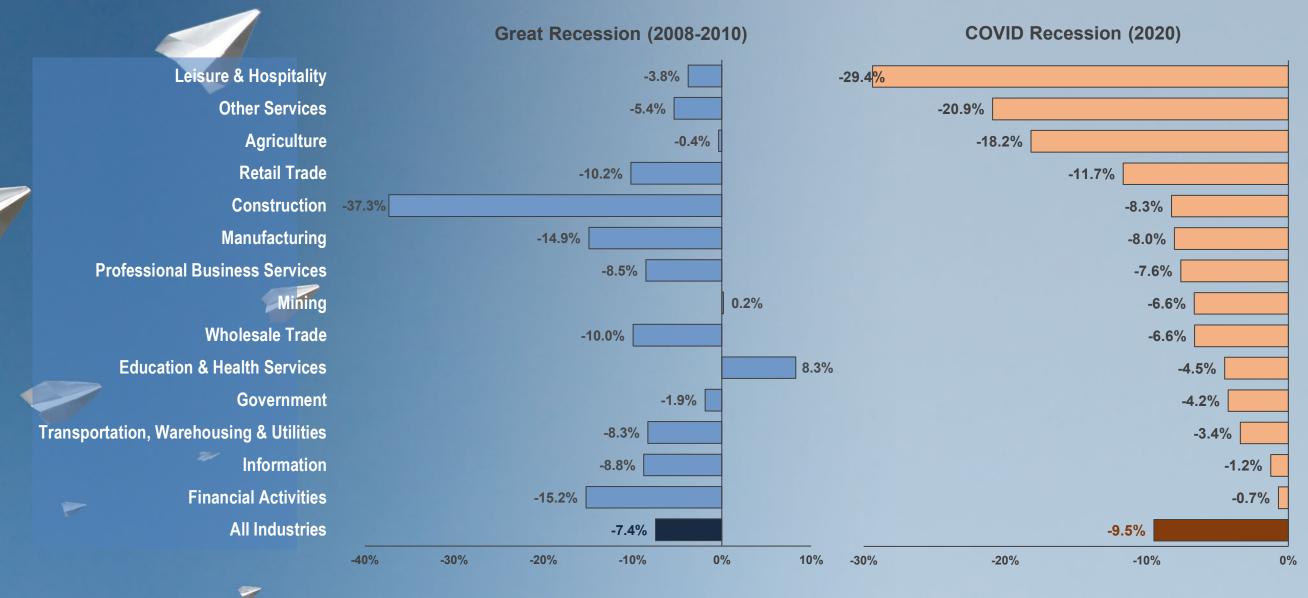


Annual Change in National Unemployment Rate



California Annual Changes in Employment by Industry Sector

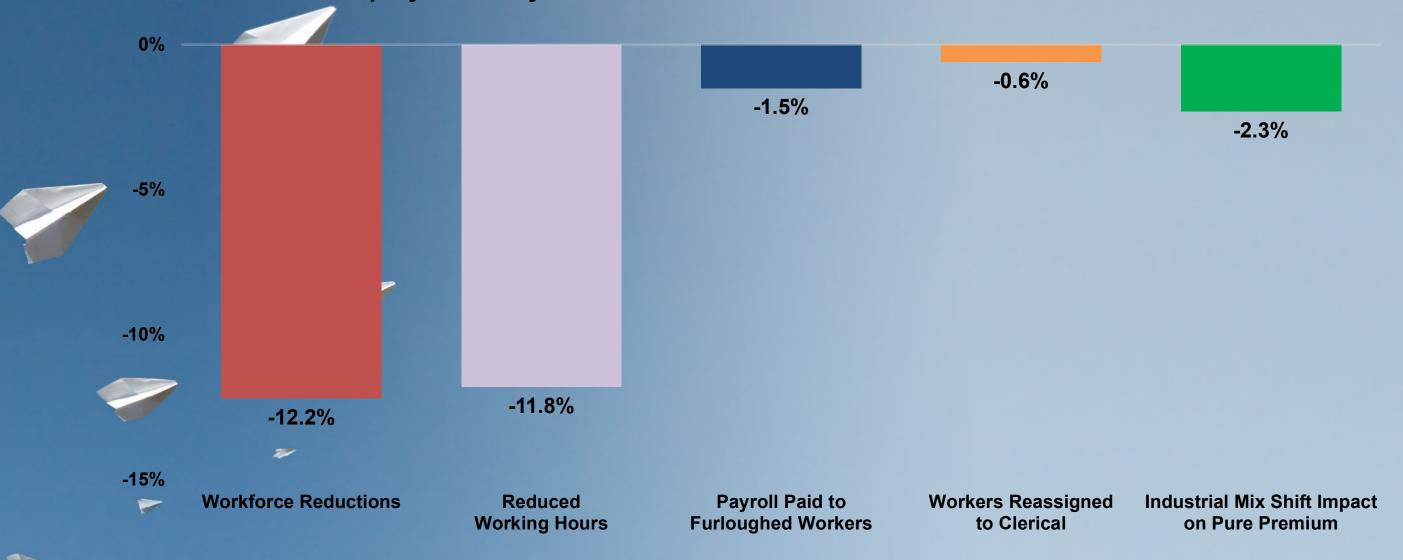
2020 Vs Great Recession - Based on BLS Data and UCLA Forecast



Sources: BLS and UCLA Anderson.

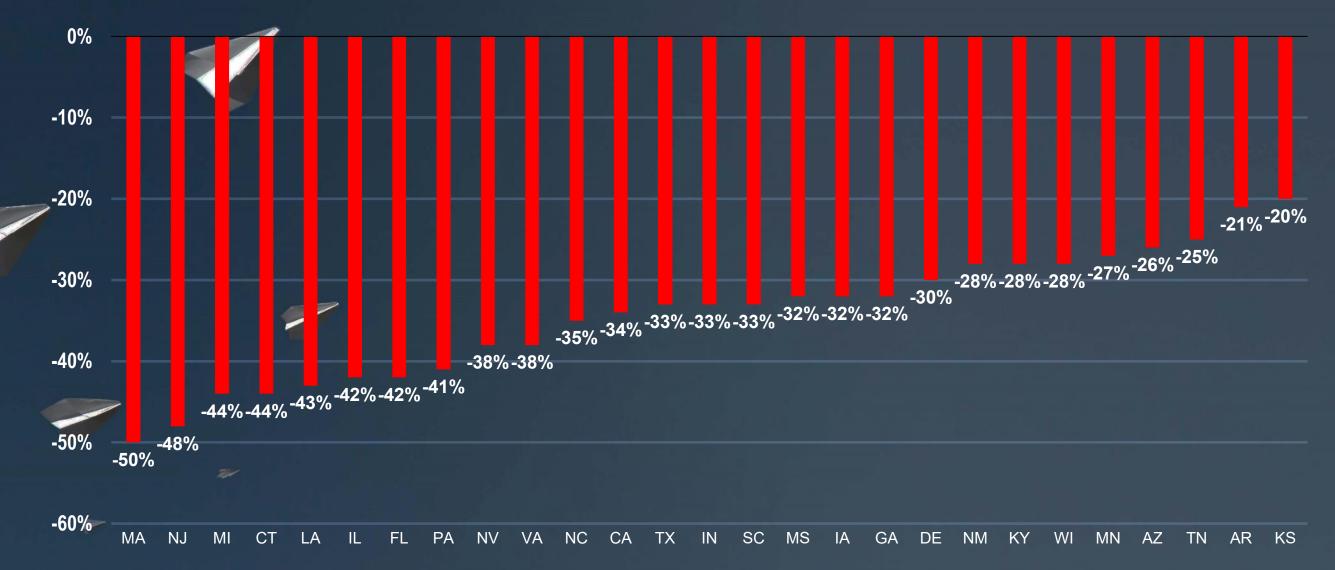
Potential 2020 California Premium Impacts

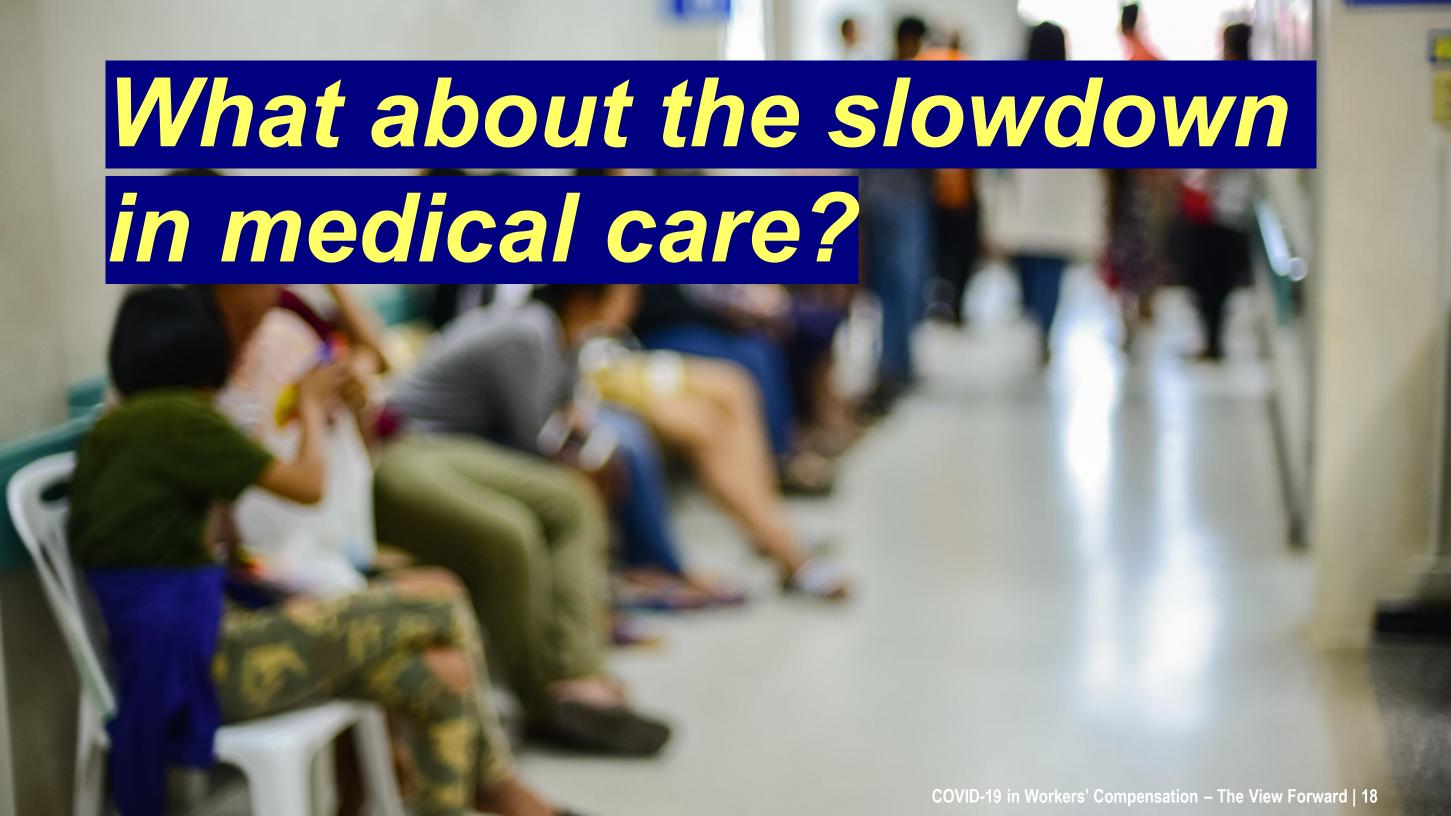
Based on WCIRB Employer Surveys and UCLA Forecast



Sources: WCIRB surveys of approximately 1,600 employers scheduled for classification inspections. BLS data and UCLA forecasts.

Percent Change in Number of Non-COVID-19 Lost-Time Claims by State Q2 2020 Vs. Q2 2021





Impact of Medical Delays



Pre-COVID-19

COVID-19 Shelter-in-Place

Early May 2020

Health care resumed normal operations in many states

Mid-March 2020
Suspension of nonurgent medical care
in some states due
to COVID-19
Pandemic.



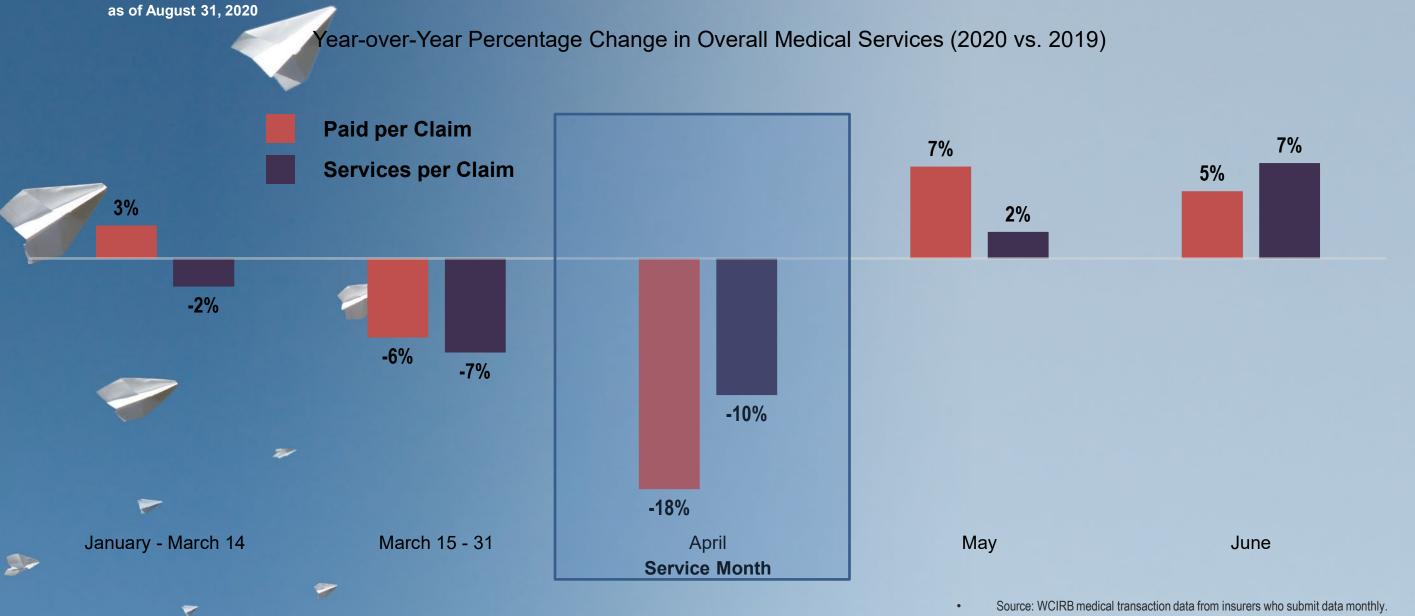
Part 1: Delays in medical treatments
Disruption in medical care access
Avoid seeking care



Part 2: Longterm cost impact of medical treatment delays

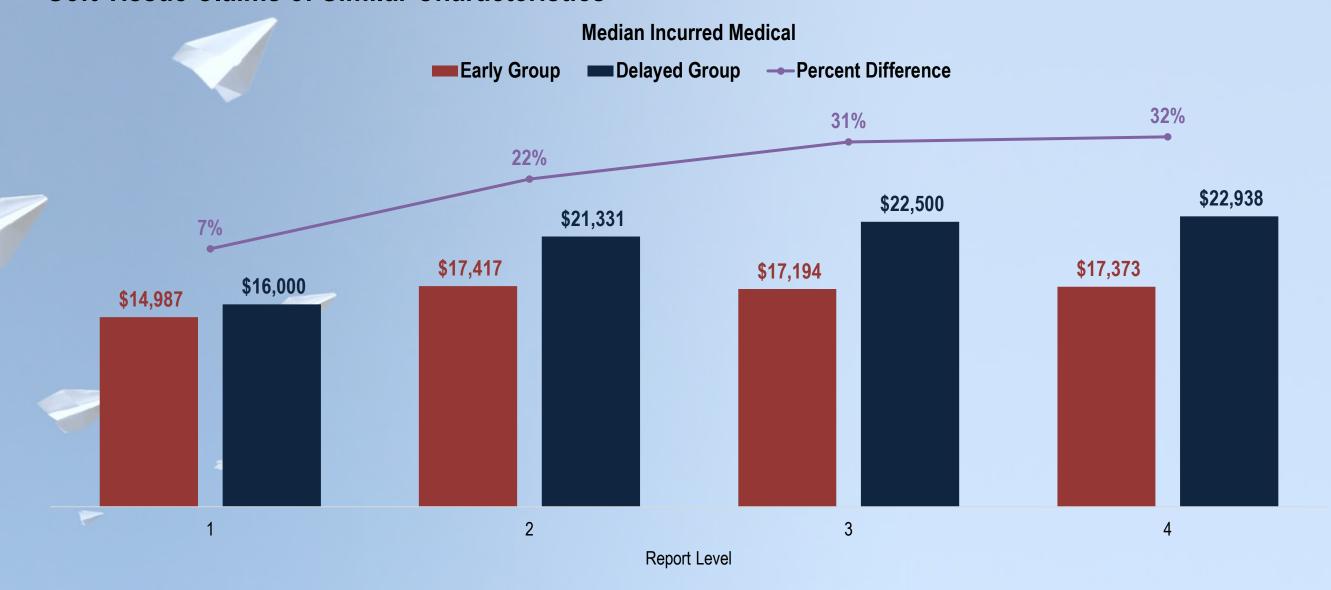
Impact of COVID-19 Pandemic

on California Overall Medical Treatment Patterns and Costs



Impact of Delayed First Medical Service on Incurred Medical

Soft Tissue Claims of Similar Characteristics

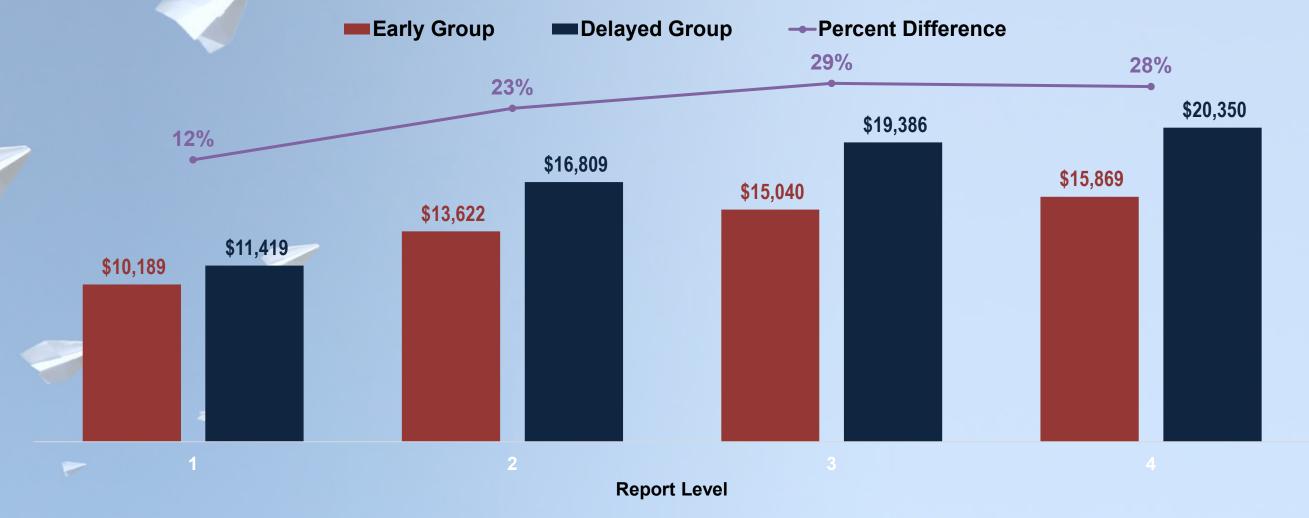


Note: Report level is a measure of valuation time. First report level is 18 months after the policy inception date, and each subsequent report level is 12 months from the previous report level.

Source: WCIRB of California unit statistical and medical transaction data.

Impact of Delayed First Medical Service on Incurred Indemnity Soft Tissue Claims of Similar Characteristics

Median Incurred Indemnity



Note: Report level is a measure of valuation time. First report level is 18 months after the policy inception date, and each subsequent report level is 12 months from the previous report level.

Source: WCIRB of California unit statistical and medical transaction data.

Questions?