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RESEARCH BRIEF

California's 2012 Workers' Compensation Reforms Helped Replace Wages and Offset Earnings Losses After the Great Recession

A California workers' compensation law intended to help permanently disabled workers replace lost earnings is likely succeeding in providing additional benefits, according to an analysis by RAND researchers. The RAND team also determined for the first time that the Great Recession had a severe impact on the earnings of permanently disabled workers, making the higher benefits provided under the recent reforms particularly important for maintaining adequate levels of wage replacement.

These are just two of the findings from RAND researchers' analysis of workers' compensation reforms that California lawmakers enacted in 2012. This brief summarizes the analysis and identifies several emerging issues that policymakers in California and elsewhere may want to monitor in the future.

Key findings:

- **Permanently disabled workers have large and persistent earnings losses.**
- **Earnings losses grew much faster than permanent partial disability benefits during the Great Recession, and wage replacement rates fell as a result.**
- **California's Senate Bill 863 has increased statutory wage replacement rates by 21.4 percentage points, helping to restore benefit adequacy.**

Permanent Partial Disability Compensates Workers for Long-Term Economic Losses from Their Injuries, but Its Adequacy Was at Issue

The workers' compensation system in California provides medical care and wage replacement benefits to approximately 600,000 workers each year. Most workers' compensation claims are for minor injuries from which workers fully recover, but about one in ten results in permanent disability that may limit a worker's ability to earn a living for many years. Permanent partial disability (PPD) benefits compensate workers for the long-term economic losses resulting from such work-related permanent impairments as back pain or carpal tunnel syndrome.

How California Determines PPD Benefits

Benefits are based on the impairment, not the actual wage loss.

- A doctor assigns an impairment rating based on the *AMA Guides to the Evaluation of Permanent Impairment, 5th Edition.*
- Prior to SB 863, an adjustment for future earning capacity was applied.
- Adjustments for age and occupation are applied.
- Ratings for multiple impairments are combined.
- The resulting final rating and the worker's pre-injury wage determine PPD benefits.

Concerned that PPD benefits were not adequately compensating permanently disabled workers, California lawmakers raised PPD benefits as part of a broader package of workers' compensation reforms enacted in Senate Bill 863 (SB 863) in 2012. The California Commission on Health and Safety and Workers' Compensation asked RAND to measure the impact of permanent disability on workers' earnings to assess the adequacy of benefits in the period before SB 863 and to quantify its likely impacts on benefits and wage replacement.

Improving Benefit Adequacy Was a Central Goal of SB 863

SB 863 was in part a response to reductions in impairment ratings and benefits following reforms enacted in SB 899 in 2004. SB 899 sought to control system costs and modernize the state's impairment rating system by adopting the *AMA Guides to the Evaluation of Permanent Impairment, 5th Edition*, as the definitive method for rating non-psychiatric impairments. A prior RAND study found that within two years of SB 899's enactment, benefits for partially disabled workers fell by roughly one-third (Seth A. Seabury, Robert T. Reville, Stephanie Williamson, Christopher F. McLaren, Adam Gailey, Elizabeth Wilke, and Frank W. Neuhauser, *Workers' Compensation Reform and Return to Work: The California Experience*, Santa Monica, Calif.: RAND Corporation, MG-1035-CHSWC, 2011, www.rand.org/t/mg1035).

SB 863 Used Multiple Policy Levers to Increase Benefits

SB 863 raised the minimum and maximum weekly wage used in calculating benefits. The reforms also effectively eliminated the future earning capacity (FEC) adjustment, used to adjust the disability ratings for certain types of injuries. Finally, SB 863 created the return-to-work (RTW) fund, which offers a supplemental payment to workers who do not receive a qualified RTW offer from their employer. All of these changes would clearly increase benefits, but because the provisions had the potential to affect different groups very differently and to interact in complex ways, the ultimate influence of SB 863 on the generosity of benefits was impossible to predict without detailed analysis.

The RAND Team's Analysis Sought to Answer Three Questions

RAND researchers sought to answer three questions: How large were earnings losses for permanently disabled workers under SB 899? How did PPD benefits under SB 899 compare with earnings losses? Finally, would the increase in benefits under SB 863 lead to adequate wage replacement?

To answer these questions, the research team estimated earnings losses for permanently disabled workers injured during the eight years leading up to SB 863 (2005–2012), when benefits were determined according to SB 899 and other prior law. The team then analyzed the law's impact on wage replacement by simulating what those same workers would have received if SB 863 had been in place. Comparing these simulated benefit levels with actual data on earnings losses allowed the research team to describe how SB 863 is likely to change the wage replacement rate (the most commonly used measure for evaluating benefit adequacy).

Two Measures Defined

- **Earnings loss:** The reduction in an injured worker's earnings caused by an injury, measured relative to the worker's potential earnings, or what the worker would have earned in the absence of the injury
- **Wage replacement rate:** The percentage of a worker's after-tax earnings loss replaced by PPD benefits, which are tax-exempt

Permanently Disabled Workers Have Large and Persistent Earnings Losses

RAND researchers found that permanently disabling injuries had serious economic consequences for disabled workers even before the Great Recession. On average, permanently disabled workers injured between 2005 and 2007 lost 26 percent of their potential earnings in the second year after their injury (see Figure 1). Over the first five years after an injury, the resulting loss of after-tax income averaged $36,238. Statutory benefits specified under SB 899 for these workers yielded a 64.3 percent wage replacement rate.

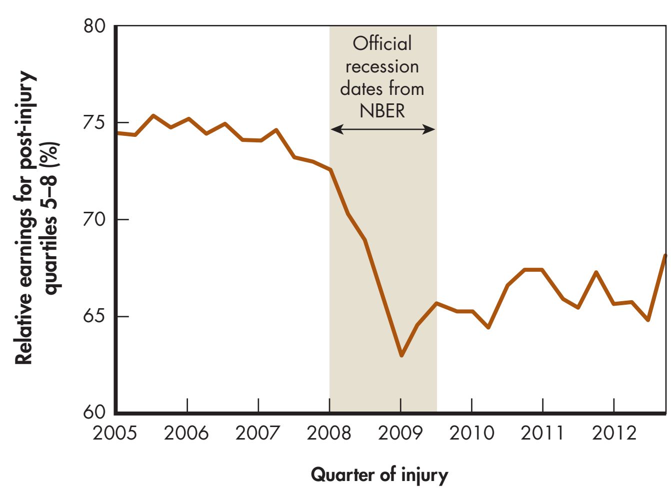
Losses Skyrocketed During the Recession, and Wage Replacement Rates Fell as a Result

Workers injured during and after the recession fared even worse. Earnings losses increased to 33 percent of potential earnings in 2008–2009 (versus 26 percent before) and showed no signs of improvement after the recession officially ended in mid-2009. While impairment ratings and benefits also rose steadily over time, this growth in benefits was not enough to offset the sharp increase in earnings loss. By the time SB 863 was enacted, wage replacement rates had fallen from 64 percent before the recession to 52.4 percent after the recession.

SB 863 Increased Wage Replacement Rates Substantially

SB 863 raised wage replacement rates by more than 21 percentage points, from 58.8 percent under SB 899 to 80.2 percent under SB 863. If SB 863 had been in place in 2010–2012, post-recession wage replacement would have been 69.8 percent rather than 52.4 percent. The researchers' analysis suggests that SB 863 is likely to meet its primary objective of restoring adequate wage replacement rates.

Figure 1. Post-Injury Earnings Relative to Potential Earnings for California Workers Receiving PPD Benefits, by Injury Date



SOURCES: Authors' calculations based on analysis of datasets from the State of California Workers' Compensation Information System (WCIS) and the State of California Employment Development Department (EDD).

NOTE: Shaded area represents official recession dates from the National Bureau of Economic Research (NBER), "U.S. Business Cycle Expansions and Contractions," undated (http://www.nber.org/cycles.html).

After-Tax Wage Replacement Rates by Year of Injury With and Without SB 863 Reforms

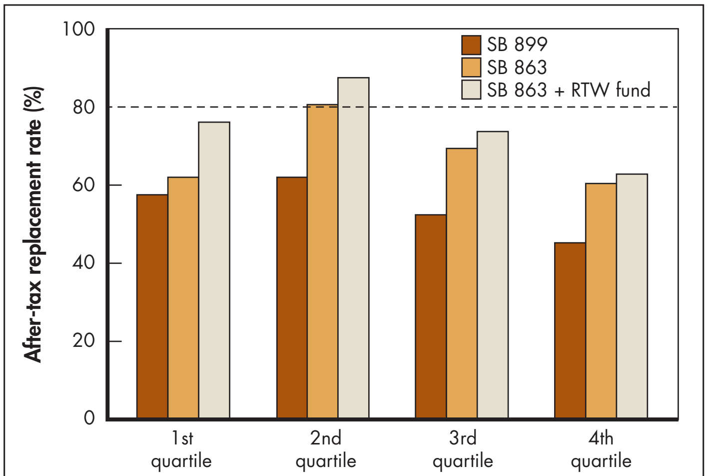
Characteristic	Pre-Recession (2005–2007) (%)	Recession (2008–2009) (%)	Post-Recession (2010–2012) (%)	All Years (%)
SB 899 benefits	64.3	57.1	52.4	58.8
SB 863 maximum wage applied to SB 899 ratings	76.3	66.8	61.2	69.2
SB 863 benefits and ratings	85.4	74.3	66.4	76.8
SB 863 and return to work fund	89.0	77.6	69.8	80.2

As shown in the table, the RAND team also found that the majority of the spike in replacement rates was driven by the increases in statutory benefit levels and the elimination of the FEC adjustment. The RTW benefit had a smaller impact on overall replacement rates (see Figure 2), in part because its value is fixed at $5,000 for all qualifying workers regardless of their pre-injury wage.

The RTW Fund Is Especially Important for Low-Wage Workers

The changes in benefits and ratings under SB 863 yielded significant increases for middle- and high-wage workers but have had little effect on their low-wage peers. In contrast, the RTW benefit had the largest effect on wage replacement rates for the lowest-wage workers. RAND researchers found that the RTW fund is highly progressive, both because the value of the benefit is fixed regardless of the worker's income level and because low-wage workers experience worse RTW outcomes than higher-wage workers do.

Figure 2. After-Tax Wage Replacement Rates Under SB 899 and SB 863, by Quartile of Pre-Injury Wage



SOURCES: Authors' calculations based on analysis of datasets from WCIS, EDD, and the State of California Disability Evaluation Unit.

NOTES: Losses calculated using after-tax earnings inflated to 2014 dollars. Horizontal line at 80 percent represents target after-tax replacement rate. Benefits calculated using estimated average weekly wage based on annual earnings over four quarters prior to quarter of injury.

The Recession's Impact on Earnings Losses Has Implications Beyond California's System

The RAND team's analysis demonstrates that earnings losses due to workplace injury are highly sensitive to economic conditions at the time of injury. When earnings losses grow faster than benefits, wage replacement rates fall, and disabled workers and their families bear a greater share of the burden of workplace injury. California and other states may want to monitor earnings losses and the adequacy of PPD benefits as economic conditions change. States might consider tying benefits more closely to actual wage loss or measures of overall economic conditions. However, benefits tied to actual wage loss could undermine work incentives, and policymakers should be careful of the unintended consequences of changes to benefits.

California Could Do More to Equalize Wage Replacement Rates Across Workers with Different Impairments

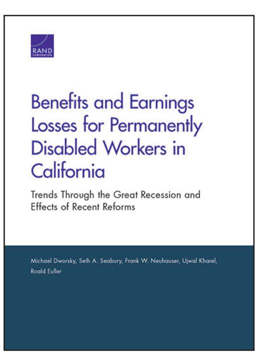
As in previous studies, the researchers also compared wage losses and benefits for different types of impairments—for instance, whether workers with similar losses received similar benefits even when they suffered from different impairments. The analysis suggests that SB 863 had little effect on these inequities. However, the RAND team found that the FEC, which SB 863 eliminated, was not a very effective tool for making benefits more equitable in the first place, given that inequities were prevalent before SB 863. Because the *AMA Guides to the Evaluation of Permanent Impairment* are used widely in other states, the RAND research team's findings on inequities in wage replacement across impairments may be of interest to policymakers beyond California.

While it is reassuring that eliminating the FEC did not increase inequities across impairments, the reforms also did nothing to address them. In future reform efforts, California may wish to focus on other elements of the rating system, such as the age and occupation modifiers.

Alternative Ratings Procedures Authorized Under SB 863 Could Dramatically Alter the Rating and Benefit Systems and Should Be Monitored Closely

In addition to the benefit increases that were the main focus of the analysis, SB 863 contains a provision that could inject some uncertainty into the future of the rating and PPD benefit systems. This provision provides an explicit statutory basis for an alternative method of interpreting the *AMA Guides*, established in a series of judicial rulings referred to as the *Almaraz/Guzman* decisions.

The RAND team's analysis contains the first quantitative evidence on the difference between *AMA Guides* ratings and the alternative *Almaraz/Guzman* ratings. If the alternative ratings were used to determine benefits, compensation and replacement rates could be substantially higher than anticipated. The RAND researchers' analysis—the first to quantify the impact of the *Almaraz/Guzman* ratings—found that the *Almaraz/Guzman* ratings led to impairment ratings that were 9.7 to 13.5 points higher than under the *AMA Guides*. Workers and their attorneys are currently submitting *Almaraz/Guzman* ratings in about 20 percent of California disability cases. However, the data available for the study did not indicate how often these alternative ratings are upheld in court, so these figures are likely an upper bound for the impact on ratings. California may wish to monitor the use of alternative ratings, as their ultimate impact on the level and the equity of benefits is unknown.



This brief describes work done in RAND Justice, Infrastructure, and Environment and documented in Michael Dworsky, Seth A. Seabury, Frank W. Neuhauser, Ujwal Kharel, and Roald Euller, *Benefits and Earnings Losses for Permanently Disabled Workers in California: Trends Through the Great Recession and Effects of Recent Reforms*, Santa Monica, Calif.: RAND Corporation, 2016 (RR-1299-CHSWC, www.rand.org/t/RR1299). To view this brief online, visit www.rand.org/t/RB9932. The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. RAND is nonprofit, nonpartisan, and committed to the public interest. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. **RAND**® is a registered trademark. © RAND 2016

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