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BULLETIN

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The number of California workers' compensation inpatient hospitalizations declined by 5.7 percent in 2021, for a net decline of 48.1 percent since 2012, though new CWCI research shows the growth of outpatient surgery and the addition of COVID-19 claims into the California workers' compensation system beginning in 2020 did cause a redistribution in the kinds of conditions treated and the types of inpatient care delivered to hospitalized injured workers.

CWCI's latest analysis of inpatient utilization uses data on more than 35.3 million inpatient stays with 2012 through 2021 discharge dates as reported by health care facilities to the California Department of Health Care Access and Information (HCAI). HCAI captures characteristics and charge data on each inpatient admission in the state, including the Medicare Severity Diagnostic Related Group (MS-DRG) – a system developed by the Health Care Financing Administration to classify inpatient hospitalizations based on diagnoses, surgical events and discharge status. The database also includes details on primary diagnosis, length of stay, and charges.

Reviewing the HCAI data from 2012 through 2021, the Institute first compared the volume and types of inpatient hospitalizations covered by workers' compensation and three other medical delivery systems: Medicare, Medi-Cal, and private coverage (excluding maternity/newborn stays). The results show that since 2012, the number of inpatient stays in the state has declined 4.0 percent overall, but the results varied sharply among the payer groups, with Medi-Cal experiencing an 11.7 percent increase as the number of Medi-Cal enrollees surged following enactment of the Affordable Care Act in 2014, while inpatient hospitalizations declined by 5.2 percent in Medicare, 15.0 percent in private coverage, and 48.1 percent in workers' compensation. Workers' compensation is by far the smallest of the payer groups, accounting for just 163,249 (< 0.5 percent) of the 35.3 million inpatient stays during the 10-year study period, with that proportion declining from 0.6 percent in 2012 to 0.3 percent in 2021. Prior CWCI research noted several factors contributed to the decline in workers' compensation inpatient stays prior to the pandemic, including fluctuations in the number and types of claims; the adoption of utilization review and independent medical review programs requiring that treatment meet evidence-based medicine standards; and a reduction in the number of spinal fusions. The new study suggests that many of those factors continue to be at play, as contrary to the other payer systems which saw their inpatient volume increase in 2021 following the COVID-19 driven health care crisis of 2020, workers' compensation hospitalizations continued to decline, falling an additional 5.7 percent in 2021.

Among the workers' compensation inpatients, both Surgical and Medical (non-surgical) hospital stays declined in 2021, with the Medical stays down 5.3 percent from 2020, and the Surgical stays down 5.8 percent. Surgical stays, however, remained far more prevalent in workers' compensation than in the other payer systems, accounting for more than 2/3 of the injured worker hospitalizations in 2021, compared to 24.7 percent for Medicare, 21.1 percent for Medi-Cal, and 31.5 percent for private coverage. Among the Surgical procedures, the number of spinal fusions performed on injured workers has declined by 59.1 percent since 2012, but they are still the most common workers' compensation surgical procedures and remain much more prevalent than in other systems, accounting for 17.6 percent of injured worker inpatient surgeries in 2021 versus 0.6 percent of the Medi-Cal surgeries, 1.3 percent of the Medicare surgeries, and 1.8 percent of the surgeries paid by private coverage. Joint replacement surgeries (major hip and knee joint replacements or reattachment of a lower extremity) are the second most common workers' compensation surgical procedures, accounting for 10.7 percent of injured worker inpatient surgeries in 2021, compared to 0.5 percent in Medi-Cal, 1.4 percent in private coverage, and 1.7 percent in Medicare. A closer examination of the knee and hip replacement data from 2021 revealed that nearly 8 out of every 9 injured workers who underwent these procedures had been diagnosed with primary osteoarthritis, which tends to develop from mechanical wear and tear, structural degeneration, and joint inflammation rather than from an acute, direct trauma to the joint associated with a specific injury.

Notably, the Institute found that the decline in workers' compensation inpatient surgeries has been somewhat offset by an increase in the number of injured worker spinal fusions and total joint replacements performed on an outpatient basis. Combining the HCAI data with data from the Institute's Industry Research Information System (IRIS) database, the study found that the percentage of spinal fusions provided at outpatient facilities jumped from 0.8 percent in 2014 to 13.6 percent in 2021, while the percentage of total knee replacements performed on an outpatient basis increased from 0.2 percent to 37.1 percent, with the biggest increase occurring in 2018, after Medicare removed the procedure from its "Inpatient Only" list.

A review of the types of conditions treated and the services delivered to workers' compensation inpatients found that while diseases and disorders of the musculoskeletal system and connective tissue, Major Diagnostic Category 08 (MDC 08), continue to dominate the workers' compensation inpatient population, their share of the diagnoses has declined since the pandemic was declared and COVID-19 claims were introduced into the workers' compensation system. Looking at the distribution of the injured workers' inpatient hospitalizations by diagnostic category the Institute found that the MDC 08 diagnoses consistently represented between 62.8 percent and 66.0 percent of the diagnoses from 2012 through 2019, but after the pandemic was declared, that percentage declined to 58.5 percent in 2020 and 58.1 percent in 2021. At the same time, there was a significant increase in injured worker hospitalizations involving the treatment of diseases and disorders of the respiratory system (MDC 04), which nearly tripled from 2.6 percent of inpatient admissions in 2019 to 7.4 percent in 2020 and remained at an elevated level (7.0 percent) in 2021. Data on the MDC 04 hospitalizations show that half of these inpatient stays were for the treatment of respiratory infections and inflammation, which would include COVID-19, though the workers' compensation hospitalizations within this diagnostic category also included a larger share of collapsed lungs or major chest traumas than the other three payer groups.

The impact of COVID-19 claims on injured workers' inpatient care is also evident in the rankings of the top 5 inpatient diagnosis-related group codes (MS-DRGs) for workers' compensation non-surgical (Medical) hospitalizations. Respiratory infections and inflammations with major complications or comorbidities (MS-DRG 177) include COVID-19 infections, and in both 2020 and 2021 these types of hospitalizations ranked first among all workers' compensation Medical diagnostic groups. CWCI research published in October 2021 showed that in 2020, MS-DRG 177 hospitalizations comprised 12.4 percent of all non-surgical injured worker hospitalizations and 4.0 percent of total (Medical and Surgical) hospitalizations and had surpassed MS-DRG 552 (hospitalizations for medical back problems without medical complications or comorbidities), which had been the number one Medical MS-DRG for workers' compensation in both 2018 and 2019. The updated data show the respiratory infections and inflammations diagnostic group still represented 10.3 percent of the workers' compensation Medical hospitalizations and 3.4 percent of all injured worker hospitalizations in 2021. Furthermore, severe COVID-19 infections can lead to sepsis, and MS-DRG 871 (the diagnosis group for septicemia or severe sepsis without mechanical ventilation exceeding 96 hours) ranked second among the 2020 workers' compensation Medical MS-DRGs, representing 7 percent of non-surgical hospitalizations and 2.3 percent of total hospitalizations, and it still ranked third among the 2021 workers' compensation Medical hospitalizations, with 4.6 percent of the non-surgical inpatient stays and 1.5 percent of all injured worker hospitalizations.

The Institute has published its study, which includes additional analyses and graphics, in a Research Update Report, **"Trends in the Utilization of Inpatient Care in California Workers' Compensation."** CWCI members and subscribers can access the report in the Research section at www.cwci.org, while others can purchase a copy for $21 at www.cwci.org/store.html. Institute members may also log on to the Research section of our website to access CWCI's Inpatient Hospital Interactive Data tool, which has been updated to include the HCAI data on 2021 workers' compensation inpatient discharges.

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