



Spotlight Report

California Workers' Comp COVID-19 Death Claims: Trends & Characteristics

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Background

When the worldwide pandemic arrived in California in early 2020, the COVID-19 coronavirus was still in its infancy and there were many questions about how and where it could be transmitted, who was most susceptible, what the most effective treatments were, how it could be contained, and how it might mutate. There were also questions about whether there would be any long-term health effects on those who were infected, and what those might entail. At the same time, no one was sure what the impact would be on the state's economy or its workers' compensation system, though by the time the governor declared a state of emergency¹ in March 2020, followed shortly by a statewide stay-at-home order for non-essential workers,² the number of infections, hospitalizations, and deaths had begun to escalate, and the number of workers' compensation COVID-19 claims was following suit. In the year and a half after the first case of COVID-19 was reported in California, the impact of the virus on the state became much clearer. The statistics are sobering:

- 69.8 million COVID tests were conducted³
- 3.7 million COVID-19 cases were confirmed statewide⁴
- 63,141 COVID-related deaths were recorded⁵
- 41.8 million vaccinations were administered⁶
- In the 5-1/2 months after mandatory reporting began in January 2021, the California Department of Public Health (CDPH) received reports of 7,715 confirmed outbreaks⁷ and 83,956 outbreak-related cases.⁸
- The pre-pandemic economic boom came to a screeching halt as unemployment in the state surged to a record 2.97 million workers in April 2020,⁹ and by the end of June 2021 the state had only regained 1.47 million (54.1%) of the 2.71 million jobs that were lost.¹⁰
- An estimated \$12.3 billion in state and federal funding had been spent or committed to fighting COVID-19 in California.¹¹

¹ Proclamation of a State of Emergency, March 4, 2020. [KM C454e-20200304160159 \(ca.gov\)](#)

² Executive Order N-33-20, issued March 19, 2020. [CAP14-20200320110132](#)

³ Calif. Department of Public Health (CDPH), State Officials Announce Latest COVID-19 Facts, CDPH news release, July 2, 2021.

⁴ Ibid.

⁵ Ibid.

⁶ Ibid.

⁷ CDPH defines an outbreak as 3 or more suspected or confirmed cases in a workplace within 14 days.

⁸ CDPH, COVID-19 Outbreaks, 1/1/2021 – 6/15/2021. [COVID-19 Outbreak Data \(ca.gov\)](#).

⁹ The California Employment Development Department (EDD) reports that the state's civilian unemployment rate during 2020 rose from 5.5% in March to 16.4% in April and May, before it began to improve, falling to 14.9% in June and 11.2% in July.

¹⁰ Avalos, G. California Unemployment Claims Jump to Highest Level Since Reopening, Bay Area News Group, July 30, 2021.

¹¹ Feder Ostrov, B. Cost of Fighting COVID in California: \$12.3 Billion. Cal Matters. July 12, 2021.

As for the impact on California workers' compensation, the pandemic introduced a whole new category of claims. Claims data submitted to the state Division of Workers' Compensation (DWC) and analyzed bi-weekly by the California Workers' Compensation Institute (CWCI)¹² shows that as of July 26, 2021, 148,222 COVID-19 claims with January 2020 through June 2021 injury dates had been reported to DWC's Workers' Compensation Information System (WCIS). Those COVID claims represented 15.6% of the 952,349 workers' compensation claims reported to the DWC for that 18-month span. Furthermore, the July 26 update to CWCI's COVID-19/Non-COVID-19 Application noted that the DWC had received reports on 1,032 COVID-19 workers' compensation death claims for the 18-month period ending in June of AY 2021. Those claims form the basis of this analysis.

Objective

The objective of this study is to track the growth of California workers' compensation COVID-19 death claims over the first 18 months of the pandemic and to identify claim and injured worker characteristics associated with COVID-19 death cases. The study uses data on COVID and non-COVID death claims from accident year (AY) 2020, the first year of the pandemic, through the first half of AY 2021, to measure and compare:

- the number of COVID and non-COVID deaths by month from January AY 2020 through June AY 2021
- COVID deaths as a percentage of all California workers' compensation deaths during that 18-month span
- the claim distributions for COVID death claims, all COVID claims and non-COVID death claims broken out by worker age, gender, region, and industry

Data Sources and Methods

CWCI compiled data for this study from California workers' compensation COVID-19 claims submitted by insured and self-insured employers to the WCIS. Dates of injury on the claims ranged from January 1, 2020 through June 30, 2021. The claim sample encompassed the 148,222 COVID-19 claims that had injury dates within the 18-month study period, including the 1,032 COVID-19 death claims, as well as the 899 non-COVID death claims recorded for the same period, which were used for comparative purposes. The claims were grouped by month of injury to track the growth in COVID and non-COVID claim counts and changes in the percentage of all workers' compensation deaths that were attributed to COVID.

Claims data collected by the WCIS includes the injured worker's age and gender, and that data was used to compare the mix of all COVID claims, COVID death claims, and non-COVID death claims across five age groups (<30, 30-39, 40-49, 50-59, and 60+) and the mix of claims by gender. The WCIS also captures the county in which the injury occurred, and that data was mapped to one of seven regions (San Diego, Inland Empire/Orange County, Los Angeles County, Central Coast, Central Valley, Bay Area, and out of state/unknown) for the regional analysis. In addition, the WCIS notes the 3-digit NAICS¹³ code for the industry in which the worker was employed, which was used to determine distributions for non-COVID death claims, COVID death claims, and all COVID claims across the following 13 industry groups: health care; manufacturing; retail; public safety/government; administration and waste; transportation; agriculture; wholesale; food service; construction; professional/technical; education; and all other.

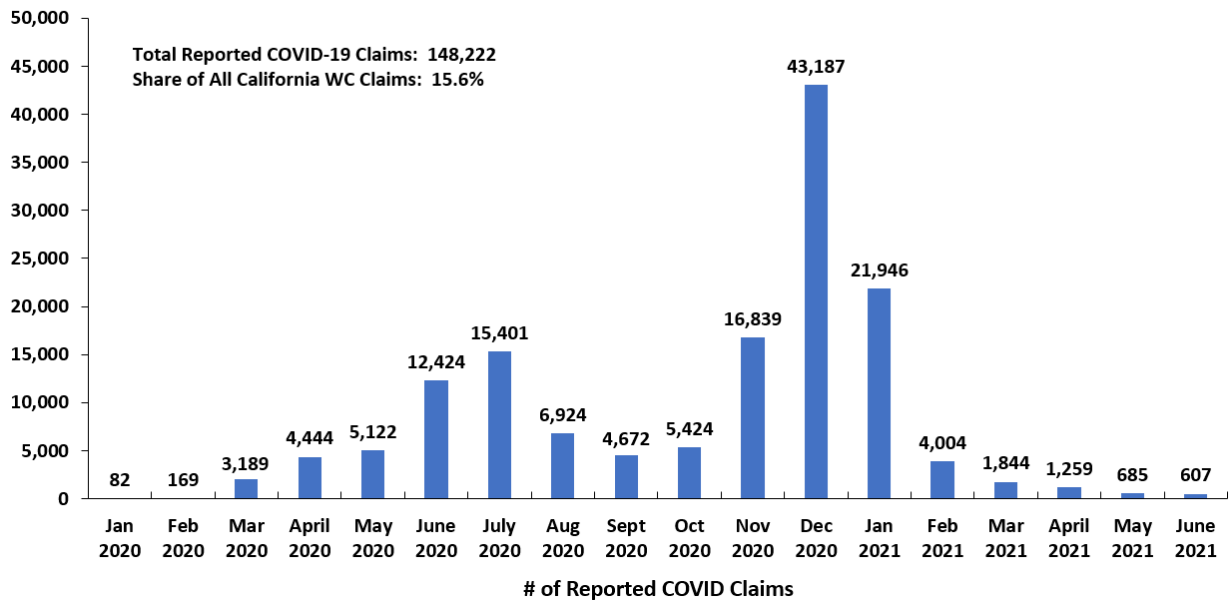
¹² [California Workers' Compensation Institute. COVID-19 & Non-COVID Interactive App \(cwci.org\)](https://www.cwci.org), Rev. July 24, 2021.

¹³ North American Industry Classification System

Findings

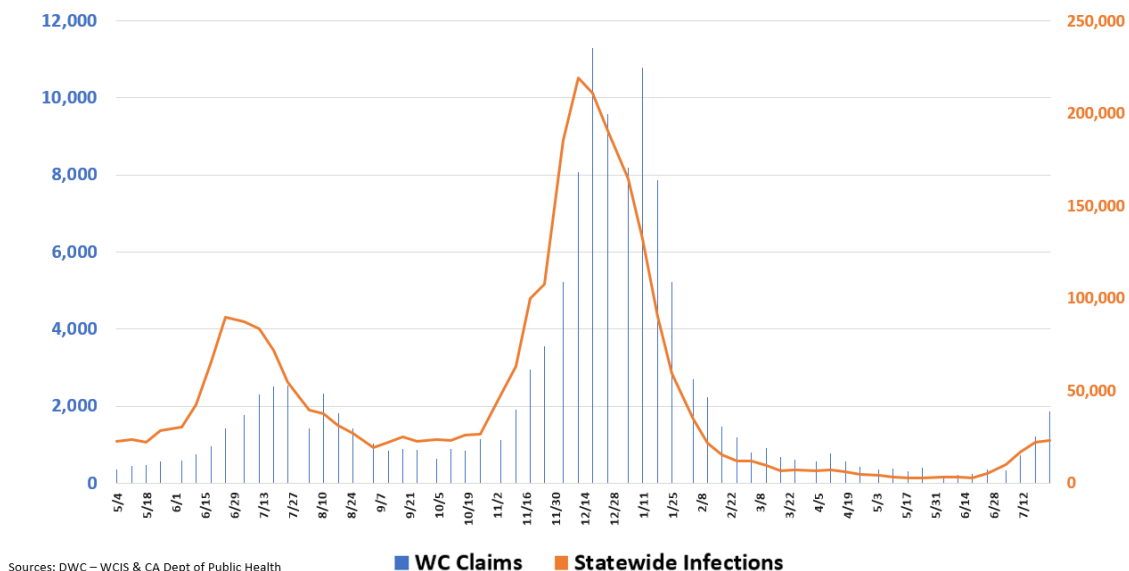
Overall, COVID-19 claim volume fluctuated dramatically over the first 18 months of the pandemic, starting with only a handful of claims in early 2020, then increasing sharply beginning in March, the same month that Governor Newsom declared the pandemic emergency and ordered non-essential businesses to shut down in an effort to contain the spread of the coronavirus.

Exhibit 1: Number of California WC COVID-19 Claims Reported to the DWC by Month January 2020 Through June 2021



Following the shut-down order, COVID-19 claim volume moved in tandem with the statewide COVID-19 infection rate, increasing steadily into July 2020, falling sharply at the end of the summer, then climbing to unprecedented levels in the fourth quarter before plunging over the first six months of 2021.

Exhibit 2: COVID-19 in California: Statewide Infections & WC Claims



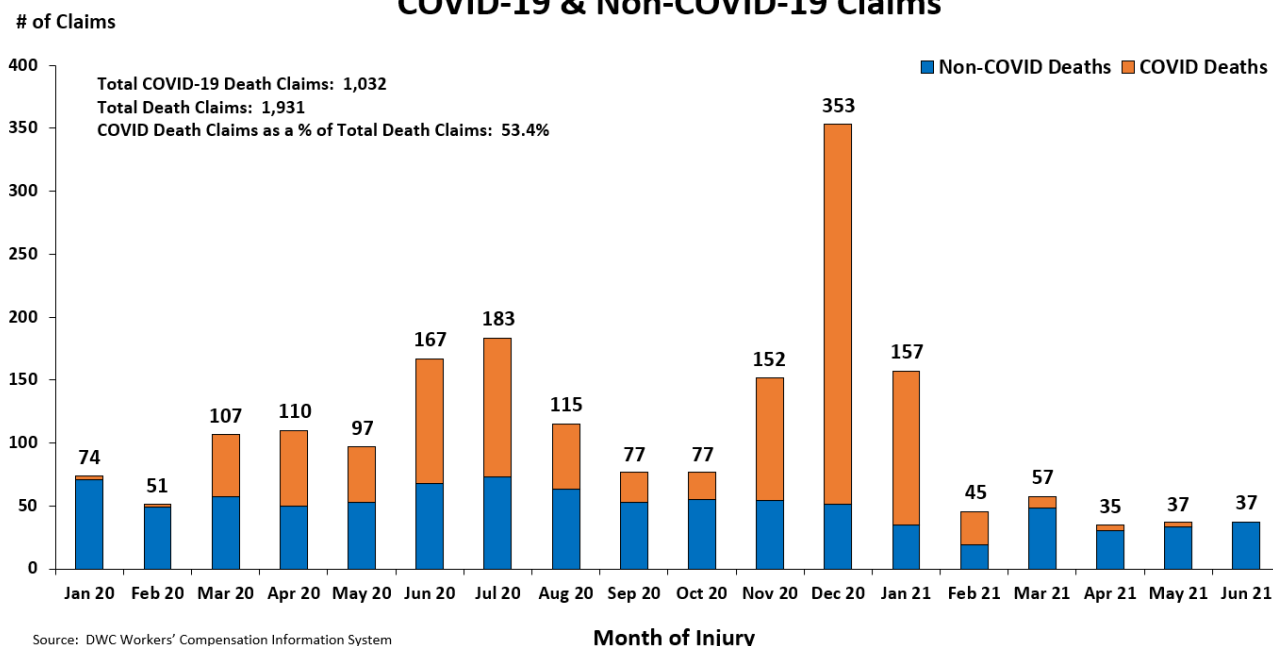
Work-Related Deaths in California

Compared to other types of workers' compensation claims (*i.e.*, medical-only, temporary disability, permanent disability), job-related deaths are relative rare in California. DWC reports that in AY 2019, there were 748 work-related death claims out of 687,912 work injury claims recorded by the WCIS, so death claims comprised 0.109% of all California claims (one out of every 917 claims) in the year prior to the pandemic. Transportation incidents have traditionally been the leading cause of job-related deaths in California, while deaths related to occupational illnesses tended to involve cancer, heart disease, or emphysema, often involving public safety officers, and only accounted for a small share of the death claims.¹⁴ The pandemic, however, introduced a new type of deadly risk, and in AY 2020 COVID-19 became the number one cause of job-related death claimed in California (866 out of 1,563 death claims). COVID death claims declined steadily from January through June of this year, but COVID remained the leading cause of workplace fatalities claimed during the first half of 2021, accounting for 166 out of the 202 death claims. Altogether, the 1,032 COVID death claims reported for the first 18 months of the pandemic represented more than half (53.4%) of the 1,931 workers' compensation death claims recorded for that period.

Even though the majority of COVID-19 claims thus far have not involved a worker fatality, the 1,032 COVID death claims that have been recorded translates to a rate of 6.96 death claims per 1,000 COVID claims. In comparison, death claims accounted for 899 of the 803,228 non-COVID claims reported to the WCIS during the same 18-month period, or 1.12 death claims per 1,000 non-COVID claims. While that nearly matches the death claim rate from 2019, before there were any COVID claims, it also underscores the extent of the new risk as it means that since the pandemic began, death claims have been more than six times as prevalent among COVID claims than among non-COVID claims.

Exhibit 3 shows the monthly volume of death claims from January 2021 through June 2021, and notes changes in the distribution of COVID death claims and non-COVID death claims over that 18-month span.

**Exhibit 3: California WC Death Claims, AY 2020 - June AY 2021
COVID-19 & Non-COVID-19 Claims**



¹⁴ [Census of Fatal Occupational Injuries \(CFOI\) - Cal/OSHA.](#)

As with COVID claims overall, COVID death claims rose sharply over the first seven months of 2020; declined in the fall; then surged at the end of the year, with the monthly tally of COVID death claims peaking at 302 claims with December dates of injury. After that, the number of COVID claims plummeted and COVID death claims experienced a steady, sharp decline, falling to 122 claims for January; 26 for February; 9 for March; 5 for April; 4 for May, and 0 for June.

The following table (Exhibit 4) details the monthly fluctuations in the number of COVID and non-COVID death claims over the study period and shows the changes in the percentage of California workers' compensation death claims that were attributed to COVID over the 18-month span.

**Exhibit 4: COVID Death Claims as a Percentage of All California Workers' Comp Death Claims
AY 2020 Through June AY 2021**

	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21	Apr 21	May 21	Jun 21
# COVID Deaths	3	2	50	60	44	99	110	52	24	22	98	302	122	26	9	5	4	0
# Other Deaths	71	49	57	50	53	68	73	63	53	55	54	51	35	19	48	30	33	37
COVID % of All	4%	4%	47%	55%	45%	59%	60%	45%	31%	29%	64%	86%	78%	58%	16%	14%	11%	0%

The COVID death claims' share of all death claims rose sharply beginning in March 2020, followed by significant fluctuations from May until the peak at the end of 2020, then began to tail off in January, with the decline accelerating into the spring and summer months. By June of 2021 the COVID death claim count was down to 0 (though that is the least developed data in the study sample, and the most likely to change over time).

COVID Death Claim Characteristics

Age

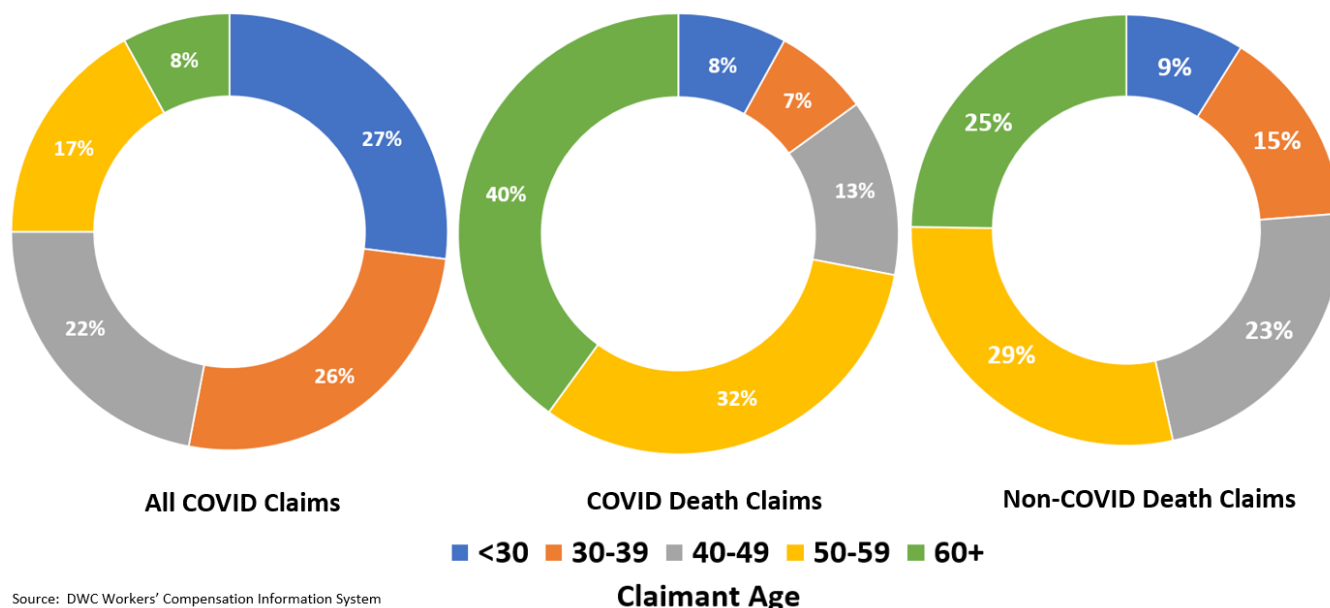
The California Employment Development Department reports that as of June 2021, the median age of employees in the state was 42.5 years and that 78% of the workers were under the age of 55,¹⁵ so it is not surprising that these workers have accounted for nearly three quarters of all COVID-19 work injury claims. COVID death claims, however, have been most prevalent among older workers. Exhibit 5 notes the percentage of death claims within each age group that were due to COVID. The results show COVID deaths ranged from 37% of the death claims among 30–39 year olds to 65% of the death claims from workers who were 60 years old or older.

Exhibit 5: COVID Death Claims as a Percent of Death Claims Within an Age Group, AY 2020 – June AY 2021			
Age Group	Total # of COVID Death Claims	Total # of WC Death Claims	COVID as % of All Death Claims
<30	83	160	52%
30-39	76	208	37%
40-49	132	337	39%
50-59	325	584	56%
60+	416	642	65%
Total	1,032	1,931	53%

¹⁵ California Employment Development Dept. Demographic Labor Force Summary Tables, June 2021; www.LaborMarketInfo.edd.ca.gov.

Exhibit 6 shows the differences in claim distributions by claimant age for all COVID claims, COVID death claims, and non-COVID death claims, underscoring the much higher risk that COVID represents for older workers.

Exhibit 6: Claim Distributions by Age
All COVID Claims, COVID Death Claims, and Non-COVID Death Claims
AY 2020 Through June AY 2021 Claims



Source: DWC Workers' Compensation Information System

During the first 18 months of the pandemic, 25% of all COVID-19 claims involved workers who were at least 50 years old (the yellow and green segments in Exhibit 6), but among the COVID death claims, workers who were 50 or older accounted for 72% of the claims, with workers who were 60 or older accounting for the smallest share of all COVID claims (8%) yet the biggest share of the COVID death claims (40%).

Workers who were at least 50 also accounted for more than half (54%) of the non-COVID death claims during the study period, which given that the median age of California employees is 42.5, indicates that they represented a disproportionate share of all work-related death claims, though that percentage was far less than their 72% share of the COVID death claims. Workers between the ages of 30 and 49 accounted for 20% of the COVID death claims, which was well below their 48% share of all COVID claims, and 18 percentage points below their 38% share of the non-COVID death claims.

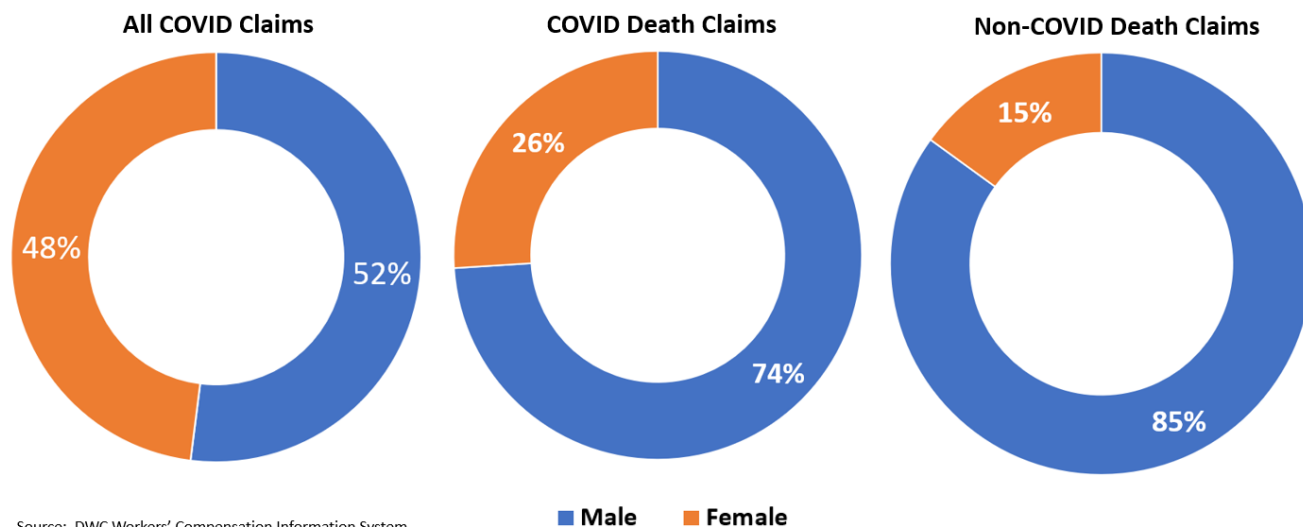
Gender

Males account for 54.5% of California's civilian employees, while females account for 45.5%,¹⁶ so the females' 48% share of all COVID claims noted in Exhibit 7 was slightly higher than their share of the work force. Males, however, have traditionally accounted for a disproportionate share of work-related fatalities.

¹⁶ California Employment Development Department, California Labor Market Review. Employment Status by Demographic Group, June 2021, [calmr.pdf](#). Labor force data are non-seasonally adjusted 12-month moving averages.

Cal/OSHA data on pre-pandemic occupational fatalities show that males suffered 92% of the 2,753 job-related fatalities recorded for the seven years prior to the pandemic, due at least in part to the high concentration of male workers in industry sectors such as trade, transportation and utilities; construction; and agriculture/natural resources, which together accounted for 53% of the 2013-2019 fatal job injuries.¹⁷

Exhibit 7: Claim Distributions by Gender
All COVID Claims, COVID Death Claims, and Non-COVID Death Claims
AY 2020 Through June AY 2021



The high percentage of workplace fatalities involving males is also evidenced by the 85% male/15% female gender distribution shown for non-COVID deaths that occurred during the first 18 months of the pandemic (Exhibit 7). In contrast, the gender distribution for the COVID death claims shows females accounted for 26% of the claims. While that percentage is relatively low compared to females' share of the work force and their share of all COVID workers' compensation claims, it is relatively high compared to their share of the non-COVID death claims. This disparity is likely linked to the fact that during the first 18 months of the pandemic women accounted for a disproportionate share of frontline health workers,¹⁸ and the healthcare sector had the highest share of COVID workers' compensation claims (30%) and COVID death claims (21%) among all industries.

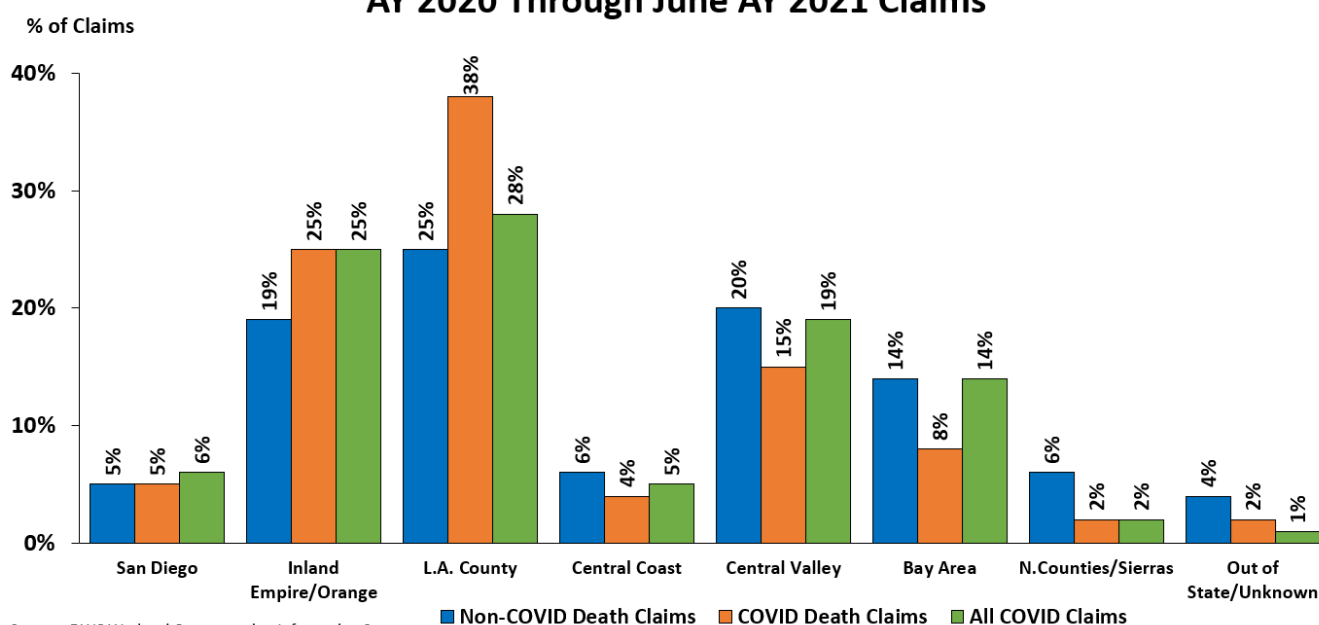
¹⁷ Cal/OSHA. [Fatal Occupational Injuries in California 2013-2019 \(CFOI\) Report](#), April 2021.

¹⁸ Day, Jennifer C. and Christnacht, C. Women hold more than three quarters of healthcare jobs in the U.S., with women of color more likely to be in caregiver rather than diagnostic roles. "Your Health Care Is in the Hands of Women." U.S. Census Bureau, Aug. 14, 2019.

Region

The breakdown of COVID-19 death claims based on the region in which the injury occurred (Exhibit 8) shows that 38% of the COVID death claims from the 18-month study period came from Los Angeles County, which is relatively high given that Los Angeles County accounted for 26% of all jobs in the state,¹⁹ 28% of all COVID claims, and 25% of non-COVID death claims. The neighboring Inland Empire/Orange County region accounted for 25% of the COVID death claims, which was in line with the 25% of all COVID claims that originated in this part of the state, though it was 6 percentage points higher than the region's share of non-COVID death claims.

**Exhibit 8: Claim Distributions by Region
Non-COVID Death Claims, COVID Death Claims, and All COVID Claims
AY 2020 Through June AY 2021 Claims**



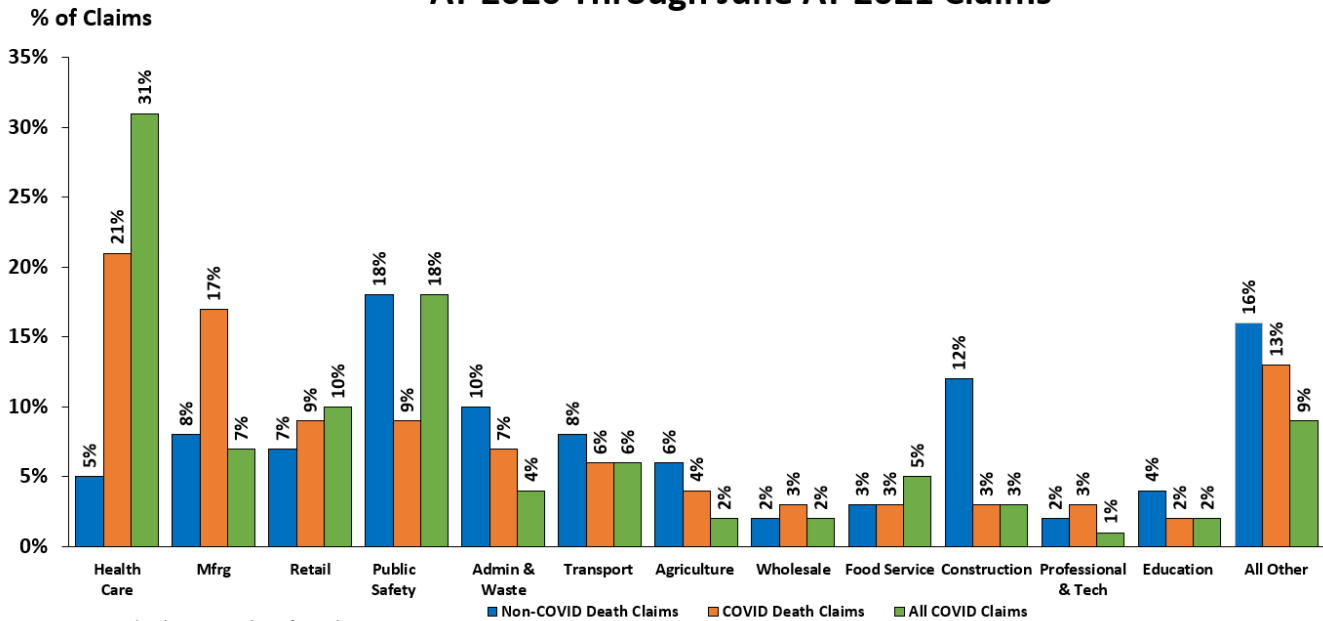
On the flip side, Exhibit 8 also shows several regions where COVID death claims were low relative to their share of all COVID claims and their share of non-COVID death claims. These included the Central Valley, the Bay Area, and the Central Coast. In San Diego, COVID death claims and non-COVID death claims each accounted for 5% of the statewide total, slightly below the region's 6% share of all COVID claims. The North Counties and Sierras – the most rural and sparsely populated part of the state – had only 2% of all COVID claims and 2% of the COVID death claims, even though this region accounted for 6% of the non-COVID deaths, which is likely due to the prevalence of high-risk industries (*i.e.*, logging, mining, and fishing) within this region.

¹⁹ California Employment Development Department, California Labor Market Review. 2021 Preliminary employment data. [calmr.pdf](#)

Industry

The distribution of COVID death claims by industry (Exhibit 9) shows health care workers had the greatest number of COVID death claims (216, or 21% of the 1,032 COVID death claims), followed by workers in manufacturing (176, or 17%), retail (94, or 9%), public safety/government (91, or 9%), administration/waste (75, or 7%), and transportation (57, or 6%). No other sector had more than 5% of the COVID-19 death claims.

Exhibit 9: Claim Distributions by Industry
Non-COVID Death Claims, COVID Death Claims, and All COVID Claims
AY 2020 Through June AY 2021 Claims



Source: DWC Workers' Compensation Information System

Health care workers had the highest share of COVID death claims at 21%, which was low compared to their 31% share of all COVID claims, though it was more than 4 times their share of non-COVID death claims. The high percentage of COVID claims from health care workers, and their disproportionate share of COVID deaths relative to their share of non-COVID deaths, reflect the risk of COVID-19 exposure that health care workers have faced, especially those with jobs that require regular interaction with patient populations. CWCI's COVID-19/ non-COVID-19 Data Application²⁰ provides a breakdown of insured health care claims by job class, which reveals that during the 18-month study period 79% of COVID claims by health care workers came from four categories of workers: skilled nursing facility employees (29%); workers at physician offices and outpatient clinics (18%); hospital workers (18%); and employees of residential care facilities for the elderly (14%). Many of these employees were deemed "essential workers"²¹ during the early months of the pandemic, and underwent regular COVID testing, which would also have contributed to the high number of COVID diagnoses and claims within this sector. On the other hand, the 10-percentage point gap between their share of all COVID claims and their share of COVID death claims may be due to the availability of personal protective equipment, vaccines, and other safety measures; greater awareness of COVID symptoms; testing requirements that would have allowed for quick diagnoses; adherence to quarantine protocols; and access to treatment.

²⁰ [California Workers' Compensation Institute - COVID-19 & Non-COVID Interactive App \(cwci.org\)](https://www.cwci.org)

²¹ [Essential workforce - Coronavirus COVID-19 Response \(ca.gov\)](https://www.ca.gov)

Government/public safety employees' 9% share of the COVID death claims was also relatively low compared to their 18% share of all COVID claims, but it was also relatively low compared to their 18% share of non-COVID death claims, where they ranked first among all sectors – not surprising given that this sector includes prison guards, police, and firefighters. Food service workers' 3% share of the COVID death claims was relatively low versus their 5% of share of all COVID claims but was in line with their share of non-COVID death claims. On the flip side, the manufacturing sector represented 7% of all COVID claims and 8% of non-COVID death claims, but manufacturing employees accounted for 17% of COVID death claims, second only to the health care sector. Manufacturing includes jobs such as meatpacking, where employees work in high-density, congregate settings where transmission of airborne viruses was especially problematic during the early part of the pandemic.²² The administration/waste sector, which accounted for 4% of all COVID claims, had 7% of the COVID death claims; but that was relatively low compared to this sector's 10% share of all non-COVID deaths during the study period. Similarly, the agriculture sector represented 2% of all COVID claims but 4% of the COVID death claims, which was below this sector's 6% share of non-COVID deaths.

As noted previously, overall, COVID-19 death claims accounted for 1,032 (53.4%) of the 1,931 California workers' compensation death claims from the 18-month study period. COVID death claims as a percentage of the total death claims within each industry sector varied sharply, however. Exhibit 10 notes the total number of COVID death claims across 20 industry sectors in California during the 18-month study period, as well as the percentage of work-related death claims within each sector that were attributed to COVID.

Exhibit 10: COVID Death Claims as a Percent of All Death Claims by Industry Sector, AY 2020 - June AY 2021			
Industry Sector	COVID Death Claims	Total Death Claims	COVID as % of Total Death Claims
Accommodations	11	17	65%
Administration/Waste	75	167	45%
Agriculture	42	96	44%
Arts & Recreation	24	40	60%
Construction	30	133	23%
Education	21	56	38%
Finance	21	40	53%
Food Services	31	55	56%
Health Care	216	257	84%
Information	3	14	21%
Manufacturing	176	247	71%
Mining	4	5	80%
Professional/Technical	27	45	60%
Public Safety/Govt	91	251	36%
Real Estate	9	22	41%
Retail	94	158	59%
Transportation	57	125	46%
Utilities	1	11	9%
Wholesale	35	57	61%
Other (Excl Public Admin)	28	47	60%
Unknown	36	88	41%
Total	1,032	1,931	53%

²² Saitone, Tina L.; Schaefer, K. Aleks; Scheitrum, Daniel P. COVID-19 Morbidity and Mortality in U.S. Meatpacking Counties. Food Policy. 2021 May; 101: 102072. Published online 2021, Apr. 8, 2021.

In 11 of the 20 industry sectors that had COVID death claims during the first 18 months of the pandemic, COVID cases comprised at least half of all death claims in the sector. Health care workers not only had the highest number of COVID death claims (216) during this period, those claims also represented 84% of all death claims in the health care sector – the highest percentage out of all sectors. COVID death claims represented 80% of the death claims in the mining sector, though claim volume in this sector was relatively low as mining is not a huge industry in California, with the state recording a total of five mining death claims during the study period, four of which were COVID claims. In contrast, the manufacturing sector had 247 death claims from January 2020 through June 2021, with COVID accounting for 176, or 71% of that total. Other industries where COVID represented more than half of the death claims within the sector were accommodations (65%); wholesale (61%); professional/technical (60%); arts and recreation (60%); retail (59%); food services (56%); and finance (53%).

The CWCI COVID/Non-COVID Data Application also shows that after the vaccines became available and the overall number of COVID claims and COVID death claims plummeted in February, there was a significant shift in the mix of all COVID claims among industry sectors. Health care workers, who accounted for one third of the COVID claims in 2020 saw their share decline to one out of five COVID claims from February through June 2021. Meanwhile, public safety/government workers' share of the COVID claims increased from 17% in 2020 to 22% for the five-month period that began in February – the same month the public safety/government sector surpassed health care in terms of monthly COVID claim volume. Over the same period, retail workers also saw their share of the COVID claims increase from 10% to 13%, transportation workers' share increased from 6% to 9%, and manufacturing workers' share rose from 5% to 7%.

Discussion

The emergence of COVID-19 presented a new and deadly risk that just over a year and a half ago began to manifest itself across the globe, causing huge, ongoing disruptions in the ways in which we interact and lead our day-to-day lives. In March of 2020, as the pandemic began to take root in California and the governor issued a shelter-at-home order, hundreds of thousands of workers in the state lost their jobs or were furloughed, while millions of others switched to remote work. Those who were deemed essential workers continued to report to their regular work sites, but due to the potential exposure to the coronavirus, were required to employ new safety measures, including masking and social distancing to minimize physical contact as much as possible.

Despite ongoing efforts to contain the virus and return to some semblance of “normal,” the volume of COVID-19 infections fluctuated dramatically throughout the first year and a half, hitting the nation and the state in a series of rising waves that ultimately peaked in December 2020 before tailing off sharply from January through June of this year, after the COVID vaccines became widely available and federal, state, and local officials adopted COVID-19 protocols and safety requirements in an attempt to minimize the risks of exposure. More recently, a wave of infections linked to the Delta variant, a highly contagious mutation of the original COVID-19 coronavirus, led to a resurgence of COVID diagnoses and hospitalizations throughout the U.S., including an uptick in the number of breakthrough infections among vaccinated individuals. Though breakthrough cases remain relatively infrequent,²³ they have fueled doubts about whether the pandemic has subsided – doubts exacerbated by the fact that millions of individuals remain unvaccinated and highly susceptible to infection, creating potential breeding grounds for the rise of new, more dangerous coronavirus variants with antibody-resistant mutations. This in turn has raised questions

²³ A July 2021 analysis by the Kaiser Family Foundation found that across all states, the rate of breakthrough cases among the fully vaccinated ranged from .01% in Connecticut to .054% in Arkansas. Kaiser Family Foundation, COVID-19 Vaccine Breakthrough Cases: Data from the States. July 30, 2021.

about whether the June 15 reopening of the state's economy, which sent thousands of workers back to their workplaces, may have been premature.^{24,25} Recent CWCI data confirm that the increase in COVID infections within the state associated with the Delta variant did coincide with a nearly four-fold increase in the number of COVID-19 workers' compensation claims between June and July.²⁶ Fortunately, the mid-year surge in COVID-19 claims has yet to translate to a surge in COVID-19 death claims, though given the reporting lag times, the ultimate outcome there remains to be seen.

This study confirms that throughout the pandemic, workers' compensation COVID-19 claim experience has largely tracked with the overall COVID-19 experience in the state, with the number of claims rising as new waves of the coronavirus hit the state and falling as infection rates subsided. Exhibit 3 showed that those trends are also evident in terms of workers' compensation death claims. Although the 1,032 workers' compensation COVID-19 death claims reported for the first 18 months of the pandemic represented just 1.6% of the 63,141 COVID deaths recorded by the CDPH for that period, that figure is sobering given that it also represented more than half (53.4%) of the 1,931 California workers' compensation death claims recorded for that period. The 1,032 COVID death claims noted among the 148,222 COVID claims reported to the state during the study period, translates to 6.96 death claims per 1,000 COVID claims. In comparison, there were 899 death claims out of the 803,228 non-COVID claims during the same 18-month period, which is 1.12 death claims per 1,000 non-COVID claims, so death claims were more than six times as prevalent among COVID claims than among non-COVID claims. Furthermore, the 866 COVID death claim tally from 2020 exceeded the entire 748 work-related death claim count from all causes recorded by WCIS in 2019 -- the final year before the pandemic began.

The demographic data offers insight into where these COVID-19 death claims originated and the populations that have been most affected. Much of the California workforce falls within three age brackets, (20-29, 30-39, and 40-49), so it is not surprising that these workers have filed nearly 73% of all COVID-19 claims since the pandemic began.²⁷ That said, COVID claims have accounted for a fairly consistent share of all claims across all age groups, ranging from 13% of the workers' compensation claims for workers who were either below the age of 20 or over the age of 50 to 18% of the claims for workers in the 30-39 age bracket.²⁸ COVID death claims, however, have been far more prevalent among older workers.

Exhibit 5 provided comparative detail on the distribution of COVID claims, COVID death claims, and non-COVID death claims by worker age. While only 25% of all COVID claims involved workers aged 50 or older, these workers accounted for 72% of the COVID death claims, and within that group, those aged 60 or above accounted for 40% of all COVID death claims. Non-COVID death claims were also relatively high among older workers, but to a lesser extent than with the COVID death claims as workers aged 50 or older accounted for 54% of the non-COVID death claims, while those who were at least 60 years old accounted for 25%. At the opposite end of the age spectrum, workers under the age of 40 accounted for 53% of all COVID claims, but only 15% of COVID death claims, which was also less than their 24% share of non-COVID death claims. COVID deaths as a proportion of all death claims within an age group were also highest among older workers, as COVID accounted for 60% of the 1,226 death claims involving workers aged 50 or above, and 65% of the 642 death claims among 60+ workers.

²⁴ Ostrov, Barbara F. [California COVID cases surging a month after reopening ...](#) Cal Matters, July 16, 2021.

²⁵ Brown, K. "Many residents say California reopened too soon and fear coronavirus spread." Los Angeles Times, July 8, 2020.

²⁶ COVID-19 Workers' Comp Claims Surge as the Latest Wave of COVID-19 Infections Hit the State. CWCI Bulletin 21-11, Aug. 13, 2021.

²⁷ CWCI COVID-19/Non-COVID-19 Interactive Data Application, June AY 2020 through July 2021 claims recorded as of July 26, 2021.

²⁸ Ibid.

While older workers accounted for a majority of the COVID-19 death claims during the study period, so too did males, who accounted for 74% of the death claims while females accounted for 26%. As noted in Exhibit 7, however, the females' share of the COVID death claims was well below their 48% share of all COVID claims, but high compared to their 15% share of non-COVID death claims during the same 18-month span. The relatively high percentage of COVID death claims involving female workers is likely linked to the fact that women account for a disproportionate share of frontline health care workers, and the health care sector had the highest share of COVID death claims among all industries. Conversely, the males' share of the non-COVID death claims exceeded their share of the COVID deaths as a majority of the non-COVID deaths occurred in male-dominated industries such as trade, construction and utilities, transportation, and natural resources and agriculture.

It is not surprising that Los Angeles County, which has a quarter of all jobs in the state and had 25% of the non-COVID claims during the study period also had the highest number of COVID death claims. What is surprising, however, is that 38% of the COVID death claims came from L.A. County, far exceeding the county's 28% share of all COVID claims. Likely contributing factors include the density of the population, the types of work within the county (including large numbers of jobs in health care, manufacturing, and retail, the top three industry sectors for COVID death claims); the large number of applicants' attorneys who practice in the county; and the high number of Hispanic workers in L.A. County,²⁹ as CDPH data show that since the pandemic began, Hispanics have accounted for 65.4% of all COVID deaths (occupational and nonoccupational) among working age (18-65 year old) Californians.³⁰ The Inland Empire/Orange County region has accounted for 25% of the COVID death claims, which is in line with the 25% of all COVID claims that have originated in this region, but is well above the region's 19% share of non-COVID deaths. Among the regions where COVID death claims are low relative to their share of all COVID claims are the Central Valley (19% of all COVID claims vs. 15% of the COVID death claims); the Bay Area (14% of the COVID claims vs. 8% of the COVID death claims); and San Diego (6% of the COVID claims vs. 5% of the COVID death claims).

The review of the COVID-19 death claims by industry confirms that while the health care sector incurred the heaviest toll over the first 18 months of the pandemic, there has been a significant, ongoing shift in the distribution of death claims since the vaccines became widely available earlier this year. A closer look at the data on COVID claims within the health care sector shows that many of the COVID cases and COVID deaths among health care workers occurred during the first several months of the pandemic, prior to the availability of the COVID vaccines. However, a recent U.C. Davis Health study³¹ found major reductions in COVID infections among health care workers after vaccines were first distributed in late 2020. The study, which measured the incidence of COVID-19 among more than 16,000 U.C. Davis Medical Center faculty, staff, and medical and nursing students before and after vaccines were first made available, concluded that a single dose of the Pfizer or Moderna vaccines decreased the risk of contracting COVID-19 by 48%, while a second dose decreased the risk by 83%. This is also evident in the monthly tallies of COVID death claims, which peaked at 302 claims in December 2020, fell to 122 claims in January, then continued to trend down, with a total of 44 additional COVID death claims coming in over the next five months. In the wake of the U.C. Davis study, on August 5 the Director of the California Department of Public Health issued an order requiring all health care workers in the state, other than those with religious or medical exemptions, to be fully vaccinated by September 30.

²⁹ The U.S. Census Bureau 2019 report shows Los Angeles County has 4.9 million Hispanic/Latino residents, which is just under half of the county's entire population and the largest Latino/Hispanic population of any county in the U.S.

³⁰ [COVID-19 Race and Ethnicity Data \(ca.gov\)](#), August 25, 2021.

³¹ Waldman, S.E., *et al.* (2021) Real-world impact of vaccination on coronavirus disease 2019 (COVID-19) incidence in healthcare personnel at an academic medical center. *Infection Control & Hospital Epidemiology*. doi.org/10.1017/ice.2021.336. July 21, 2021.

The extent to which such mandates will help reduce the COVID infection and death rates will likely hinge on compliance, and there has been pushback on the mandates, not only among health care workers, but in other hard-hit sectors as well. For example, despite their increasing share of the COVID-19 claims, and an increasing number of COVID-19 deaths within their ranks, there has been significant resistance to similar vaccine mandates from members of the public safety sector, including state prison guards,³² and members of the Los Angeles Police Department, which encompasses some 13,000 employees, only about half of whom have been vaccinated.³³ In some cases, public sector employee unions have encouraged their members to get the COVID-19 vaccinations, but have resisted state and local efforts to require the vaccinations, preferring to allow their members to keep the option to be tested regularly in lieu of getting the vaccine.³⁴ That would match the mandate that Governor Newsom announced on July 26 would be imposed on all state workers and workers in health care and high-risk congregate settings,³⁵ and then subsequently extended to include an estimated 650,000 public and private school teachers and employees throughout the state, with full compliance required by October 15.³⁶

In the meantime, several sectors within the state, including the education sector, have begun to reopen and bring employees back on-site after being largely confined to remote work since last year, increasing the potential for COVID exposures. With the Delta variant surge, and the state's full vaccination rate currently at 56.4%,³⁷ some of these sectors are beginning to see an increasing number of reported COVID infections among their workers. If the historical pattern continues, this is likely to translate to increasing COVID-19 workers' compensation claims within those sectors, as evidenced by the number of COVID claims in the education sector, which the August 23 update to CWCI's COVID-19/Non-COVID-19 data application shows went from a total of 67 cases during April through June of this year to 106 claims in July, as school staff began to report back to campuses to prepare for a return to in-person learning. However, most of the recent COVID hospitalizations and deaths have involved unvaccinated individuals,³⁸ and with the FDA's approval of the Pfizer vaccine, a growing number of employers instituting vaccine requirements (and courts upholding those mandates), and employers starting to consider health insurance surcharges for unvaccinated employees,³⁹ the unvaccinated population is declining.⁴⁰ If that continues to hold true, the latest surge in COVID infections may not produce as many workers' compensation death claims as in the past, which would be a key step toward establishing a "new normal" for employers, workers, and those responsible for covering COVID risks that arise out of employment and in the course of employment.

³² Lyons, B. Most Prison Staff Refuse COVID Vaccine – Should California Let Them? Cal Matters, May 11, 2021.

³³ Rector, K, Cosgrove, J. Coronavirus Cases Spiking in LAPD as Some Officers Skirt Vaccine Mandate. L.A. Times, Aug. 26, 2021.

³⁴ Smith, D. L.A. Firefighters, Police Officers Dig in Heels Over Vaccination Mandate. Los Angeles Times, Sept. 3, 2021

³⁵ Office of Governor Gavin Newsom. [California Implements First-in-the-Nation Measures to Encourage State Employees and Health Care Workers to Get Vaccinated | California Governor](#). July 26, 2021.

³⁶ Associated Press. [California Will Require COVID-19 Vaccination for Teachers: Back to School: Live Updates](#). NPR Aug. 11, 2021.

³⁷ California Dept. of Public Health. [Tracking California COVID-19 vaccine distribution](#). Los Angeles Times, Aug 28, 2021.

³⁸ Centers for Disease Control. [SARS-CoV-2 Infections and Hospitalizations Among Persons Aged ≥16 Years, by Vaccination Status — Los Angeles County, California, May 1–July 25, 2021](#). Aug. 27, 2021

³⁹ Golden, R. Surcharges for Unvaccinated Workers Gain Momentum, But Questions Remain. HRDive.com Aug. 30, 2021.

⁴⁰ Neilson, S. Vaccinations Are Increasing in California. Here's Where. San Francisco Chronicle, Aug. 30, 2021.

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California Workers' Compensation Institute

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