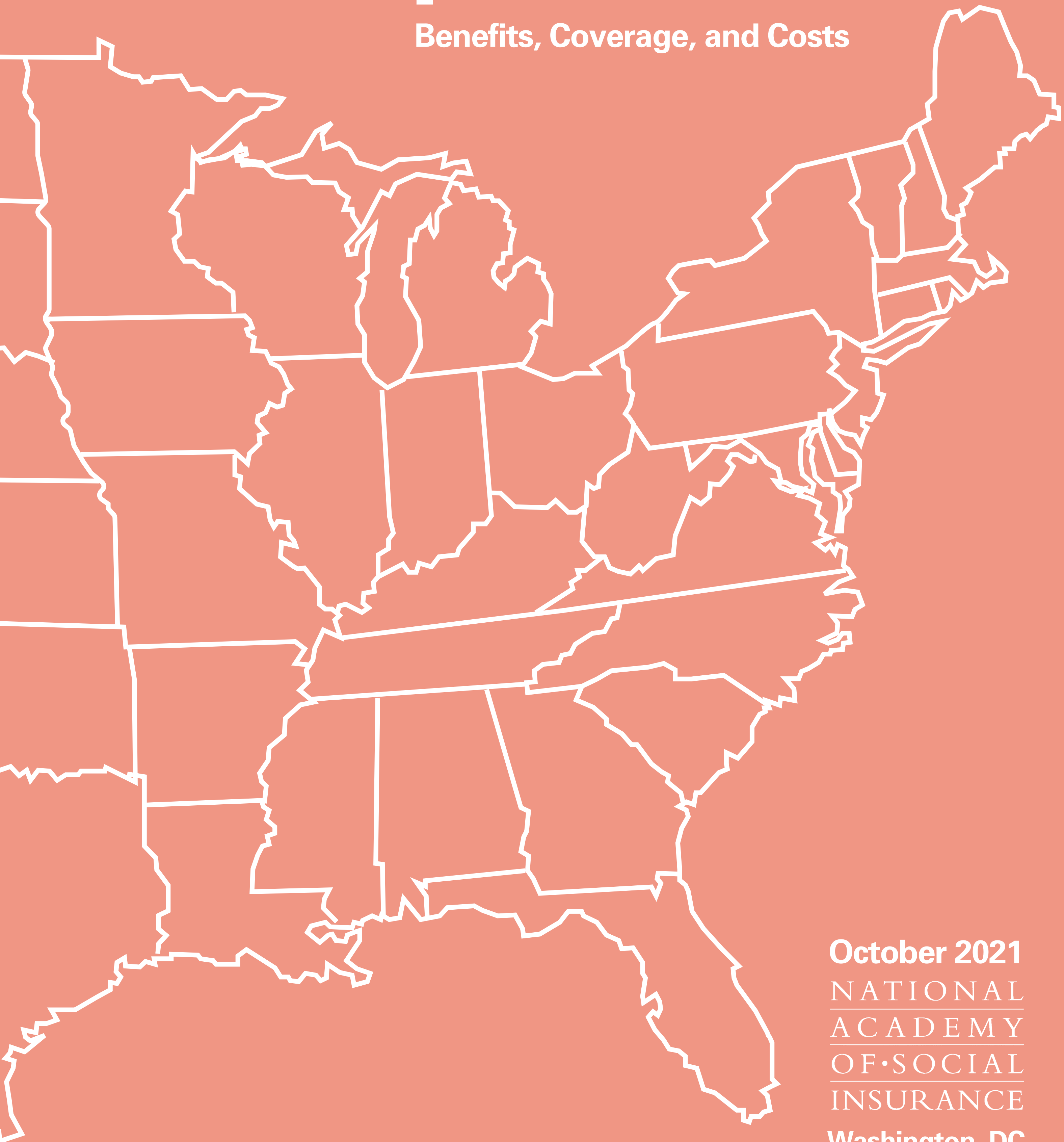
Workers' Compensation:

Benefits, Coverage, and Costs



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The National Academy of Social Insurance (the Academy) is a non-profit, non-partisan organization made up of the nation's leading experts on social insurance. Social insurance encompasses broad-based systems that help workers pool risks to avoid loss of income due to retirement, death, disability, or unemployment, and to ensure access to health care. The mission of the Academy is to advance solutions to challenges facing the nation by increasing public understanding of how social insurance contributes to economic security. The Academy convenes steering committees and study panels that are charged with conducting research, issuing findings, and, in some cases, making recommendations based on their analyses. Members of these groups are selected for their recognized expertise in a particular area of social insurance, and with due consideration for the balance of disciplines and perspectives appropriate to the project. This research report presents data on trends in workers' compensation benefits, costs, and coverage as of 2019. The report was prepared with the guidance of the Study Panel on Workers' Compensation Data and, in accordance with procedures of the Academy, has been reviewed for completeness, accuracy, clarity, and objectivity by a committee selected by the Board of Directors. The purpose of the report is to present the data and describe trends over time, but not to make policy recommendations. The Centers for Medicare & Medicaid Services (CMS) provide funding to produce selected tables for this Report that are also used in its own estimates. The project also receives in-kind support from the National Council on Compensation Insurance and the National Association of Insurance Commissioners.

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Benefits, Costs, and Coverage (2019 data)

by

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with advice from the

Study Panel on Workers' Compensation Data

October 2021

NATIONAL ACADEMY OF·SOCIAL INSURANCE

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Preface

Workers' compensation provides funding for medical care, rehabilitation, and cash benefits for workers who are injured on the job or who contract work-related illnesses. The program also pays benefits to families of workers who die of work-related injuries or illnesses. The programs were established by state statute or within state constitutions beginning in 1911, before most federal social insurance programs were enacted. Unlike most other U.S. social insurance programs, workers' compensation is primarily a state program. (As described below, a number of federal programs, such as the Longshore and Black Lung funds, insure workers in specific occupations.) No federal laws set standards for the state workers' compensation programs or require comprehensive reporting of workers' compensation data, nor is there any federal financing of these state programs.

The lack of uniform federal standards or reporting requirements for state workers' compensation programs makes it difficult to provide national estimates based on uniform definitions of amounts of benefits paid, costs to employers, and numbers of workers covered. In order to produce national summary statistics on the program, it is necessary to compile data from various sources.

Until 1995, the U.S. Social Security Administration (SSA) produced the only comprehensive national data on workers' compensation benefits, costs, and coverage, with annual estimates dating back to 1946. SSA discontinued the series in 1995 and the National Academy of Social Insurance (the Academy) assumed the task of reporting national data on workers' compensation in 1997. The Academy published its first report that year and has produced the report annually ever since.

This is the Academy's 24th annual report on workers' compensation benefits, costs, and coverage. This report presents new data on state and federal workers' compensation programs for 2019 and updated estimates for 2015-2018. The revised estimates in this report replace estimates in the Academy's prior reports. Because it only covers data through 2019, this report does not include any data on the impacts of COVID-19 on workers' compensation systems. A discussion of COVID-19 and policy responses to coverage under worker' compensation systems will be discussed in a forthcoming spotlight to be issued by the Academy.

The Academy and its expert advisors are continually seeking ways to improve the report and to adapt estimation methods to track new developments in workers' compensation programs. Detailed descriptions of the methods used to produce the estimates in this report are available online at **nasi.org**

Despite the Academy's continued efforts to improve the quality of its estimates, there are limitations to the data which we acknowledge in the report. It is important to note, for example, that our estimates of workers' compensation costs may not capture the full cost of work-related injuries borne by employers through insurance or other payments made outside the workers' compensation reporting system. Nor do our estimates capture other economic and human costs of work-related injuries, illnesses, and fatalities borne by workers, families, and communities. These costs are significant but beyond the scope of this report. Moreover, the report does not evaluate the degree to which workers' compensation programs are meeting key objectives, such as: preventing work-related injuries and illnesses; compensating injured workers adequately and equitably; rehabilitating injured workers; and returning injured workers to work at an affordable cost.

The audience for the Academy's annual report on workers' compensation includes: actuaries; insurers; journalists; business and labor leaders; employee benefit specialists; federal and state policymakers; students; and researchers working in universities, government, and private consulting firms. The data from some tables are published by the National Safety Council (NSC) (in Injury Facts), by the Employee Benefit Research Institute (in Employee Benefit News, Fundamentals of Employee Benefit Programs) and by the SSA (in the Annual Statistical Supplement to the Social Security Bulletin).

The Academy's estimates inform state and federal policymakers in numerous ways. The federal Centers for Medicare & Medicaid Services (CMS), for example, uses the data in estimates and projections of health care spending in the United States. The National Institute for Occupational Safety and

Health (NIOSH) uses the data to track the costs of workplace injuries in the United States. The International Association of Industrial Accident Boards and Commissions (IAIABC)—the organization of state and provincial agencies that administer workers' compensation in the United States and Canada—uses the information to track and compare the performance of workers' compensation programs in the United States with similar systems in Canada. The National Foundation for Unemployment Compensation and Workers' Compensation uses the data as part of its comparison of state workers' compensation in its annual workers' compensation fiscal bulletin.

Acknowledgements

The Academy expresses its deep appreciation to staff members in the 50 states and District of Columbia workers' compensation offices, in addition to the U.S. Department of Labor staff at the Office of Workers' Compensation Programs, who provide data on their program areas each year. While there are too many individuals to name here, we are grateful for the time they spend responding to our survey and answering clarification questions as needed. Without support from these individuals, constructing this annual data series would be impossible. The Centers for Medicare & Medicaid Services (CMS) provide funding to produce selected tables for this Report that are also used in its own estimates. The project also receives in-kind support from the National Council on Compensation Insurance and the National Association of Insurance Commissioners.

The authors gratefully acknowledge the time and expertise contributed by members of the Academy's Study Panel on Workers' Compensation Data. All members of the Panel are listed on page iii, but we especially acknowledge the contributions of: Terry Bogyo, John F. Burton Jr., Christopher Day, Jeff Eddinger, Doug Holmes, Michael Manley, and Frank Neuhauser. Finally, we appreciate comments from Marcus Dillender (University of Illinois at Chicago), Stephanie Rennane (RAND), and Glenn Shor (University of California, Berkeley).

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Highlights

For more than two decades, the National Academy of Social Insurance has produced an annual report on workers' compensation benefits, costs, and coverage. The report provides summary statistics on state and federal workers' compensation programs, with the aim of facilitating policymaking that improves the system for both injured workers and employers. This report provides new data for 2019, with comparison data for the five-year period from 2015 to 2019.

National Trends (Table 1)

- **Covered employment and wages continued to rise, albeit at a slower rate than in the past few years.**
  - The number of U.S. workers covered by workers' compensation continued to grow, increasing by 3.2 percent between 2015 and 2017 and 2.8 percent between 2017 and 2019.
  - Covered wages grew by 8.0 percent between 2015-2017, and by 9.9 percent between 2017 and 2019.
- **Total benefits paid to injured workers and their health care providers increased by less than 1 percent.**
  - In 2019, workers' compensation total benefits paid were $63.0 billion, an increase of 0.7 percent from 2015. Benefits decreased by 0.6 percent from 2015-2017, then increased by 1.3 percent from 2017-2019.
  - Adjusting for the increase in covered wages, however, total benefits per $100 of covered wages were $0.74 in 2019, a decrease of $0.13 from 2015.
  - The overall decrease in benefits per $100 covered wages reflects a $0.07 decline in medical benefits per $100, and a $0.06 decline in cash benefits per $100.
- **Total employer costs decreased in 2019 for the first time since 2010, while costs per $100 of covered wages continued to decline.**
  - In 2019, employer costs for workers' compensation were $100.2 billion, a decrease of 0.6 percent from 2017 but an increase of 0.9 percent from 2015.
  - When adjusted for the increase in covered wages, employers' costs were $1.17 per $100 of covered wages, a decrease of $0.21 (15.0%) since 2015.
- **Declines in benefits and costs per $100 of payroll between 2015 and 2019 were substantial.**
  - The $0.13 decline in benefits represents a 15.4 percent decline in benefits per $100 of payroll.[1]
  - The $0.21 decline in costs represents a 15.0 percent decline in costs per $100 of payroll.
- **National benefits and costs per $100 of covered wages continue to decline relative to prior decades. (Figure 1)**
  - Since peaking in 1992, benefits per $100 have declined by 55.5 percent as of 2019.
    - Between 2009 and 2019, benefits per $100 declined by 28.5 percent.
  - Since peaking in 1993, costs per $100 have declined by 46.1 percent as of 2019.
    - Between 2009 and 2019, costs per $100 declined by 12.7 percent.

State Trends

- **Workers' compensation covered employment and wages increased in almost every jurisdiction between 2015 and 2019.**[2]
  - Covered employment increased in all but five jurisdictions (Alaska, North Dakota, Wyoming, West Virginia, Louisiana). The largest percentage increase was in Utah (13.7%), followed by Idaho (13.3%) and Nevada (13.1%). (Table 3)
  - Covered wages increased in all jurisdictions. The largest percentage increase occurred in Washington (35.9%), with six other states experiencing increases greater than 25%. (Table 4)

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1 The disparity between the smaller reduction in employer costs and the larger decline in benefits is discussed in the text accompanying Table 15.

2 This report includes data from all fifty states and the District of Columbia, as well as for select federal programs. For the purposes of this report, we treat DC like a 51st state and, thus, use the terms "state" and "jurisdiction" interchangeably throughout.

Table 1

Overview of Workers' Compensation Benefits, Costs, and Coverage, 2015-2019

		Percent Change		
Aggregate Benefits, Coverage, and Costs	**2019**	**2015-2017**	**2017-2019**	**2015-2019**
Covered Jobs (in thousands)	144,407	3.2	2.8	6.2
Covered Wages (in billions)	$8,560	8.0	9.9	18.7
Workers' Compensation Benefits Paid (in billions)	63.0	-0.5	1.0	0.4
Medical Benefits	31.3	-1.7	0.6	-1.1
Cash Benefits	31.8	0.7	1.3	2.0
Employer Costs for Workers' Compensation (in billions)	$100.2	1.6	-0.6	0.9

		Dollar Change		
Benefits and Costs per $100 of Covered Wages	**2019**	**2015-2017**	**2017-2019**	**2015-2019**
Workers' Compensation Benefits Paid	$0.74	-$0.07	-$0.07	-$0.13
Medical Benefits	0.37	-0.04	-0.03	-0.07
Cash Benefits	0.37	-0.03	-0.03	-0.06
Employer Costs for Workers' Compensation	$1.17	-0.08	-0.12	-0.21

Notes: Benefits are calendar-year payments to injured workers (cash benefits) and to providers of their medical care (medical benefits). Costs for employers who purchase workers' compensation insurance include calendar-year insurance premiums paid plus benefits paid by the employer to meet the annual deductible, if any. Costs for self-insuring employers are calendar-year benefits paid plus the administrative costs associated with providing those benefits.

Source: National Academy of Social Insurance estimates.

- **Workers' compensation benefits per $100 of covered wages, and employers' costs per $100 of covered wages, decreased in almost all states between 2015 and 2019**
  - Benefits per $100 of covered wages decreased in all jurisdictions except Hawaii between 2015-2019. (Table 12)
    - The largest percentage decrease occurred in Oklahoma, where benefits per $100 declined by 33.1 percent between 2015 and 2019.
  - Between 2015-2019, costs per $100 of covered wages decreased in every state but Hawaii
    - The largest percent decrease occurred in Tennessee, where costs per $100 decreased by 40.2 percent between 2015 and 2019. (Table 14)

Background on Workers' Compensation

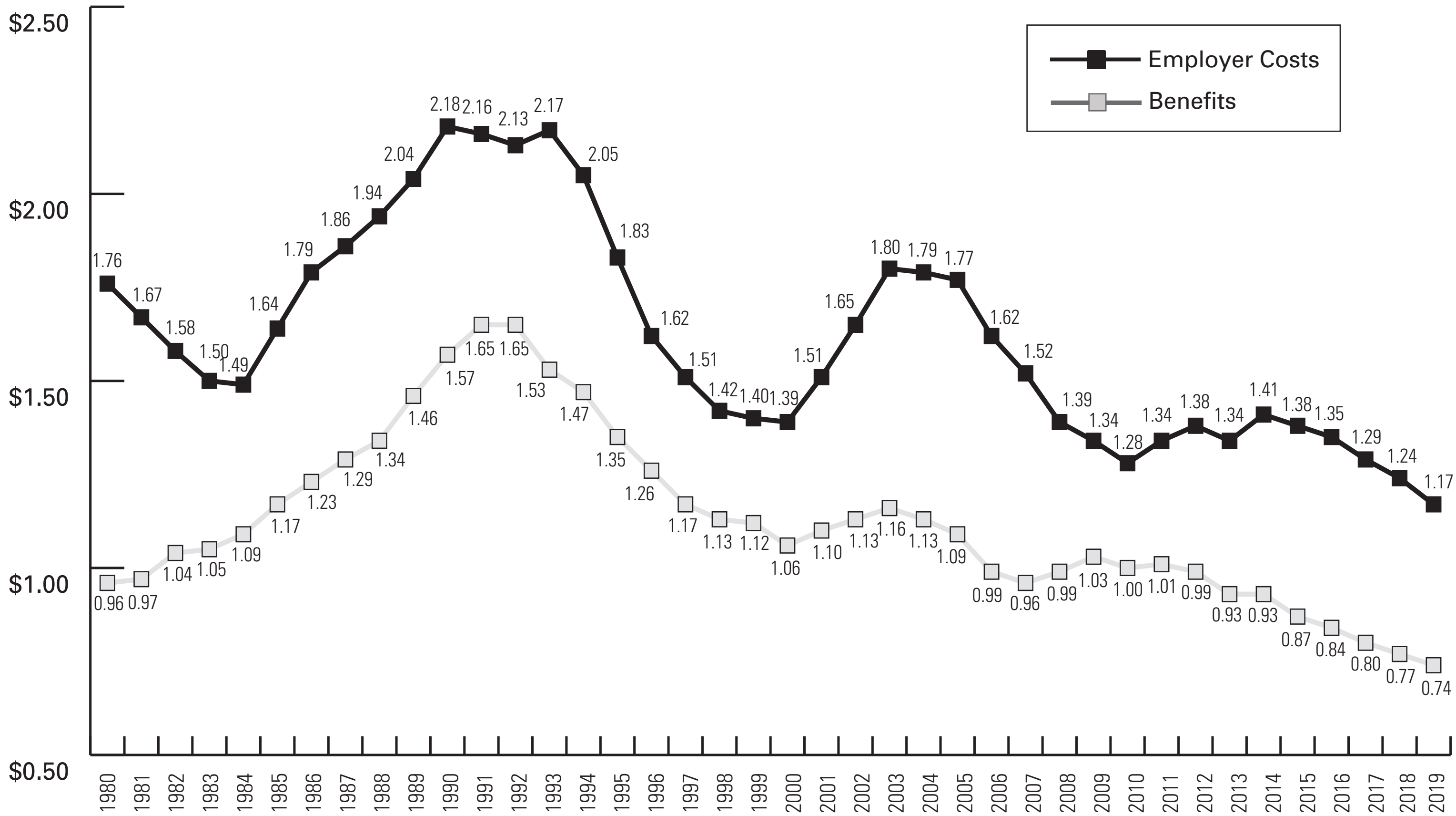
This section of the report, covering background material that is repeated annually, describes the history of workers' compensation insurance in the United States; the current structure of state workers' compensation programs; types of benefits paid; and how workers' compensation is financed. Reporting of detailed program data for 2019 begins on page 9, and a glossary of terms used in this report is available on page 62.

History of Workers' Compensation

Workers' compensation was the first social insurance program adopted in most developed countries. The first modern workers' compensation laws, known as Sickness and Accident Laws based on the principle

Figure 1

Workers' Compensation Benefits and Costs Per $100 of Covered Wages, 1980-2019[3]



Notes: Benefits are calendar-year payments to injured workers and to providers of their medical care. Costs for employers who purchase workers' compensation insurance include calendar-year insurance premiums paid plus benefits paid by the employer to meet the annual deductible, if any. Costs for self-insuring employers are calendar-year benefits paid plus the administrative costs associated with providing those benefits.

Source: National Academy of Social Insurance estimates.

of employer liability for workplace injuries, were adopted in Germany in 1884 under Chancellor Otto von Bismarck (Clayton, 2004). In 1897, England passed a similar law that held employers liable so long as employees could prove that they had been injured on the job.

The first workers' compensation law in the United States was enacted in 1908 to cover certain federal workers. The first state law, passed by New York in 1910, which was compulsory for certain very risky jobs, was struck down as unconstitutional by the state's court of appeals in 1911.[4] That same year, Kansas and Washington passed the first state laws that survived constitutional challenges (though New Jersey and Wisconsin both claim the "first in WC" title), with five other states enacting laws that went into effect that year.[5] Most other states then adopted workers' compensation laws by 1920, though the last of the 48 contiguous states to pass one, Mississippi, did so only in 1948.

Before the enactment of these laws, the primary legal remedy for workers who were injured on the job was

3 See page 44 for an explanation of why costs and benefits in a given year are not perfectly aligned.

4 "[I]n 1911, in Ives v. South Buffalo Railway Co… the Court of Appeals of New York held the New York act unconstitutional on the grounds of deprivation of property without due process of law," (Willborn et al., 2017). In 1911, nine states, including Kansas, New Jersey, and Wisconsin, thus enacted elective laws in an effort to avoid similar decisions by their state courts. Washington, however, adopted a compulsory statute, which the Washington Supreme Court upheld (Somers and Somers, 1954).

5 Kansas and Washington had the first enactment date (March 14, 1911), but those laws were not effective until after May 3, 1911, the same date when the Wisconsin law was enacted and took effect (Krohm, 2011).

to file a tort suit claiming negligence by their employer.[6] Employers had three commonly used legal defenses to shield themselves from liability: assumption of risk (showing that the injury resulted from an ordinary risk of employment of which the worker should have been aware);[7] the fellow servant rule (showing the injury was caused by the negligence of a fellow worker, rather than the employer); or contributory negligence (showing that the worker's own negligence contributed to the injury, regardless of whether the employer was to any degree at fault).

Given the available defenses, along with workers' very limited resources to bring suits, employers prevailed in court in the vast majority of cases. In the minority of cases in which employees won, however, employers could be held liable for substantial and unpredictable amounts. Litigation also created friction between employers and employees; dissatisfaction with the status quo on both sides set the stage for reform.

Initial reforms came in the form of employer liability acts, which eliminated some of the employers' common law defenses. Still, employees retained the burden of proving negligence on the part of the employer, which posed a significant obstacle to recovering damages (Burton and Mitchell, 2003).[8] Ultimately, both employers and employees favored workers' compensation legislation, which would ensure that workers who sustained occupational injuries or (as laws evolved) contracted work-related diseases received predictable and timely compensation. As a quid pro quo, workers' compensation became the "exclusive remedy" for occupational injuries and diseases, and an employer's liability was limited to the statutory benefits specified in the state's workers' compensation act.

Workers' compensation is the "exclusive remedy" for occupational injuries and diseases. An employer's liability is limited to the statutory benefits specified by the workers' compensation act in the jurisdiction.

The adoption of state workers' compensation programs marked significant progress in the nation's economic, legal, and political history. Passage of the laws required extensive efforts on the part of both business and labor leaders in each state to reach agreement on the law's specifics. Ultimately, both employers and employees supported workers' compensation statutes, often referred to as the grand bargain because the laws contained some principles favorable to workers, some principles favorable to employers, and some principles beneficial to both parties. For example, workers could receive workers' compensation benefits even when the injury resulted from the worker being negligent or when the employer was not negligent. For this reason, the program structure is often described as "no fault" –it is intended to compensate (almost) regardless of how the occupational injury, illness, or death occurs.

Employers benefited from workers' compensation benefits that can be more limited than tort awards, and workers' compensation benefits specified in the statute became the exclusive remedy for injured workers, which meant that employers could not be sued for damages in a tort suit.[9] In essence, workers' compensation statues are a no-fault and limited liability approach to compensate for workplace injuries and diseases.[10]

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6 Some injured workers received voluntary compensation from employers or medical benefits paid through personal accident insurance, but many received no compensation at all (Fishback and Kantor, 1996).

7 A more complete definition is provided by Willborn et al. (2017): "The assumption of risk doctrine… barred recovery for the ordinary risks of employment; as well as the extraordinary risks of employment, if the worker knew of them or might reasonably have been expected to know of them."

8 As a result, the employers' liability approach was abandoned in all jurisdictions and industries except the railroads, where it still applies.

9 Under the exclusive remedy concept, the worker accepts workers' compensation as payment in full and gives up the right to sue. There are limited exceptions to the exclusive remedy concept in some states, such as when there is an intentional injury of the employee or when an employer violates a safety regulation in a reckless manner. A suit is also possible if the employer is uninsured.

10 As John Burton notes, this compromise benefited workers by doing away with negligence tests and employers' special defenses, while employers received truncated liability and the guarantee that this was workers' exclusive remedy. Both benefited from simplified determination of the extent of liability and from specialized dispute resolution. In the past decade, concerns have been raised regarding state legislation that has curtailed the availability of benefits to workers. For example, Spieler (2017) and Burton (2017) argue that

For both workers and employers, simplified determination of benefits meant that benefits could be paid without attorney involvement in most cases. When benefits are disputed, workers' compensation statutes in most states removed workplace injuries from the general court system and established workers' compensation agencies (or commissions) that were given the primary responsibility for resolving disputes between workers and employers. Reformers felt this delivery system would also reduce the delays, uncertainties, and inconsistencies of the court system (Berkowitz and Berkowitz 1985, 161-163).

From the beginning, some segments of the working population were excluded from the state programs. Most importantly, given their prevalence in the labor market of the early 20th century, agricultural workers and people in domestic employment were explicitly excluded. Other workers, including independent contractors, have also been outside the reach of workers' compensation insurance.

Today, each of the 50 states and the District of Columbia has its own workers' compensation program, and there are several federal workers' compensation programs. (U.S. territories also have workers' compensation programs, which are not included in this report.)

Overview of Programs Included in the Report

Consistent with previous editions of this report, the current report uses a "standard approach" in determining which workers' compensation programs to include in the estimates presented in the main text, tables, and figures.

This approach includes all workers' compensation programs, as prescribed by state or federal laws, and for which costs are paid directly by employers or workers. The scope of this approach includes: all state workers' compensation programs; the Federal Employees' Compensation Act (FECA), which provides benefits to federal workers; the portion of the Longshore and Harbor Workers Act (LHWCA) paid by employers, which provides protection to longshore, harbor, and other maritime workers; and the portion of the Black Lung Benefits Act financed by employers, which provides compensation to coal miners with black lung disease. (See Appendix C for two broader measures of the scope of workers' compensation programs in the US.)

The state and federal programs in this report vary with respect to which employers and workers are covered, which injuries and diseases are compensable, and the levels of benefits provided. However, there are common features in most of these programs:

- Workers' compensation programs still largely adhere to the no-fault and limited liability principles that were the central features of the grand bargain agreed to when the programs emerged in the early 20th Century.
- Workers' compensation insurance coverage is mandatory in all states except Texas and Wyoming, with limited exemptions for small employers. Workers in specific classifications, such as agricultural or domestic employees, and workers who are classified as independent contractors are generally excluded from coverage.[11]
  - In Texas, employers are not covered by the workers' compensation law unless they elect to be covered.
  - Wyoming employs an unusual system, requiring workers' compensation coverage only for workers in "extra-hazardous" occupations. Although the state designates most occupations as "extra-hazardous," several large employers have opted not to provide workers' compensation coverage in recent years, leading to a shrinking share of workers with coverage.[12]

recent developments in many states are undermining the grand compromise that serves as the foundation for workers' compensation programs. These developments include the adoption of constricted compensability rules, the reduction in cash benefits, and the adoption of procedural hurdles, such as increasing the burden of proof for claimants. A development in several states that appears to be particularly inconsistent with the grand bargain is the adoption of what Burton terms the "dual-denial doctrine," which both makes it impossible for the worker to qualify for workers' compensation benefits and precludes the worker from bringing a tort suit by stating that workers' compensation is the exclusive remedy for a workplace injury.

11 In addition, many states allow specific classes of employers to voluntarily purchase workers' compensation coverage or to opt out of statutory coverage, e.g., independent contractors, corporate officers, and local governments.

12 As University of Wyoming law professor Michael Duff notes, "Like the situation in Texas, most [Wyoming] employers not covered

- In principle, workers' compensation pays 100 percent of injury-related medical costs for injured workers, and cash benefits that replace a portion of wages lost because of the injury. Lost-time compensation may be subject to a waiting period (typically three to seven days) that may be paid retroactively if the disability involves hospitalization or a lengthy duration of work absence. Statutory wage-replacement rates vary by state but, on average, replace about two-thirds of a worker's pre-injury gross wage, subject to minimum and maximum weekly benefits, which also vary among states. Cash benefits are tax-exempt.
- Workers' compensation benefits are financed exclusively by employers except in three states (Oregon, Washington and New Mexico), where workers pay part of the cost of benefits and services through direct payroll deductions or assessments.[13]
- Employers purchase workers' compensation insurance from private insurers or from state workers' compensation insurance funds. In most states, large employers have the option to self-insure.

Workers' Compensation Benefits

Injured workers or their medical providers may collect benefits through one of three basic types of claims:

Medical-only claims: Most workers' compensation claims do not involve lost work time in excess of the waiting period for cash benefits, so only medical benefits (and no cash benefits) are paid for these claims. "Medical-only" claims are the most common type of workers' compensation claim, but they represent only a small share of overall payments.[14]

Temporary disability claims: When a work-related injury or illness temporarily prevents a worker from returning to his or her pre-injury job or to another job for the same employer, the worker receives temporary total disability (TTD) benefits in addition to medical benefits. These TTD benefits replace approximately two-thirds of the worker's gross, pre-injury weekly earnings up to state-specified limits. Depending on the jurisdiction, if workers had additional jobs with another employer at the time of injury, earnings from that second or other job may or may not be covered by temporary disability benefits, even if the worker cannot perform any job.

Compensation for temporary disability is subject to minimum and maximum benefit levels that vary from state to state. As of January 2021, the *minimum* weekly TTD benefit ranged from a low of $20 in Arkansas, Florida, and Wisconsin, to a high of $620 in North Dakota.[15] The *maximum* weekly benefit ranged from a low of $523 in Mississippi to a high of $1,864 in Iowa. Generally, the maximum benefit is a percentage of the state's average weekly wage.

Most workers who receive TTD benefits fully recover and return to work, at which time those benefits end. In many cases, however, employers make accommodations that allow injured workers to return to transitional work before they are physically able to resume all of their former job duties. In these cases, workers may be assigned to restricted duties or given shorter hours at lower wages. When injured workers return to work at less than their pre-injury wage during the healing period, they may be eligible for temporary partial disability (TPD). TPD benefits typically cover two-thirds of the difference between an injured worker's pre-injury wage and their new wage.

Permanent disability claims: Some injured workers experience work-related injuries or illnesses that result in permanent impairments. These workers may be eligible for either permanent partial or per-

are liable in tort. Also like in Texas, there are significant numbers of workers employed by companies that offer 'alternative WC' plans." He points to Araguz v. State, ex rel. Wyoming Workers' Safety and Comp. Div., 2011 WY 148, 262 P.3d 1263 as an example of how dual-denial is expanding in that state. This case involved two injured Walmart employees. Duff 2018 and Elaine Weiss correspondence with Michael Duff, July 2019.

13 Employees directly pay for a portion of workers' compensation programs in New Mexico, Oregon, and Washington, as discussed in Appendix C. Even in states where costs are paid directly by employers, it is likely that the incidence of costs falls on employees in the form of lower wages. (Gruber and Krueger, 1991)

14 In 2017, medical-only claims accounted for 75 percent of all workers' compensation claims, but less than 10 percent of all benefits paid (NCCI, 2021a). Since 1999, there has been a gradual decline in the share of medical-only claims from 78.3 percent to the current 75.4 percent. On the other hand, the share of benefits paid for medical only claims has increased from 6.2 percent in 1999 to 7.6 percent of overall benefits in 2017.

15 Arizona, Iowa, Maine, Montana, Nevada, Oklahoma, and Rhode Island do not have a specified minimum weekly TTD benefit. Details on benefit and coverage provisions of state laws are summarized in Appendix C.

manent total disability benefits, after they reach maximum medical improvement (the point at which further medical intervention is no longer expected to improve functional capacity or provide further healing).[16] Permanent total disability (PTD) benefits are paid to workers who are considered permanently unable to work as a result of a work-related injury or illness.[17] PTD benefit minimums and maximums are typically equal to those of TTD claims. 34 states have no limit on benefit duration. Of those with limits, Alabama has the shortest at 300 weeks, or a little under six years.

States differ in their methods for determining whether a worker is eligible for permanent partial disability (PPD) benefits, the extent of permanent disability, and the amount of benefits to be paid (Barth and Niss, 1999; Burton, 2008). There are three operational approaches to determining eligibility for PPD benefits:

- The impairment approach pays benefits if the worker has a permanent medical loss, without regard to actual loss of earnings. In this case, the amount of permanent disability benefits is determined by some measure of physical loss to the body.
- The loss of earning capacity approach pays benefits if the impairment causes a permanent loss of earning capacity. In this case, benefits are determined by an estimate of reduced earning capacity.
- The wage loss approach pays benefits only if the worker has actual wage losses. In this case, if the worker has the ability to work in some capacity and actually works, he or she will not receive PPD benefits unless a wage loss is incurred.

Only eight states have no limit on PPD benefit duration or amount. Many cases involving permanent disability are settled through the use of compromise and release agreements, which generally provide a lump sum to the injured worker, may cover possible future medical costs, and release the employer from future liability.[18]

Fatalities: Workers' compensation programs also pay death benefits when a work-related illness or injury is fatal. The benefits typically include an amount for funeral and burial expenses, as well as cash benefits for the workers' family or other dependents.

Sources of Workers' Compensation Insurance

Non-federal employers pay for workers' compensation by purchasing insurance from a private insurance carrier or a state workers' compensation insurance fund (a state fund), or by self-insuring. Federal workers' compensation insurance covers federal civilian employees and some private-sector workers who are employed either in high-risk jobs or jobs related to national defense (see Federal Programs on p.71). Many states also have special workers' compensation funds to cover exceptional circumstances, such as a second work-related injury for an individual with a pre-existing condition that increases the costs associated with the injury.

Private insurance. Workers' compensation policies provided by private insurers operate much like automobile or homeowners' insurance. Employers purchase insurance for a premium that varies according to expected risk. There are two types of policies: 1) policies that require the insurer to pay all workers' compensation benefits; and 2) policies with a deductible, which require the employer to reimburse the insurer for benefits paid up to the specified deductible amount. With a deductible policy, the employer is self-insuring to a specified limit, and in return pays a lower premium. Deductibles may be written into an insurance policy on a per-injury basis, an aggregate-benefit basis, or a combination of the two. Most states permit deductible policies in workers' compensation insurance, but state regulations vary on the specifics.

State funds. In 21 states, some (or all) employers obtain workers' compensation insurance through a state workers' compensation insurance fund. State funds, which are established by an act of the state legislature, are designated as either exclusive or com-

16 In most claims where the workers ultimately receive permanent disability benefits, there is initially a period in which the workers receive temporary disability benefits, as described in the preceding paragraphs.

17 Most states allow permanently and totally disabling conditions to be compensated for life if the condition leads to an inability to work. The requirements for a PTD benefit vary across jurisdictions, but many have a provision such that if an injured worker has a permanent disability rating over a specified threshold (for instance, more than 70 percent disabled), then the worker would qualify.

18 See glossary for complete definition of compromise and release agreements.

petitive. An exclusive state fund is the sole provider of workers' compensation insurance in a state (although most states with exclusive state funds allow large employers to self-insure). A competitive state fund competes with private insurers. In this report, we define a competitive state fund as one that: 1) sells workers' compensation policies to private-sector employers in the voluntary insurance market; and 2) is exempt from federal taxes.[19] In 2019, four states had exclusive state funds, 16 states had competitive state funds that met our criteria, and two states had special circumstances.[20]

> Employers pay for workers' compensation insurance by purchasing from private insurers or a state fund or by self-insuring

Self-insurance. Many large employers choose to self-insure for workers' compensation.[21] Where self-insurance is permitted, employers must apply for permission to self-insure from the regulatory authority and demonstrate that they have sufficient financial resources to cover their expected workers' compensation costs.[22] Some states also permit groups of employers in the same industry or trade association to self-insure through group self-insurance.

Federal programs. The federal government covers workers' compensation benefits for federal civilian employees under the Federal Employees Compensation Act (FECA). Federal programs also cover some private-sector workers, including coal miners with black lung disease, employees of overseas contractors with the U.S. government, energy employees exposed to certain hazardous materials, workers engaged in manufacturing atomic bombs, and veterans injured while on active duty in the armed forces.[23] The federal government also provides oversight for workers covered under the Longshore and Harbor Workers' Compensation Act (LHWCA), but employers are still required to purchase private insurance or self-insure. (More details about these federal programs are provided in Appendix B.)

Guaranty funds. State guaranty funds ensure benefit payments to injured workers in cases in which a private insurance carrier or self-insured employer becomes insolvent and lacks sufficient earmarked assets to pay outstanding benefits. The benefit payments and administrative costs of guaranty funds for private insurers are typically[24] funded through assessments on workers' compensation insurers, while the costs of guaranty funds for self-insured employers are funded through assessments on self-insuring employers.

Second injury funds. Second injury funds reimburse employers or insurance carriers in cases in which an employee with a pre-existing condition experiences another work-related injury or illness. The second injury fund pays any costs associated with the prior condition in order to reduce the cost burden on the current employer. The funds encourage employers to hire injured workers who want to return to work with residual impairments, because the current employer is responsible only for workers' compensation benefits associated with a subsequent illness or injury. Second injury funds are financed through assessments on employers and, in a small number of jurisdictions, with general fund monies.[25]

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19 All competitive state funds are exempt from federal taxes, and five funds (Hawaii, Idaho, Louisiana, New Mexico, and Texas) are also exempt from paying state premium taxes.

20 In 2019, North Dakota, Ohio, Washington, and Wyoming had exclusive state funds. Competitive state funds operated in California, Colorado, Hawaii, Idaho, Kentucky, Louisiana, Maryland, Missouri, Montana, New Mexico, New York, Oklahoma, Oregon, Pennsylvania, Rhode Island, and Texas. South Carolina's state fund provides workers' compensation insurance for state and local government employees and competes with private insurers for the quasi-state agency market segment. West Virginia discontinued its state fund in 2006. However, the state was still paying benefits in 2019 on some claims involving injuries that occurred before 2006.

21 All states allow employers to self-insure except for North Dakota and Wyoming, both of which require all employers to obtain workers' compensation insurance from their exclusive state funds.

22 Nearly all self-insured firms are required to post some type of financial security (e.g. surety bonds) so that workers' compensation benefits are paid even if the employer experiences financial distress.

23 While these jobs tend to be particularly hazardous, there are many hazardous jobs not covered by federal WC programs.

24 There are some states in which guaranty funds are funded through assessments paid directly by employers. In California in 2017, for example, employers were assessed a tax of 2.00% of net premiums paid in 2016. (NCCI, 2021b)

25 See Sources and Methods 2021 on the Academy's website for further details on special funds, second injury funds, and guaranty funds.

Other special funds. Many states have special funds beyond guaranty funds and second injury funds to address specific risks and problems within their respective programs.[26] The most common special fund aside from the aforementioned types is an Uninsured Employer's fund. These funds ensure that employees of (illegally) uninsured employers receive workers' compensation benefits in the case of a workplace illness or injury. Other special funds are more dependent on the industry breakdown of a given state. In Kentucky and West Virginia, for example, there is a Coal Workers Pneumoconiosis fund.[27]

Carve-outs. Several states have legislative provisions for "Carve-outs", a variant of workers' compensation allowing for union-management agreements that meet or exceed the legislated workers' compensation provisions and provide for certain benefits and dispute resolution mechanisms outside those typically provided in the legislation.[28] Carve-outs are most common in construction, police work and firefighting sectors. (Indemnity costs of these mechanisms are reflected in the Academy's data, but some administrative and medical costs may not be.)

Estimates for 2019

The workers' compensation system involves multiple stakeholder groups: employers, workers, insurers, attorneys, medical providers, and state governments. The estimates presented in this report reflect the experience mainly of two groups: workers who rely on compensation for workplace injuries and illnesses and employers (including the federal government) who pay the bills. The estimates represent benefits and costs paid in each of the last five calendar years.

The estimates of benefits and costs necessarily represent different time frames. Estimates of benefits for 2019 include payments made in 2019 for injuries and illnesses that occurred in 2019 and prior years. For employers that purchase workers' compensation insurance, estimates of costs for 2019 are the premiums paid in 2019 to a private insurer or state fund. Those premiums incorporate projected future liabilities for injuries and illnesses that occur in 2019. For employers that are self-insured, the cost estimates include payments for medical and cash benefits made in 2019, for injuries and illnesses that occurred in 2019 or prior years. For additional discussion of these measures, refer to the Addendum, Benefits Paid vs. Benefits Incurred.

The Academy has designed its measures to provide the best available estimates of workers' compensation benefits, costs, and coverage in a given year and over time. The estimates are not designed to assess the performance of the insurance industry or of insurance markets. Other organizations analyze insurance trends.[29] The estimates also are not designed to measure the performance of the workers' compensation system with respect to: the prevention of occupational injuries and illnesses; the adequacy or equity of benefits paid to workers; the adequacy of payment for medical coverage; affordability of compensation; or the impact of vocational rehabilitation and job accommodations in returning injured employees to work or on the benefits they receive.

Finally, it is not appropriate to use the estimates to compare the performance of workers' compensation systems in different states. Benefits and costs vary across states not only due to differences in their workers' compensation laws and systems, but also because states vary in the relative risk of their mix of industries and occupations. A meaningful comparison of benefits or costs across states is beyond the scope of this report. As described in the table in Appendix E, the Oregon Department of Consumer and Business Services produces a biannual report on state costs of workers' compensation premiums that does control for industry mix. However, that report's scope does not extend to measuring system performance, which would require other metrics that are unavailable for all states.

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26 Not all states have guaranty funds and/or second-injury funds.

27 See Sources and Methods 2021 on the Academy's website for further details on special funds, second injury funds, and guaranty funds.

28 These include California, Florida, Hawaii, Illinois, Kentucky, Massachusetts, Maryland, Maine, Minnesota, Nevada, New York, and Pennsylvania. (Torrey, 2019)

29 The National Council on Compensation Insurance and state rating bureaus, for example, assess insurance developments in the states and advise regulators and insurers on proposed insurance rates.

Covered Employment and Wages

There is no national system for counting the number of jobs covered by workers' compensation, so the number of covered jobs and amount of covered wages must be estimated. The Academy's methodology is designed to count the number of jobs that are legally required to be covered by workers' compensation under state laws, for all states except Texas and Wyoming.[30] In Texas, where employers opt into the workers' compensation system by purchasing coverage or self-insuring, and Wyoming, where employers are allowed to opt out of workers' compensation, the estimates include both workers who are required to be covered, and those who are covered but not required to be (Wyoming Department of Workforce Services, 2018 & 2019).[31]

Methods for Estimating Covered Employment and Wages

We use the number of jobs and amount of wages covered by unemployment insurance (UI) in each state as the starting point for our estimates.[32] Then, we estimate the number of jobs that are not required to be covered by workers' compensation according to each state's statute regarding exemptions for small firms and/or agricultural employers. We subtract the number of exempted jobs from the UI base to determine the number of UI-covered jobs that are covered by workers' compensation. We then calculate the proportion of UI-covered jobs that are covered by workers' compensation in each state and apply this proportion to the state's UI-covered wages to obtain total workers' compensation covered wages. In Texas, where coverage is optional for employers, we apply the proportion of jobs in firms that opt into workers' compensation to the UI base. In Wyoming, where between 52.3 percent and 67.1 percent of employees are mandatorily covered, and 22.9 percent of employees are covered under optional coverage, we assume 59.7 percent mandatory coverage (average of 52.3 and 67.1) and add the 22.9 percent who are covered by employer opt-ins for an estimate of 82.7 percent coverage (Wyoming Department of Workforce Services, 2017 & 2018).

The Academy's methodology may undercount the actual number of jobs (and amount of wages) covered because some employers that are not required to carry workers' compensation coverage do so anyway. For example, self-employed persons are not typically required to carry unemployment or workers' compensation insurance, but, in some states, those persons may voluntarily elect to be covered. Likewise, in states with exemptions for small firms, some of those small firms may voluntarily purchase workers' compensation insurance.

On the other hand, our methodology may overestimate the number of jobs (and wages) covered because some employers who are required to carry state's workers' compensation insurance do not do so. Every state has a program to detect and penalize employers who fail to report or cover jobs under state labor statutes, but no definitive national study has documented the extent of noncompliance. (For more details on the Academy's methods for estimating coverage, refer to Appendix A.)

We note that millions of workers are not covered by unemployment insurance or workers' compensation because they are not categorized as employees. These include independent contractors, gig economy workers (except perhaps in California[33]), and day laborers.[34]

30 Workers' compensation covered employment is measured in terms of "covered jobs" as opposed to "covered workers." Refer to Appendix A, Employed Workforce Coverage Estimates.

31 It recently came to the Academy's attention that not all workers in Wyoming are required to be covered by workers' compensation. In the state, only "extra hazardous" jobs fall under mandatory coverage; otherwise, employers choose whether or not they will provide coverage. The data published by the state of Wyoming on the matter, however, is not consistent and appears to be too volatile to be plausible. For fiscal years 2017 and 2018, for example, their data depicts the labor force size to have declined by 14 percent, and the employees covered as a percent of the labor force to have risen from 75.4 percent to 90.0 percent. With this information, we assume actual coverage to be somewhere in the middle and use 82.7 percent of the employed labor force for our coverage estimate. This is newly instituted as of the 2019 data report. We hope to have better data on the matter for the 2020 data report.

32 Unemployment Insurance (UI) programs provide cash benefits to workers who become unemployed (through no fault of their own) and meet specific eligibility requirements. The UI programs are largely controlled by the states, although there are several federal standards, including a requirement that states produce uniform data. (These aspects of federal involvement are not present in workers' compensation.)

33 California Assembly Bill 5, effective Jan. 2020, uses the "ABC" test to determine the classification of workers as employees or independent contractors. However, with the passage of Prop 22, app-based drivers (Uber, Lyft, DoorDash, etc.) are classified as independent contractors and are not entitled to unemployment insurance or workers' compensation benefits. The effect of AB5 on workers' compensation is not reflected in this year's report. (Lake, 2021)

34 The BLS has some information on occupational fatalities of independent workers. Unfortunately, the non-fatal injuries and illnesses

National Estimates of Covered Employment and Wages

In 2019, workers' compensation covered an estimated 144.4 million U.S. jobs, a 1.2 percent increase from the previous year (Table 2). Covered wages totaled $8.6 trillion, an increase of 4.7 percent from 2018 (Table 2). Covered employment and wages have increased steadily since 2010, but the rate of increase has fluctuated across those years. The difference in percentage increases between covered jobs and covered wages is in part due to inflation, which is not accounted for in the Academy's estimates of covered wages.

Between 2015 and 2019, covered non-federal employment increased by an estimated 8.3 million jobs, or 6.3 percent (Table 3). Covered non-federal wages increased much more substantially, by $1.3 trillion or 19 percent (Table 4).

Overall, in 2019, workers' compensation coverage extended to an estimated 97.6 percent of all non-federal jobs covered by unemployment insurance (Table A.1), and 86.8 percent of all jobs in the U.S. (Table A.2).[35]

In contrast to the relatively large percentage increase in covered employment in the non-federal sector, coverage in the federal workers' compensation program grew by only 2.5 percent between 2015 and 2019, adding 68,000 jobs (Table 3). Most of this gain, an increase in coverage of 1.7 percent, took place between 2015 and 2017, with a 0.8 percent increase from 2017-2019. Covered wages of federal workers increased by 3.0 percent from 2015 to 2017, and by 5.6 percent from 2017-2019, for a total 8.8 percent increase over the study period (Table 4).

State Estimates of Covered Employment and Wages

Between 2015 and 2019, all states except Alaska, Louisiana, North Dakota, West Virginia, and Wyoming experienced increases in the number of jobs covered by workers' compensation (Table 3). The three states with the largest percentage gains in covered employment were Utah (13.7%), Idaho (13.3%), and Nevada (13.1%), the same as in last year's report. The states with the largest percentage declines in covered employment were North Dakota (-3.4%) and Alaska (-2.5%). In all five states which experienced a decline in covered jobs over the five-year period, the decline in coverage occurred between 2015-17 and was not fully offset by increases in coverage between 2017-19.

The trend in covered wages largely parallels the trend in covered jobs, although covered wages must grow more quickly than covered jobs unless there is no wage growth in the economy overall. Between 2015-2019, no state experienced a decline in covered wages. The across-the-board increases largely represent the continuing improvement in the economy over the analysis period. Forty-six states experienced increases in covered wages of more than 10 percent, and 13 states experienced increases exceeding 20 percent. Four western states—Washington (35.9%), Utah (30.6%), Idaho (29.4%), and Nevada (27.3%)–experienced the greatest increases in covered wages, while Alaska (2.2%), North Dakota (3.0%), and Wyoming (5.3%) experienced the slowest growth. (Table 4).

Workers' Compensation Benefits Paid

Data Sources and Methods for Estimating Benefits Paid

This section describes the primary data sources that we use to estimate workers' compensation benefits nationally and for each state. A detailed, state-by-state explanation of how the benefit estimates in this report are produced is available in Sources and Methods: A Companion to Workers' Compensation:

are captured via an employer survey and so does not capture independent workers.

35 According to unpublished estimates provided by the BLS, 3.7 percent of civilian (non-federal) workers represented by the BLS National Compensation Survey (NCS) were employed in establishments reporting zero annual workers' compensation costs in March 2019 (DOL, 2021). Civilian workers are those employed in private industry or state and local governments. Excluded from private industry are the self-employed and farm and private household workers. Federal government workers are excluded from the public sector. The private industry series and the state and local government series provide data for the two sectors separately. The Academy's estimate of legally required workers' compensation coverage is 97.6 percent of all non-federal UI covered jobs in 2019, slightly above NCS estimates.

Table 2

Workers' Compensation Covered Jobs and Covered Wages, 1999-2019

Year	Covered Workers (thousands)	Covered Workers Percent Change	Covered Wages (billions)	Covered Wages Percent Change
1999	124,349	2.4	4,151	6.8
2000	127,141	2.2	4,495	8.3
2001	126,972	-0.1	4,604	2.4
2002	125,603	-1.1	4,615	0.2
2003	124,685	-0.7	4,717	2.2
2004	125,878	1.0	4,953	5.0
2005	128,158	1.8	5,213	5.3
2006	130,339	1.7	5,544	6.3
2007	131,734	1.1	5,857	5.6
2008	130,643	-0.8	5,954	1.7
2009	124,856	-4.4	5,675	-4.7
2010	124,638	-0.2	5,834	2.8
2011	125,876	1.0	6,058	3.8
2012	127,916	1.6	6,326	4.4
2013	130,149	1.7	6,835	8.0
2014	132,791	2.0	6,840	0.1
2015	136,008	2.4	7,211	5.4
2016	138,468	1.8	7,432	3.1
2017	140,424	1.4	7,787	4.8
2018	142,635	1.6	8,178	5.0
2019	144,407	1.2	8,560	4.7

Source: National Academy of Social Insurance estimates. See Appendix A for more details.

Benefits, Costs, and Coverage 2019, on the Academy's website (www.nasi.org)

The Academy's estimates of workers' compensation benefits paid are based on three main data sources: 1) data from a questionnaire on workers' compensation benefits and costs, distributed annually by the Academy to state agencies overseeing workers' compensation programs; 2) data purchased from A.M. Best, a private company that specializes in collecting insurance data and rating insurance companies; and 3) data provided by the National Council on Compensation Insurance (NCCI). Together, the data from state agencies, A.M. Best, and NCCI allow us to assemble estimates of workers' compensation benefits paid by private insurance carriers, state funds, and self-insured employers. The U.S. Department of Labor provides data on benefits paid through federal programs.[36]

Academy questionnaire. The primary source of data on benefits paid to injured workers is the responses from state workers' compensation agencies to the Academy's annual questionnaire. The questionnaire is designed to collect information on amounts of medical and cash benefits—the latter of which includes settlements—paid in a calendar year, as well as benefits paid through special funds, second injury funds, and guaranty funds. This year, we received responses from at least one agency or organization in 41 out of 51 jurisdictions.

States vary in their ability to provide complete data on benefits paid. One of the most common reporting problems relates to benefits paid by self-insured employers. If a state does not report self-insured benefits, benefits are imputed using one of two methods. The first method utilizes historical self-insured benefits paid in the state, if available, along with information on the ratio of self-insured benefit payments to total benefits paid (in states in which the data are available) to control for trends in self-insured benefit payments over time. This method may understate or overstate benefits if there is a change in the portion of self-insuring companies between the historical data year and the year(s) being estimated. If historical data are not available for the specific state, we rely on a second method that applies the ratio of self-insured benefits to covered wages in states where the data are available, or to the estimate of covered wages in states where data on self-insureds is missing. This method may understate or overstate benefits if the cost per worker covered by self-insurance in that state differs from the average.

Among the states that did not directly reply to the survey, six published annual reports from which we could obtain the workers' compensation information normally included in the questionnaire. For some states, we obtained information on benefits paid through special funds, second injury funds, or guaranty funds from data on the websites of the state workers' compensation agency.

A.M. Best data. The A.M. Best data supplement the state survey data in cases in which the survey data are incomplete, missing, or determined to be incorrect. The A.M. Best data used for this report provide information on benefits paid in each state for 2015 through 2019 (A.M. Best, 2021). The data include information for all private carriers in every state and for 16 of the 22 state funds. The A.M. Best data do not include information about benefits paid by the other six state funds, by self-insured employers, by employers under deductible policies, or by special funds.[37]

NCCI data. NCCI is the primary source of data on medical benefits in the 38 states in which it is licensed (NCCI, 2021). In states where NCCI data are not available, estimates of medical benefits are based on reports from the states. In cases where state data are incomplete and NCCI is licensed, NCCI is also a source for data on reimbursements paid through deductible policies and for amounts of covered wages for employers insured by private insurers or a competitive state fund.

Estimating deductibles. The availability of deductible policies varies by state.[38] Among the states that allow them, a few can provide us with complete information on these policies, but most cannot. For states that do provide information on deductibles, we rely on the survey data alone, or together with data from A.M. Best, to estimate amounts paid for the deductibles. For states that do not include deductibles in the survey, we rely on NCCI data on

36 Note that while, in previous reports, Table 5 reports benefits paid by insurers, this report uses the term payer instead. We made this change to clarify that states can be either employers or insurers, depending on the context, and that the federal government is a payer, but not an insurer, with respect to WC. That is, it pays benefits but does not insure other entities.

37 A.M. Best does not provided data on the four exclusive state funds (Ohio, North Dakota, Washington, and Wyoming), the state fund in South Carolina that only provides benefits to government workers, or the state fund in West Virginia that discontinued in 2006, but was still paying benefits as of 2019.

38 Deductible policies are not allowed in the four states with exclusive state funds (Ohio, North Dakota, Washington, and Wyoming), or in Wisconsin. Five states (California, New York, Oregon, Pennsylvania, and Rhode Island) do not allow deductible policies in their competitive state funds.

Table 3
Workers' Compensation Covered Jobs by State, 2015-2019

State	Number of Jobs (in thousands)					Percent Change			Ranking (1=largest percent increase, 2015-2019)
	2015	2016	2017	2018	2019	2015-2017	2017-2019	2015-2019	
Alabama	1,765	1,790	1,812	1,838	1,864	2.6	2.9	5.6	19
Alaska	317	311	307	306	309	-3.1	0.6	-2.5	50
Arizona	2,555	2,625	2,692	2,771	2,852	5.4	5.9	11.6	4
Arkansas	1,129	1,144	1,153	1,163	1,170	2.1	1.5	3.6	32
California	16,051	16,471	16,775	17,110	17,385	4.5	3.6	8.3	11
Colorado	2,428	2,485	2,542	2,607	2,667	4.7	4.9	9.8	7
Connecticut	1,645	1,649	1,652	1,656	1,652	0.4	0.1	0.4	46
Delaware	427	432	435	440	446	1.9	2.5	4.4	26
District of Columbia	545	556	565	576	581	3.5	2.9	6.5	15
Florida	7,616	7,881	8,061	8,264	8,436	5.8	4.7	10.8	5
Georgia	3,968	4,077	4,160	4,242	4,321	4.8	3.9	8.9	10
Hawaii	605	614	621	625	624	2.6	0.6	3.2	37
Idaho	652	675	694	718	739	6.4	6.5	13.3	2
Illinois	5,754	5,801	5,840	5,879	5,902	1.5	1.1	2.6	39
Indiana	2,892	2,936	2,967	3,000	3,025	2.6	2.0	4.6	23
Iowa	1,497	1,506	1,506	1,515	1,518	0.6	0.8	1.4	44
Kansas	1,332	1,335	1,335	1,347	1,356	0.3	1.6	1.8	42
Kentucky	1,794	1,820	1,833	1,844	1,858	2.2	1.3	3.5	33
Louisiana	1,896	1,873	1,872	1,886	1,888	-1.3	0.8	-0.5	47
Maine	578	585	591	596	602	2.1	1.9	4.0	29
Maryland	2,443	2,477	2,503	2,530	2,548	2.4	1.8	4.3	27
Massachusetts	3,382	3,448	3,497	3,540	3,589	3.4	2.6	6.1	16
Michigan	4,085	4,164	4,217	4,262	4,281	3.2	1.5	4.8	22
Minnesota	2,727	2,765	2,805	2,833	2,851	2.9	1.6	4.5	24
Mississippi	1,041	1,052	1,056	1,059	1,063	1.5	0.7	2.2	41

Missouri	2,541	2,578	2,614	2,626	2,643	2.9	1.1	4.0	30
Montana	432	438	442	447	453	2.4	2.4	4.9	21
Nebraska	931	940	944	949	953	1.4	1.0	2.4	40
Nevada	1,224	1,262	1,304	1,347	1,384	6.5	6.2	13.1	3
New Hampshire	629	640	646	651	657	2.6	1.8	4.5	25
New Jersey	3,841	3,905	3,957	3,995	4,034	3.0	1.9	5.0	20
New Mexico	755	756	759	771	785	0.5	3.4	3.9	31
New York	8,878	9,015	9,137	9,294	9,404	2.9	2.9	5.9	17
North Carolina	4,002	4,099	4,167	4,247	4,331	4.1	3.9	8.2	12
North Dakota	424	404	401	404	410	-5.5	2.2	-3.4	51
Ohio	5,182	5,242	5,286	5,327	5,360	2.0	1.4	3.4	34
Oklahoma	1,538	1,518	1,523	1,547	1,565	-0.9	2.8	1.8	43
Oregon	1,760	1,813	1,855	1,893	1,925	5.4	3.8	9.4	9
Pennsylvania	5,576	5,621	5,682	5,751	5,807	1.9	2.2	4.1	28
Rhode Island	459	462	466	470	474	1.5	1.7	3.2	38
South Carolina	1,858	1,904	1,944	2,000	2,035	4.6	4.7	9.5	8
South Dakota	400	404	406	410	413	1.5	1.8	3.3	35
Tennessee	2,677	2,745	2,789	2,834	2,887	4.2	3.5	7.8	14
Texas	9,238	9,472	9,642	9,877	9,985	4.4	3.6	8.1	13
Utah	1,301	1,348	1,390	1,438	1,479	6.8	6.4	13.7	1
Vermont	298	298	300	301	300	0.7	0.3	1.0	45
Virginia	3,490	3,543	3,591	3,645	3,687	2.9	2.7	5.6	18
Washington	3,049	3,141	3,215	3,298	3,363	5.5	4.6	10.3	6
West Virginia	672	660	659	669	664	-1.9	0.7	-1.2	48
Wisconsin	2,742	2,775	2,797	2,823	2,833	2.0	1.3	3.3	36
Wyoming*	228	219	217	219	223	-4.8	2.9	-2.1	49
Total Non-Federal	133,251	135,674	137,621	139,840	141,583	3.3	2.9	6.3	
Federal Employees	2,756	2,793	2,803	2,795	2,824	1.7	0.8	2.5	
TOTAL	136,008	138,468	140,424	142,635	144,407	3.2	2.8	6.2	

* The 2019 data report assumes 82.7 percent job coverage in Wyoming. See Appendix A for more information.
Source: National Academy of Social Insurance estimates.

Table 4

Workers' Compensation Covered Wages by State, 2015-2019

	Covered Wages (in millions)					Percent Change			Ranking (1=largest percent increase, 2015-2019)
State	2015	2016	2017	2018	2019	2015-2017	2017-2019	2015-2019	
Alabama	$76,375	$78,472	$81,513	$85,294	$89,145	6.7	9.4	16.7	22
Alaska	17,008	16,316	16,105	16,653	17,377	-5.3	7.9	2.2	51
Arizona	121,117	126,025	133,656	142,234	152,059	10.4	13.8	25.5	5
Arkansas	45,693	47,069	49,026	50,600	52,664	7.3	7.4	15.3	28
California	986,111	1,033,048	1,100,775	1,167,490	1,236,649	11.6	12.3	25.4	7
Colorado	130,421	134,653	143,486	152,312	163,627	10.0	14.0	25.5	6
Connecticut	107,652	108,469	109,939	112,001	115,187	2.1	4.8	7.0	47
Delaware	22,963	23,117	24,183	24,909	25,983	5.3	7.4	13.2	38
District of Columbia	44,245	45,668	48,115	50,624	52,624	8.7	9.4	18.9	16
Florida	348,730	367,225	386,855	410,172	432,854	10.9	11.9	24.1	9
Georgia	194,315	204,389	214,658	224,518	236,385	10.5	10.1	21.7	11
Hawaii	27,455	28,671	29,899	30,879	31,938	8.9	6.8	16.3	25
Idaho	25,003	26,421	28,353	30,413	32,363	13.4	14.1	29.4	3
Illinois	320,627	325,926	337,050	350,809	361,975	5.1	7.4	12.9	39
Indiana	126,044	130,020	136,138	141,826	146,657	8.0	7.7	16.4	24
Iowa	65,691	67,335	69,094	71,669	73,587	5.2	6.5	12.0	41
Kansas	57,907	58,383	59,712	62,206	64,631	3.1	8.2	11.6	43
Kentucky	77,074	79,531	82,084	84,640	87,886	6.5	7.1	14.0	36
Louisiana	86,388	84,735	86,288	89,926	92,249	-0.1	6.9	6.8	48
Maine	23,734	24,489	25,473	26,567	27,920	7.3	9.6	17.6	19
Maryland	133,953	137,952	143,060	148,270	153,805	6.8	7.5	14.8	33
Massachusetts	225,054	232,040	244,117	256,581	270,355	8.5	10.7	20.1	13
Michigan	203,240	210,922	220,107	228,067	234,068	8.3	6.3	15.2	29
Minnesota	145,477	149,647	157,008	163,774	169,513	7.9	8.0	16.5	23
Mississippi	38,485	39,429	40,234	41,354	42,506	4.5	5.6	10.4	44

Missouri	114,664	117,819	122,700	127,663	132,459	7.0	8.0	15.5	27
Montana	16,969	17,472	18,247	19,059	19,987	7.5	9.5	17.8	18
Nebraska	39,527	40,613	41,956	43,501	45,227	6.1	7.8	14.4	35
Nevada	55,562	59,063	62,315	66,967	70,735	12.2	13.5	27.3	4
New Hampshire	32,889	34,090	35,440	36,778	38,409	7.8	8.4	16.8	21
New Jersey	238,725	244,360	252,669	261,709	270,944	5.8	7.2	13.5	37
New Mexico	31,291	31,314	32,143	33,890	36,026	2.7	12.1	15.1	30
New York	598,418	611,626	644,759	676,612	708,015	7.7	9.8	18.3	17
North Carolina	184,809	192,323	202,391	214,070	225,395	9.5	11.4	22.0	10
North Dakota	21,396	19,611	20,035	21,035	22,041	-6.4	10.0	3.0	50
Ohio	242,199	247,780	257,739	267,238	277,239	6.4	7.6	14.5	34
Oklahoma	67,038	65,518	67,541	71,098	73,963	0.8	9.5	10.3	46
Oregon	84,407	89,028	94,162	99,715	105,281	11.6	11.8	24.7	8
Pennsylvania	289,036	292,931	304,850	317,832	331,933	5.5	8.9	14.8	32
Rhode Island	22,940	23,474	24,279	24,922	25,683	5.8	5.8	12.0	42
South Carolina	77,269	80,873	85,141	88,590	93,545	10.2	9.9	21.1	12
South Dakota	15,838	16,401	16,979	17,671	18,415	7.2	8.5	16.3	26
Tennessee	123,676	128,687	134,713	141,504	147,824	8.9	9.7	19.5	14
Texas	498,207	511,121	534,512	566,668	593,716	7.3	11.1	19.2	15
Utah	56,871	60,227	63,904	68,906	74,269	12.4	16.2	30.6	2
Vermont	12,983	13,248	13,645	14,101	14,620	5.1	7.1	12.6	40
Virginia	183,411	188,077	196,462	205,610	215,398	7.1	9.6	17.4	20
Washington	171,473	184,150	198,259	216,879	233,046	15.6	17.5	35.9	1
West Virginia	27,351	26,777	27,888	30,104	30,193	2.0	8.3	10.4	45
Wisconsin	123,895	127,192	131,615	137,448	142,360	6.2	8.2	14.9	31
Wyoming	10,446	9,719	9,912	10,395	11,003	-5.1	11.0	5.3	49
Total Non-Federal	$6,992,052	$7,213,448	$7,561,185	$7,943,754	$8,321,734	8.1	10.1	19.0	
Federal Employees	$218,918	$218,918	$225,416	$233,843	$238,117	3.0	5.6	8.8	
TOTAL	$7,210,970	$7,432,365	$7,786,601	$8,177,597	$8,559,851	8.0	9.9	18.7	

Source: National Academy of Social Insurance estimates.

manual equivalent premiums, together with data from A.M. Best to estimate deductible payments.[39] See *Sources and Methods 2021* on the Academy's website for a detailed description of the methods used to estimate deductibles.

Benefits paid. The Academy's estimates of workers' compensation benefits in this report reflect amounts paid for work-related injuries and illnesses in calendar year 2019 regardless of when those injuries occurred. This measure of benefits is commonly used in reporting data on social insurance programs, private employee benefits, and other income security programs.

> The Academy draws on a range of data and methods to provide the most accurate possible estimates of workers' compensation benefits, costs, and coverage for a five-year study period.

Benefits incurred. A different measure, accident year incurred losses (or accident year incurred benefits), is the common reporting measure for private workers' compensation insurers and some state funds. Incurred benefits measure the total expected benefits associated with injuries that occur in a particular year, regardless of whether the benefits are paid in that year or future years. The two measures, accident year benefits paid and accident year benefits incurred, reveal important but different information. For a discussion of the relative merits of each measure, refer to the Addendum, Benefits Paid vs. Benefits Incurred.

National Estimates of Benefits Paid

Table 5 shows workers' compensation benefits paid by each type of payer (private insurer, state fund, self-insured, federal government) from 1999 to 2019. Altogether, workers' compensation paid approximately $63.0 billion in benefits in 2019, a 0.2 percent increase from the total paid in 2018. Private carriers were the largest single payer category, followed by self-insured employers, state funds, and the federal government.

Benefits by type of payer. In 2019, private insurers continued to dominate the workers' compensation insurance market, accounting for $35.1 billion in benefits paid (55.6% of total benefits paid). Self-insured employers were the next largest payer, $15.8 billion in benefits paid (25.0% of total). State funds paid $8.8 billion (14.0%) and the federal government the remaining $3.4 billion (5.4%) of benefits. (Table 5)

Over the last two decades, the workers' compensation insurance market has shifted away from coverage by private insurers, state funds, and federal programs, toward self-insurance. As shown in Table 5, the former groups decreased their share of benefits by 1.4, 1.3, and 0.8 percentage points respectively between 1999 and 2019.[40,41] Over the same period, the share of benefits paid by self-insurers increased by 3.4 percentage points—from 21.6% to 25.0%.

Deductibles. Employers who have workers' compensation policies with deductibles must reimburse their insurer for benefits paid up to the deductible amount. A share of the benefit payments that are attributed to private insurers and state funds in Table 5 are thus paid by employers, as is depicted in Table 7.

In 2019, employers paid $10.8 billion in benefits under deductible policies, or 17.6 percent of total benefits paid (Table 6). The vast majority of benefits paid under deductible provisions are by employers

39 Accurately estimating high-deductible policies is particularly challenging. The Academy notes that numbers in this report may not fully capture either the benefits or costs, and is working on better methodology for the latter.

40 The decline in the relative importance of state funds in recent years largely reflects the decline in coverage of the California State Fund (which accounted for 50 percent of the California workers' compensation insurance market in 2004 but only 10 percent more recently) and, to a lesser extent, the dissolution of funds in West Virginia (in 2009), Arizona (in 2012), and Utah (in 2017).

41 The self-insured share fluctuated slightly at the turn of the century, but never fell below 21.6 percent. While the federal government share in 2019 is down 1 percentage point since 1997, since 1999 it has remained steady between 6.2 percent and 5.6 percent.

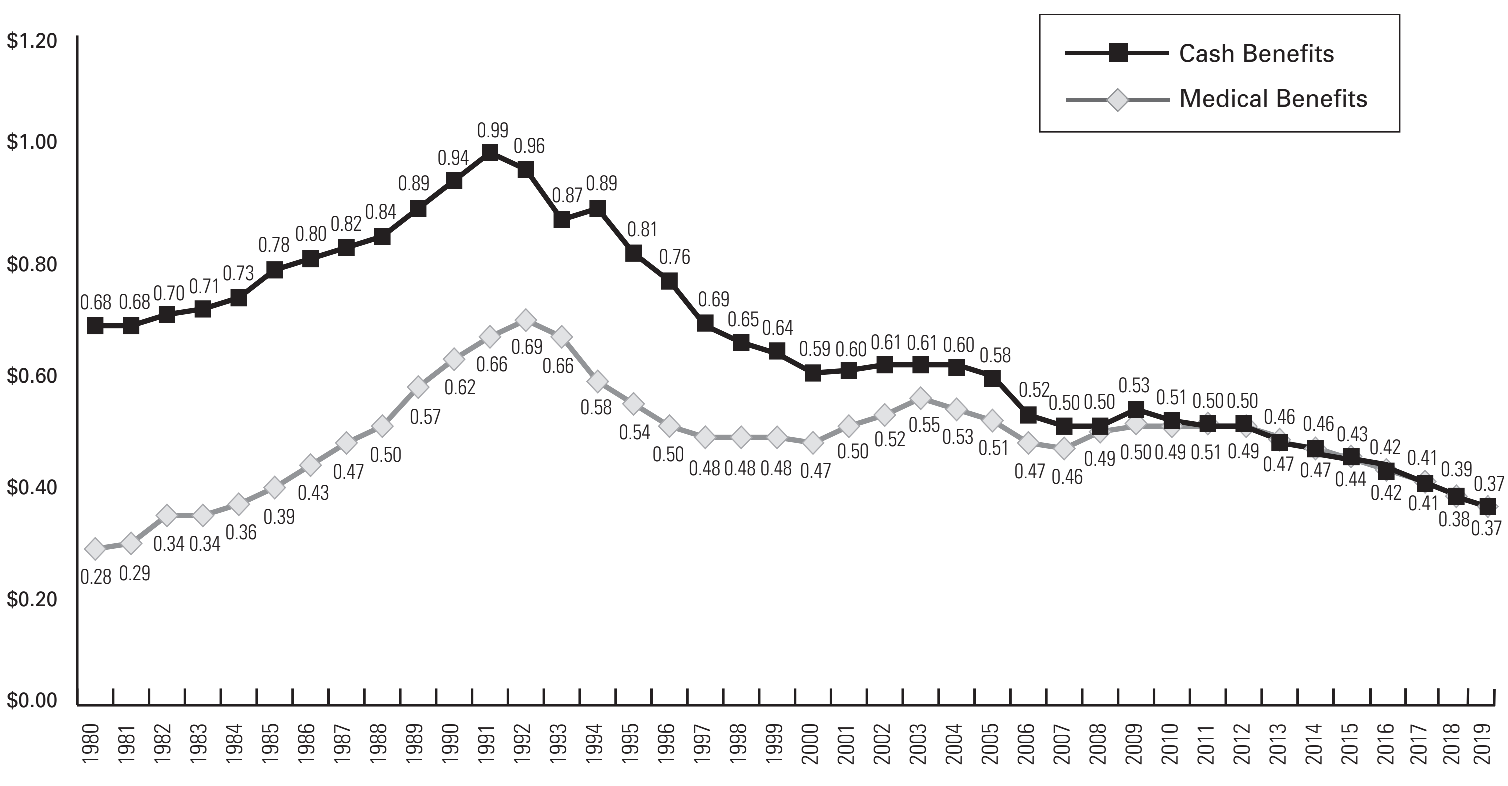
covered through private insurers (97.2% of total deductibles paid in 2019), as opposed to deductibles paid by employers covered through a state fund (2.8% of total). The share of benefits paid by employers under deductible provisions increased by 2.4 percentage points between 1999 and 2009 and by another 2.9 percentage points between 2009 and 2019.

Employers who have policies with deductibles are, in effect, self-insured up to the amount of the deductible.[42] If we allocate the amount of benefits paid under deductibles to self-insurance (instead of to private carriers as in Table 5) we obtain a more accurate picture of the share of the workers' compensation market for which employers are assuming primary financial risk. Table 7 shows the share of workers' compensation benefits directly paid by employers from 1999 to 2019. For 2019, employers paid 42.6 percent of total benefits (as opposed to 25.0% in Table 5), while private insurers paid 38.5 percent (as opposed to 55.6%). The remaining benefits were paid by state funds and the federal government. (Table 7)

In 2019, workers' compensation insurers paid $0.37 per $100 of covered wages toward medical benefits, a 16.7 percent decrease from 2015 (Table 10). The change reflects the effects of a 1.1 percent decline in total medical benefits over the five-year period, accompanied by an 18.7 percent increase in covered wages (Table 1).

Figure 2

Workers' Compensation Medical and Cash Benefits Per $100 of Covered Wages, 1980-2019

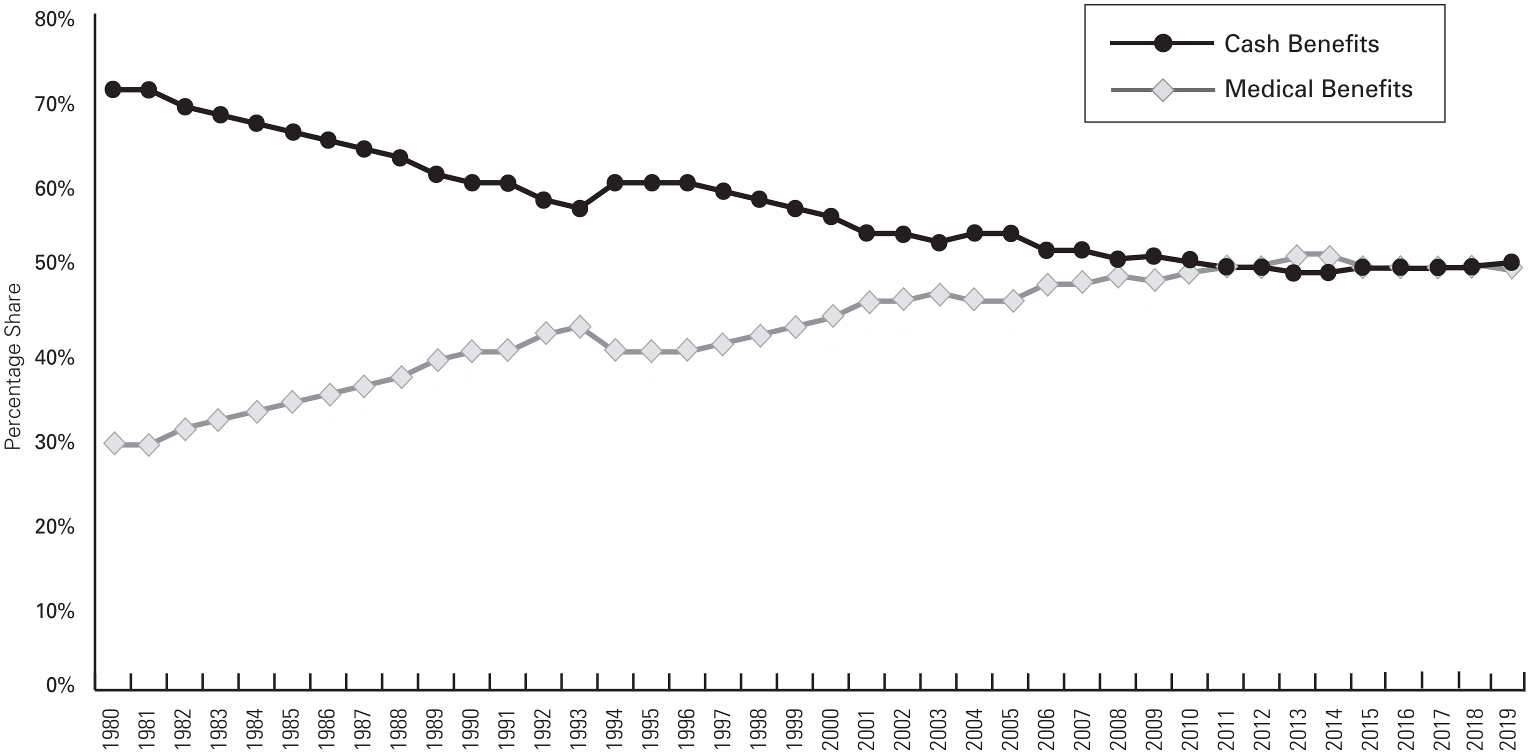


Source: National Academy of Social Insurance estimates.

42 Deductible policies may be written in a variety of ways, and the maximum amount may represent a specified number of injuries and the corresponding benefits paid, or a specified amount of the aggregate benefits paid.

Figure 3

Percentage Share of Medical and Cash Benefits, 1980-2019



Source: National Academy of Social Insurance estimates. The percentage share of medical and cash benefits sum to 100 percent.

Medical benefits. In 2019, medical benefits represented just under half (49.6%) of total workers' compensation benefits paid (Table 5). Historically, medical benefits, paid to health care providers, have been a smaller share of workers' compensation benefits than cash benefits paid to injured workers. (Figures 2 and 3) Since 2008, however, medical and cash benefits have accounted for roughly equal shares of total benefits, with medical benefits slightly higher than cash benefits for the first time in 2011. Between 2015 and 2019 the share of medical benefits decreased slightly (from 50.4% in 2015 to 49.6% in 2019) (Table 5) because medical benefits paid decreased over this period by 1.1% while cash benefits paid increased by 2.0%.

State Estimates of Benefits Paid in 2019

Benefits by type of insurer. Table 8 shows the shares of workers' compensation benefits paid by each type of insurer in each state in 2019. The shares vary considerably across states for several reasons: not all states have a state fund; where state funds exist, their legal status varies; the incentives to self-insure vary across states; and two states (North Dakota and Wyoming) do not allow self-insurance.

North Dakota and Wyoming have exclusive state funds and do not allow self-insurance. In 2019, their state funds accounted for more than 99 percent of total workers' compensation benefits paid (Table 8). Ohio and Washington have exclusive state funds but allow employers to self-insure. In 2019, their state funds accounted for just under 80 percent of total

Table 5

Workers' Compensation Benefits Paid by Type of Insurer, 1999-2019

Year	Private Insurers Total (millions)	Private Insurers % Share	State Funds Total (millions)	State Funds % Share	Self-Insured Employers Total (millions)	Self-Insured Employers % Share	Federal Government Total (millions)	Federal Government % Share	All Insurers Total Benefits (millions)	All Insurers % Change from Prior Year	All Insurers Total Medical (millions)	All Insurers % Change from Prior Year	All Insurers % Medical
1999	26,383	57.0	7,083	15.3	9,985	21.6	2,862	6.2	46,313	5.3	20,055	7.7	43.3
2000	26,874	56.3	7,388	15.5	10,481	22.0	2,957	6.2	47,699	3.0	20,933	4.4	43.9
2001	27,905	54.9	8,013	15.8	11,839	23.3	3,069	6.0	50,827	6.6	23,137	10.5	45.5
2002	28,085	53.7	9,139	17.5	11,920	22.8	3,154	6.0	52,297	2.9	24,203	4.6	46.3
2003	28,395	51.9	10,442	19.1	12,717	23.2	3,185	5.8	54,739	4.7	25,733	6.3	47.0
2004	28,632	51.0	11,146	19.9	13,115	23.4	3,256	5.8	56,149	2.6	26,079	1.3	46.4
2005	29,039	50.9	11,060	19.4	13,710	24.0	3,258	5.7	57,067	1.6	26,361	1.1	46.2
2006	27,946	50.9	10,555	19.2	13,125	23.9	3,270	6.0	54,896	-3.8	26,206	-0.6	47.7
2007	29,410	52.2	10,153	18.0	13,482	23.9	3,340	5.9	56,385	2.7	27,105	3.4	48.1
2008	30,725	52.3	10,347	17.6	14,255	24.3	3,424	5.8	58,750	4.2	28,987	6.9	49.3
2009	30,909	52.9	9,997	17.1	13,987	23.9	3,543	6.1	58,435	-0.5	28,157	-2.9	48.2
2010	31,090	53.2	9,809	16.8	13,894	23.8	3,672	6.3	58,465	0.1	28,715	2.0	49.1
2011	33,014	53.7	9,837	16.0	14,805	24.1	3,777	6.1	61,433	5.1	30,805	7.3	50.1
2012	33,911	54.1	9,977	15.9	14,991	23.9	3,776	6.0	62,655	2.0	31,266	1.5	49.9
2013	35,203	55.5	9,508	15.0	15,020	23.7	3,693	5.8	63,424	1.2	32,274	3.2	50.9
2014	35,290	55.5	9,288	14.6	15,365	24.2	3,681	5.8	63,624	0.3	32,420	0.5	51.0
2015	34,760	55.4	9,077	14.5	15,237	24.3	3,706	5.9	62,780	-1.3	31,642	-2.4	50.4
2016	34,794	55.6	8,933	14.3	15,277	24.4	3,603	5.8	62,607	-0.3	31,460	-0.6	50.2
2017	34,588	55.4	8,888	14.2	15,490	24.8	3,483	5.6	62,450	-0.3	31,104	-1.1	49.8
2018	34,861	55.4	8,875	14.1	15,758	25.0	3,455	5.5	62,949	0.8	31,355	0.8	49.8
2019	35,083	55.6	8,815	14.0	15,774	25.0	3,375	5.4	63,046	0.2	31,295	-0.2	49.6

Notes: Benefits are calendar-year payments to injured workers and to providers of their medical care, including benefits paid by employers through deductible policies. Federal benefits include benefits paid under the Federal Employees' Compensation Act and employer-financed benefits paid through the Federal Black Lung Disability Trust Fund. Federal benefits include a portion of employer-financed benefits under the Longshore and Harbor Workers' Compensation Act. See Appendix B for more information about federal programs.

Source: National Academy of Social Insurance estimates based on data received from state agencies, the U.S. Department of Labor, A.M. Best, and the National Council on Compensation Insurance.

Table 6

Workers' Compensation Employer-Paid Benefits Under Deductible Provisions, 1999-2019

Year	Deductibles (millions $)			Deductibles as a % of Total Benefits
	Total	Private Insured	State Fund Insured	
1999	5,684	5,452	232	12.3
2000	6,201	5,931	270	13.0
2001	6,388	6,085	303	12.6
2002	6,922	6,511	411	13.2
2003	8,020	7,547	474	14.7
2004	7,645	7,134	510	13.6
2005	7,798	7,290	508	13.7
2006	7,575	7,052	524	13.8
2007	8,217	7,684	533	14.6
2008	8,603	8,095	508	14.6
2009	8,582	8,118	464	14.7
2010	8,904	8,466	438	15.2
2011	9,248	8,822	426	15.1
2012	9,940	9,494	446	15.9
2013	10,496	10,152	344	16.5
2014	10,809	10,452	356	17.0
2015	10,703	10,344	359	17.0
2016	10,660	10,336	324	17.0
2017	10,798	10,498	301	17.3
2018	11,047	10,735	312	17.5
2019	11,099	10,790	310	17.6

Notes: For states that provide information on deductible payments, we rely on the survey data alone, or together with data from AM Best, to estimate amounts paid for deductibles. For states that do not include deductibles in the survey, we rely on NCCI data on manual equivalent premiums together with data from AM Best to estimate deductible payments. (See the *Sources and Methods 2021* available at www.nasi.org for more details).

Source: National Academy of Social Insurance estimates.

benefits paid (77.2% and 78.5%, respectively), representing a slight decrease in the state fund share in recent years.[43] Among the other 18 states that have an active state fund, the share of benefits accounted for by the fund ranged from less than 10 percent (California, New Mexico, Pennsylvania, and South Carolina) to approximately one-half in Colorado (46.0%), Oregon (48.8%), and Montana (48.6%), and almost two-thirds in Idaho (60.2%).

43 Private carrier workers' compensation benefit payments payments occur in states with exclusive state funds for a few possible reasons. First, some policies sold to employers provide multistate coverage whereas the exclusive state fund may be restricted to providing benefits only in the state where it operates. Second, the exclusive state fund may not be permitted to offer employers' liability coverage, federal LWHCA coverage, or excess coverage for authorized self-insurers.

Table 7

Percentage Distribution of Workers' Compensation Benefit Payments, by Type of Coverage: With and Without Deductibles, 1999-2019

Year	Total Benefits (millions)	Percent of Total Benefits: Private Insured: *Total* (1)	Private Insured: Employer Paid Deductibles (2)	Private Insured: Insurer Paid after Deductibles (3)	State Fund Insured: *Total* (4)	State Fund Insured: Employer Paid Deductibles (5)	State Fund Insured: Insurer Paid After Deductibles (6)	Self-Insured (7)	Federal (8)	Total Employer Paid (9)=(2)+(5)+(7)
1999	46,313	57.0	11.8	45.2	15.3	0.5	14.8	21.6	6.2	33.8
2000	47,699	56.3	12.4	43.9	15.5	0.6	14.9	22.0	6.2	35.0
2001	50,827	54.9	12.0	42.9	15.8	0.6	15.2	23.3	6.0	35.9
2002	52,297	53.7	12.4	41.3	17.5	0.8	16.7	22.8	6.0	36.0
2003	54,739	51.9	13.8	38.1	19.1	0.9	18.2	23.2	5.8	37.9
2004	56,149	51.0	12.7	38.3	19.9	0.9	18.9	23.4	5.8	37.0
2005	57,067	50.9	12.8	38.1	19.4	0.9	18.5	24.0	5.7	37.7
2006	54,896	50.9	12.8	38.1	19.2	1.0	18.3	23.9	6.0	37.7
2007	56,385	52.2	13.6	38.5	18.0	0.9	17.1	23.9	5.9	38.5
2008	58,750	52.3	13.8	38.5	17.6	0.9	16.7	24.3	5.8	38.9
2009	58,435	52.9	13.9	39.0	17.1	0.8	16.3	23.9	6.1	38.6
2010	58,465	53.2	14.5	38.7	16.8	0.7	16.0	23.8	6.3	39.0
2011	61,433	53.7	14.4	39.4	16.0	0.7	15.3	24.1	6.1	39.2
2012	62,655	54.1	15.2	39.0	15.9	0.7	15.2	23.9	6.0	39.8
2013	63,424	55.5	16.0	39.5	15.0	0.5	14.4	23.7	5.8	40.2
2014	63,624	55.5	16.4	39.0	14.6	0.6	14.0	24.2	5.8	41.1
2015	62,780	55.4	16.5	38.9	14.5	0.6	13.9	24.3	5.9	41.3
2016	62,607	55.6	16.5	39.1	14.3	0.5	13.8	24.4	5.8	41.4
2017	62,450	55.4	16.8	38.6	14.2	0.5	13.8	24.8	5.6	42.1
2018	62,949	55.4	17.1	38.3	14.1	0.5	13.6	25.0	5.5	42.6
2019	63,046	55.6	17.1	38.5	14.0	0.5	13.5	25.0	5.4	42.6

Notes: Shaded columns sum to 100%. Total employer paid benefits include employer-paid deductibles under private carriers and state funds, as well as benefits paid by self-insured employers.

Source: National Academy of Social Insurance estimates based on Tables 5 and 6.

Table 8

Workers' Compensation Benefits Paid, by Type of Insurer and State, 2019

State	Private Insured[a]		State Fund Insured[a]		Self-Insured[b]		Total Benefits Paid (thousands)[c]	Medical Benefits Paid (thousands)[d]	Percent Medical	Ranking (1=largest percent medical)
	Benefits (thousands)	Percent Share	Benefits (thousands)	Percent Share	Benefits (thousands)	Percent Share				
Alabama	$340,712	50.9			$329,289	49.1	$670,001	$462,301	69.0	5
Alaska	160,984	77.9			45,724	22.1	206,708	144,902	70.1	4
Arizona	584,983	77.2			172,393	22.8	757,376	515,773	68.1	6
Arkansas	140,705	67.7			67,256	32.3	207,961	138,710	66.7	8
California	7,463,058	60.2	1,073,522	8.7	3,867,809	31.2	12,404,388	6,493,486	52.3	31
Colorado	242,999	29.2	383,177	46.0	206,741	24.8	832,917	476,429	57.2	23
Connecticut	641,570	72.1			248,286	27.9	889,856	405,774	45.6	45
Delaware	148,013	76.6			45,217	23.4	193,229	98,933	51.2	33
District of Columbia	138,185	77.2			40,843	22.8	179,029	53,351	29.8	51
Florida	2,589,062	72.6			976,061	27.4	3,565,123	2,377,937	66.7	8
Georgia	1,052,062	73.9			371,107	26.1	1,423,169	703,045	49.4	38
Hawaii	180,070	47.1	57,399	15.0	144,985	37.9	382,454	189,315	49.5	37
Idaho	106,819	33.4	192,341	60.2	20,268	6.3	319,428	206,350	64.6	13
Illinois	1,633,567	74.8			551,763	25.2	2,185,330	1,040,217	47.6	39
Indiana	526,152	86.9			79,271	13.1	605,423	440,143	72.7	2
Iowa	480,811	76.5			147,537	23.5	628,348	370,097	58.9	21
Kansas	328,250	76.2			102,357	23.8	430,606	280,755	65.2	12
Kentucky	356,471	58.3	104,837	17.1	150,386	24.6	611,694	348,666	57.0	24
Louisiana	578,621	58.9	118,496	12.1	285,257	29.0	982,373	550,129	56.0	25
Maine	170,470	67.6			81,864	32.4	252,335	126,924	50.3	35
Maryland	462,578	51.3	160,214	17.8	278,807	30.9	901,600	427,358	47.4	42
Massachusetts	937,911	73.4			340,609	26.6	1,278,520	425,174	33.3	48
Michigan	605,329	67.3			293,822	32.7	899,152	457,813	50.9	34
Minnesota	789,702	74.1			275,577	25.9	1,065,279	568,492	53.4	29
Mississippi	232,719	76.3			72,440	23.7	305,159	186,147	61.0	18
Missouri	541,060	54.6	176,586	17.8	272,567	27.5	990,213	588,186	59.4	20
Montana	78,972	34.3	111,828	48.6	39,159	17.0	229,959	153,153	66.6	10
Nebraska	254,951	78.9			68,214	21.1	323,166	203,271	62.9	16
Nevada	271,509	67.6			130,287	32.4	401,796	190,451	47.4	41
New Hampshire	144,427	68.6			66,051	31.4	210,478	134,285	63.8	15
New Jersey	1,913,033	76.0			602,938	24.0	2,515,971	1,253,764	49.8	36

New Mexico	198,734	62.3	22,109	6.9	97,990	30.7	318,833	193,213	60.6	19
New York	2,858,535	46.2	1,230,528	19.9	2,103,388	34.0	6,192,450	1,979,116	32.0	49
North Carolina	836,647	76.1			262,180	23.9	1,098,828	510,955	46.5	44
North Dakota[e]	202	0.1	142,460	99.9			142,662	82,530	57.9	22
Ohioe	8,580	0.5	1,407,995	77.2	407,039	22.3	1,823,614	696,832	38.2	46
Oklahoma	258,569	49.5	168,100	32.2	95,199	18.2	521,867	272,415	52.2	32
Oregon	220,695	31.6	341,065	48.8	137,534	19.7	699,294	379,717	54.3	28
Pennsylvania	2,115,429	73.1	145,965	5.0	631,015	21.8	2,892,409	1,374,467	47.5	40
Rhode Island	76,191	48.8	66,312	42.5	13,662	8.7	156,165	53,721	34.4	47
South Carolina[f]	719,949	70.1	71,608	7.0	235,283	22.9	1,026,840	482,615	47.0	43
South Dakota	112,514	97.8			2,489	2.2	115,003	77,857	67.7	7
Tennessee	502,358	91.0			49,395	9.0	551,752	360,846	65.4	11
Texas	759,814	50.1	454,895	30.0	302,853	20.0	1,517,562	849,835	56.0	26
Utah[g]	244,934	84.4			45,346	15.6	290,280	205,808	70.9	3
Vermont	125,171	87.0			18,724	13.0	143,894	75,545	52.5	30
Virginia	710,247	77.6			205,367	22.4	915,613	566,765	61.9	17
Washington[e,k]			2,057,658	78.5	563,152	21.5	2,620,810	803,167	30.6	50
West Virginia[h]	173,359	43.5	148,451	37.3	76,654	19.2	398,463	218,756	54.9	27
Wisconsin	1,070,859	87.6			151,714	12.4	1,222,573	966,622	79.1	1
Wyoming[e]	568	0.3	179,141	99.7			179,709	115,770	64.4	14
Total Non-Federal	$35,089,108	58.8	$8,814,686	14.8	$15,773,867	26.4	$59,677,661	$30,277,881	50.7	
All Federal[i]							$3,374,778	$1,016,922	30.1	
Federal Employees[j]							$1,834,405	$843,601	46.0	
TOTAL							$63,052,439	$31,294,803	49.6	

Notes: Benefits are calendar-year payments to injured workers and to providers of their medical care. Benefits paid under special funds, second injury funds and guaranty funds are prorated across private insured, state fund insured and self-insured employers.

a. Deductibles paid under private insurance policies and state fund policies are included in these estimates, even though they are technically paid by the employer.
b. Self-insured includes individual self-insured and group self-insured.
c. These data may not include benefits paid under second injury funds for some states and may, therefore, be an understatement of total benefits paid.
d. For further details see Sources and Methods 2021 available at www.nasi.org.
e. States with exclusive state funds (Ohio, North Dakota, Washington, and Wyoming) may have some amounts of benefits paid in the private insured category, because: (1) some employers doing business in these states may need to obtain coverage from private carriers under the US Longshore and Harbor Workers' Act; (2) some employers carry liability coverage which the state fund is not authorized to provide; and/or (3) some employers obtain excess compensation coverage from private carriers.
f. South Carolina's State Accident Fund is not a competitive state fund.
g. Utah Senate Bill 92, passed in 2017, repealed the statute creating the Workers' Compensation Fund (Utah's public state fund). The former-lead company of WCF is now known as WCF Mutual Insurance Company, and is a for-profit mutual insurance company. Though this did not become effective until January 1, 2018, AM Best data on Utah classified all 2017 Utah premiums and losses under private insurance. WCF Mutual Insurance Company will remain the insurer of last resort in Utah until 2020.
h. West Virginia completed the transition from monopolistic state fund to competitive insurance status on July 1, 2008.
i. Federal benefits include: those paid under the Federal Employees' Compensation Act for civilian employees; the portion of the Black Lung benefit program that is financed by employers; and a portion of benefits under the Longshore and Harbor Workers' Compensation Act that are not reflected in state data, namely, benefits paid by self-insured employers and by special funds under the LHWCA. See Appendix B for more information about federal programs.
j. Included in the Federal benefits total.
k. AM Best reported a negative number for Washington private carriers in 2019. We have left the column empty while we investigate the matter.

Source: National Academy of Social Insurance estimates are based on data received from state agencies, the U.S. Department of Labor, A.M. Best, and the National Council on Compensation Insurance.

Table 9

Workers' Compensation Total Benefits Paid and Five-Year Percent Change by State, 2015-2019

	Total Benefits (thousands)					Percent Change			Ranking (1=largest percent increase, 2015-2019)
State	2015	2016	2017	2018	2019	2015-2017	2017-2019	2015-2019	
Alabama	$616,797	$600,723	$601,375	$643,375	$670,001	-2.5	11.4	8.6	8
Alaska	240,473	225,596	213,187	226,404	206,708	-11.3	-3.0	-14.0	46
Arizona	739,890	751,532	744,135	748,019	757,376	0.6	1.8	2.4	23
Arkansas	197,169	206,830	214,987	201,111	207,961	9.0	-3.3	5.5	18
California	12,029,488	12,170,603	12,212,791	12,302,786	12,404,388	1.5	1.6	3.1	21
Colorado	835,205	799,517	811,174	775,726	832,917	-2.9	2.7	-0.3	30
Connecticut	981,552	894,683	911,367	871,391	889,856	-7.2	-2.4	-9.3	43
Delaware	228,430	224,704	220,856	211,309	193,229	-3.3	-12.5	-15.4	47
District of Columbia	160,333	164,122	163,070	173,913	179,029	1.7	9.8	11.7	6
Florida	3,527,792	3,531,701	3,542,707	3,586,082	3,565,123	0.4	0.6	1.1	26
Georgia	1,314,884	1,365,688	1,382,100	1,445,361	1,423,169	5.1	3.0	8.2	11
Hawaii	298,237	306,058	325,104	358,433	382,454	9.0	17.6	28.2	1
Idaho	262,823	267,976	283,157	292,103	319,428	7.7	12.8	21.5	2
Illinois	2,389,437	2,338,038	2,329,129	2,240,104	2,185,330	-2.5	-6.2	-8.5	40
Indiana	567,214	576,242	594,701	581,302	605,423	4.8	1.8	6.7	17
Iowa	614,050	659,503	653,463	658,419	628,348	6.4	-3.8	2.3	24
Kansas	423,458	422,801	421,453	406,180	430,606	-0.5	2.2	1.7	25
Kentucky	674,678	634,628	606,332	635,586	611,694	-10.1	0.9	-9.3	42
Louisiana	982,345	982,714	981,772	1,031,501	982,373	-0.1	0.1	0.0	29
Maine	232,712	240,819	255,267	261,929	252,335	9.7	-1.1	8.4	9
Maryland	964,670	895,062	931,091	1,021,051	901,600	-3.5	-3.2	-6.5	38
Massachusetts	1,090,119	1,158,060	1,192,118	1,231,062	1,278,520	9.4	7.2	17.3	4
Michigan	1,077,947	955,311	918,169	910,182	899,152	-14.8	-2.1	-16.6	48
Minnesota	1,033,268	1,031,255	1,017,459	1,053,994	1,065,279	-1.5	4.7	3.1	22
Mississippi	331,653	305,660	318,031	303,692	305,159	-4.1	-4.0	-8.0	39
Missouri	924,214	936,716	964,361	978,075	990,213	4.3	2.7	7.1	16
Montana	252,558	261,047	253,763	237,377	229,959	0.5	-9.4	-8.9	41
Nebraska	299,656	311,632	311,480	319,027	323,166	3.9	3.8	7.8	14

Nevada	341,676	355,465	354,490	393,683	401,796	3.8	13.3	17.6	3
New Hampshire	215,944	205,579	209,535	209,489	210,478	-3.0	0.4	-2.5	34
New Jersey	2,338,160	2,368,230	2,463,232	2,416,769	2,515,971	5.3	2.1	7.6	15
New Mexico	326,983	308,728	296,730	300,078	318,833	-9.3	7.4	-2.5	33
New York	5,895,092	6,002,861	6,222,972	6,288,188	6,192,450	5.6	-0.5	5.0	19
North Carolina	1,214,933	1,194,654	1,122,241	1,076,453	1,098,828	-7.6	-2.1	-9.6	44
North Dakota	180,401	165,943	157,209	149,259	142,662	-12.9	-9.3	-20.9	50
Ohio	2,063,700	2,014,335	1,880,850	1,857,533	1,823,614	-8.9	-3.0	-11.6	45
Oklahoma	707,442	604,060	575,685	544,721	521,867	-18.6	-9.3	-26.2	51
Oregon	633,223	630,950	681,627	669,262	699,294	7.6	2.6	10.4	7
Pennsylvania	2,974,544	3,124,120	2,818,291	2,904,099	2,892,409	-5.3	2.6	-2.8	35
Rhode Island	155,167	149,418	148,238	147,388	156,165	-4.5	5.3	0.6	28
South Carolina	896,125	910,292	928,575	978,515	1,026,840	3.6	10.6	14.6	5
South Dakota	106,495	102,814	97,920	107,161	115,003	-8.1	17.4	8.0	12
Tennessee	663,724	614,854	598,961	547,441	551,752	-9.8	-7.9	-16.9	49
Texas	1,553,577	1,473,645	1,427,288	1,521,762	1,517,562	-8.1	6.3	-2.3	32
Utah	269,080	273,837	274,895	281,283	290,280	2.2	5.6	7.9	13
Vermont	151,452	140,325	144,203	139,018	143,894	-4.8	-0.2	-5.0	37
Virginia	920,311	947,402	983,675	945,965	915,613	6.9	-6.9	-0.5	31
Washington	2,412,253	2,437,100	2,464,784	2,537,805	2,614,341	2.2	6.1	8.4	10
West Virginia	416,892	415,389	396,398	412,260	398,463	-4.9	0.5	-4.4	36
Wisconsin	1,167,469	1,169,240	1,167,630	1,195,330	1,222,573	0.0	4.7	4.7	20
Wyoming	178,444	175,053	176,433	165,009	179,709	-1.1	1.9	0.7	27
Total Non-Federal	$59,074,142	$59,003,516	$58,966,462	$59,493,963	$59,671,192	-0.2	1.2	1.0	
All Federal[a]	$3,705,848	$3,603,265	$3,483,448	$3,454,588	$3,374,778	-6.0	-3.1	-8.9	
Federal Employees[b]	$2,988,242	$2,890,670	$2,780,499	$2,756,361	$2,678,006	-7.0	-3.7	-10.4	
TOTAL	$62,779,990	$62,606,781	$62,449,910	$62,948,551	$63,045,970	-0.5	1.0	0.4	

Notes: Benefits are calendar-year payments to injured workers and to providers of their medical care. Data sources for each state are described in detail in *Sources and Methods 2021* available at www.nasi.org.

a Includes federal benefits as described in Table 8.

b Included in the federal benefits total.

Source: National Academy of Social Insurance estimates based on data from state agencies, A.M. Best, National Association of Insurance Commissioners, the U.S. Department of Labor, and the Social Security Administration.

Among the states that do not have a state fund, private carriers typically accounted for 65 to 80 percent of benefits paid in 2019, while self-insured employers accounted for 20 to 30 percent. Alabama is the exception, with self-insured employers covering nearly half of benefits paid in 2019 (49.1%), by far the highest self-insured share of any state, and private insurers paying the remaining half (50.9%). Hawaii and New York also have relatively high proportions of benefits paid by self-insured employers (37.9% and 34.0%). The exception in the opposite direction is South Dakota, where private carriers accounted for 97.8 percent of benefits paid in 2019, and self-insured employers account for only 2.2 percent. Indiana, Tennessee, Vermont, and Wisconsin also have relatively high proportions of benefits paid by private carriers (86% to 91%).

There are several reasons for the tremendous variation in take-up rates for self-insurance across states:

1) Large employers are more likely to self-insure, and some states have a disproportionate share of large employers relative to other states.
2) Financial incentives to self-insure vary across states because of differences in state workers' compensation statutes.
3) Self-insurance and private insurance are substitutes. When workers' compensation premium rates are rising in a state, employers tend to shift to self-insurance; when premium rates are declining, employers tend to shift to private insurance.
4) Measurement error may account for some of the observed variation in the share of benefits paid by self-insured employers; our methods for estimating benefits paid under self-insurance vary across states dependent upon state agencies' responses to the Academy's survey

Medical benefits paid. Table 8 shows the amount of medical benefits paid in each state, as well as medical benefits as a share of total benefits. In 2019, the median share of medical benefits was 56.0 percent. The share of medical benefits was highest in Wisconsin (79.1%), followed by Indiana (72.7%), Utah (70.9%), and Alaska (70.1%). The share of medical benefits was lowest in the District of Columbia (29.8%), Washington (30.6%), and New York (32.0%). Note that the share of medical benefits in a state can be high either because medical benefits are relatively high or because cash benefits are relatively low.

State Trends in Benefits Paid

Table 9 shows total workers' compensation benefits paid in each state in the years 2015 to 2019. Over the five-year period, benefits decreased in 21 jurisdictions (compared to 28 jurisdictions that experienced decreases from 2014 to 2018). The largest decreases were in Oklahoma (26.2%) and North Dakota (20.9%). Oklahoma experienced 2/3 of its decrease between 2015 and 2017 whereas the decrease in North Dakota was spread more evenly over the five year period. Five other states—Alaska, Delaware, Michigan, Ohio, and Tennessee—experienced decreases in benefits of at least 10 percent. Benefits increased in 30 jurisdictions (compared to 23 that experienced increases from 2014-2018). The states with the greatest increases were Hawaii (28.2%), Idaho (21.5%), Nevada (17.6%) and Massachusetts (17.3%).

The within-state amounts of workers' compensation benefits paid vary from year to year for a number of reasons. Benefits change as within-state employment changes, although much of the impact occurs with a lag. Benefits are also affected by changes to a state's legal system for processing claims, such as changes in statutory rules, legal decisions, administrative processes, reporting requirements, and lags in recording results. Other factors that may explain within-state changes in benefits over time include: changes in the number of work-related injuries and illnesses; fluctuations in wage rates; changes in the mix of occupations/industries; changes in the costs and effectiveness of medical care (including changes to the medical fee schedule); changes to the indemnity benefit schedule; differences in the way stakeholders interact with the system over time (e.g., whether or not employees and/or employers have and exercise the right to choose a physician); changes in return-to-work and vocational rehabilitation efforts; and changes to coverage requirements (e.g., exclusions for small employers or agricultural employers).

Benefits Per $100 of Covered Wages

Much of the interstate variation and intertemporal variation in benefit payments described above can be attributed to different trends in employment and wages across states. To control for differential trends in employment and wages over the time period covered in this report, we construct a standardized measure of benefits—benefits per $100 of covered wages. Variations in the standardized measure of benefits capture interstate differences in the factors described above (i.e., type and nature of injuries, quality of medical care, value of cash benefits, and investments in return-to-work).

We caution the reader that, because we cannot account for the factors described above, the data on standardized benefits (benefits paid per $100 of covered wages) do not provide meaningful comparisons of the performance of state workers' compensation systems. For example, standardized benefits do not indicate the extent to which cash benefits compensate workers for their losses due to injury (i.e., benefit adequacy). Moreover, standardized benefits could be high or low in a given state for a number of reasons completely unrelated to the adequacy of benefits that injured workers receive.[44] For example, if a state has a disproportionate share of risky occupations (e.g., mining), and all else is held equal, standardized benefits will tend to be higher. If a state has high prices for medical care relative to the average wage rate, all else equal, standardized benefits will tend to be higher.

Table 10 shows trends in *medical benefits per $100 of covered wages* in each state between 2015 and 2019. Nationally, medical benefits decreased 16.7% over this five-year period (versus 18.6% from 2014-2018). Medical benefits per $100 of covered wages decreased in 47 jurisdictions, with the largest percent decreases in Delaware (33.5%), Tennessee (27.5%), and Oklahoma (26.5%). Only three states experienced increases in medical benefits per $100: Hawaii (21.8%), Rhode Island (2.4%), and Iowa (0.4%).

Table 11 shows trends in *cash benefits per $100 of covered wages* in each state between 2015 and 2019. Nationally, cash benefits decreased by 14.0 percent over the five years covered in the report. The decrease in standardized cash benefits ranged from as large as 39.1 percent in Oklahoma and 35.5 percent in Tennessee, to as little as 1.3 percent in New Jersey and Massachusetts. Only three states experienced increases in standardized cash benefits. Those states are Washington, D.C., (4.0% increase), Wyoming (2.8%), and Hawaii (0.9%,).

Table 12 shows total benefits paid per $100 of covered wages by state from 2015 through 2019. Nationally, benefits paid were $0.74 per $100 of covered wages in 2019, down $0.13, or 15.4 percent, from 2015. Benefits per $100 of covered wages decreased by $0.07 between 2015 and 2017, and $0.06 between 2017 and 2019. As shown in Figure 1, standardized benefits have decreased by roughly one-third (33.8%) from $1.12 per $100 of covered wages in 1999 to $0.74 in 2019.

Between 2015 and 2019, benefits per $100 of covered wages decreased in all jurisdictions except Hawaii (where standardized benefits increased by $0.11, or 10.2%). Twenty-five jurisdictions experienced decreases in standardized benefits of at least 15 percent (compared to 29 in last year's report), and 5 states experienced a decrease of 25 percent or more (the same number as in last year's report).

The largest percent decreases in standardized benefits between 2015-2019 were in Oklahoma (33.1%), followed closely by Tennessee (30.5%), Michigan (27.6%), and North Carolina (25.8). In any given year, a state may experience a relatively large increase or decrease in standardized benefits that defies recent trends. These large changes may be attributable, in part, to changes in worker's compensation laws in the state. Some recent legislative changes are described below.

44 To provide meaningful comparisons of benefit adequacy, a study should compare the benefits that injured workers actually receive to the wages they lose because of their occupational injuries or diseases. Such wage-loss studies have been conducted in several states (e.g., California, New Mexico, Oregon, Wisconsin, and Michigan), but the data for estimating wage losses are not available for most states. (See, e.g., a May 2019 report on New York's Workers' Compensation system describing challenges to producing such a study for that state. Parrott and Martin 2019.) For benefit adequacy studies, see Hunt and Dillender (2017), Dworsky et al. (2016), Seabury et al. (2014), Boden et al. (2005), and Hunt (2004).

Table 10

Workers' Compensation Medical Benefits Paid per $100 of Covered Wages and Five-Year Percent Change by State, 2015-2019

State	Medical Benefits (per $100 covered wages)					Percent Change			Ranking (1=largest percent increase, 2015-2019)
	2015	2016	2017	2018	2019	2015-2017	2017-2019	2015-2019	
Alabama	$0.55	$0.54	$0.51	$0.55	$0.52	-8.0	2.2	-6.0	13
Alaska	0.99	0.91	0.87	0.93	0.83	-11.9	-4.4	-15.8	32
Arizona	0.41	0.40	0.38	0.37	0.34	-6.0	-10.9	-16.3	33
Arkansas	0.28	0.28	0.29	0.26	0.26	5.3	-9.1	-4.3	9
California	0.68	0.65	0.59	0.56	0.53	-13.2	-11.6	-23.3	44
Colorado	0.36	0.33	0.32	0.29	0.29	-10.8	-9.5	-19.2	39
Connecticut	0.41	0.36	0.37	0.34	0.35	-10.5	-4.1	-14.1	27
Delaware	0.57	0.53	0.46	0.44	0.38	-19.5	-17.4	-33.5	51
District of Columbia	0.13	0.13	0.14	0.11	0.10	2.7	-25.6	-23.6	45
Florida	0.69	0.65	0.62	0.58	0.55	-11.2	-10.7	-20.7	41
Georgia	0.33	0.35	0.33	0.32	0.30	0.8	-11.0	-10.3	22
Hawaii	0.49	0.49	0.52	0.56	0.59	7.2	13.6	21.8	1
Idaho	0.68	0.65	0.64	0.60	0.64	-6.6	0.4	-6.2	15
Illinois	0.34	0.32	0.31	0.30	0.29	-9.1	-6.3	-14.9	30
Indiana	0.32	0.31	0.31	0.29	0.30	-1.5	-3.5	-5.0	11
Iowa	0.50	0.52	0.51	0.51	0.50	1.4	-1.0	0.4	3
Kansas	0.45	0.46	0.45	0.43	0.43	0.5	-3.2	-2.8	5
Kentucky	0.49	0.43	0.40	0.40	0.40	-18.5	0.2	-18.3	37
Louisiana	0.63	0.65	0.64	0.66	0.60	1.0	-6.4	-5.5	12
Maine	0.47	0.47	0.51	0.49	0.45	7.5	-10.0	-3.2	7
Maryland	0.33	0.30	0.31	0.33	0.28	-6.1	-11.2	-16.7	34
Massachusetts	0.16	0.17	0.16	0.16	0.16	-1.8	-2.6	-4.4	10
Michigan	0.26	0.22	0.20	0.20	0.20	-22.7	-4.2	-25.9	48
Minnesota	0.38	0.37	0.35	0.35	0.34	-8.3	-4.7	-12.6	23
Mississippi	0.51	0.45	0.47	0.44	0.44	-7.7	-7.5	-14.6	28
Missouri	0.45	0.45	0.45	0.45	0.44	-0.8	-1.1	-1.8	4
Montana	1.00	0.99	0.94	0.83	0.77	-5.6	-18.5	-23.0	43
Nebraska	0.48	0.49	0.46	0.46	0.45	-5.0	-1.7	-6.6	16

Nevada	0.31	0.32	0.30	0.28	0.27	-2.9	-10.9	-13.5	24
New Hampshire	0.42	0.40	0.39	0.39	0.35	-7.4	-10.8	-17.4	36
New Jersey	0.51	0.49	0.48	0.46	0.46	-4.5	-4.5	-8.8	19
New Mexico	0.60	0.56	0.54	0.54	0.54	-9.6	-0.7	-10.3	21
New York	0.34	0.33	0.33	0.30	0.28	-3.5	-14.3	-17.3	35
North Carolina	0.30	0.29	0.26	0.23	0.23	-14.4	-13.0	-25.5	47
North Dakota	0.46	0.46	0.43	0.40	0.37	-6.0	-13.9	-19.1	38
Ohio	0.34	0.32	0.27	0.27	0.25	-21.2	-5.3	-25.3	46
Oklahoma	0.50	0.46	0.46	0.40	0.37	-8.7	-19.5	-26.5	49
Oregon	0.40	0.38	0.39	0.37	0.36	-2.1	-8.2	-10.1	20
Pennsylvania	0.48	0.50	0.44	0.44	0.41	-9.3	-5.2	-14.0	26
Rhode Island	0.20	0.21	0.20	0.19	0.21	-4.4	7.1	2.4	2
South Carolina	0.53	0.51	0.48	0.50	0.52	-9.5	7.3	-2.9	6
South Dakota	0.45	0.40	0.37	0.41	0.42	-17.6	13.8	-6.2	14
Tennessee	0.34	0.31	0.29	0.26	0.24	-13.8	-15.8	-27.5	50
Texas	0.18	0.16	0.15	0.15	0.14	-17.3	-4.8	-21.3	42
Utah	0.32	0.32	0.30	0.28	0.28	-7.2	-7.2	-13.9	25
Vermont	0.61	0.54	0.55	0.51	0.52	-9.8	-5.6	-14.8	29
Virginia	0.31	0.32	0.32	0.29	0.26	3.6	-18.5	-15.6	31
Washington	0.43	0.41	0.38	0.36	0.34	-10.8	-9.8	-19.5	40
West Virginia	0.75	0.74	0.70	0.68	0.72	-7.3	4.0	-3.6	8
Wisconsin	0.73	0.72	0.69	0.68	0.68	-4.8	-1.9	-6.7	17
Wyoming	1.14	1.22	1.18	1.02	1.05	3.6	-11.2	-7.9	18
Total Non-Federal	$0.44	$0.42	$0.40	$0.38	$0.36	-8.9	-8.2	-16.4	
Federal Employees[a]	$0.48	$0.47	$0.42	$0.39	$0.35	-12.5	-14.9	-25.5	
TOTAL[b]	$0.44	$0.42	$0.40	$0.38	$0.37	-9.0	-8.5	-16.7	

Notes: Benefits are payments in the calendar year to injured workers and to providers of their medical care. Data source for each state is described in detail in *Sources and Methods 2021* available at www.nasi.org.

a Includes Federal Employee Compensation Act medical benefits from Table B1.

b Includes federal (medical) benefits as described in Table 8.

Source: National Academy of Social Insurance estimates are based on data from state agencies, A.M. Best, National Association of Insurance Commissioners (NAIC), the U.S. Department of Labor and the Social Security Administration.

Table 11

Workers' Compensation Cash Benefits per $100 of Covered Wages and Five-Year Percent Change by State, 2015-2019

	Cash Benefits (per $100 covered wages)					Percent Change			Ranking
State	2015	2016	2017	2018	2019	2015-2017	2017-2019	2015-2019	(1=largest percent increase, 2015-2019)
Alabama	$0.26	$0.23	$0.23	$0.21	$0.23	-10.1	1.2	-9.0	12
Alaska	0.42	0.47	0.45	0.43	0.36	6.4	-21.2	-16.2	28
Arizona	0.21	0.19	0.18	0.16	0.16	-14.5	-9.7	-22.8	43
Arkansas	0.16	0.16	0.15	0.14	0.13	-4.8	-11.5	-15.8	26
California	0.54	0.53	0.52	0.49	0.48	-3.7	-7.3	-10.7	15
Colorado	0.28	0.27	0.24	0.22	0.22	-12.9	-10.6	-22.1	41
Connecticut	0.50	0.46	0.46	0.43	0.42	-7.9	-9.0	-16.2	29
Delaware	0.42	0.44	0.45	0.41	0.36	7.2	-19.7	-14.0	21
District of Columbia	0.23	0.23	0.20	0.23	0.24	-11.8	17.8	4.0	1
Florida	0.32	0.31	0.30	0.29	0.27	-5.7	-8.7	-13.9	20
Georgia	0.35	0.32	0.31	0.32	0.30	-10.3	-1.6	-11.7	16
Hawaii	0.60	0.58	0.57	0.60	0.60	-5.7	7.0	0.9	3
Idaho	0.37	0.37	0.36	0.36	0.35	-2.0	-3.9	-5.8	8
Illinois	0.41	0.39	0.38	0.34	0.32	-5.7	-17.7	-22.4	42
Indiana	0.13	0.13	0.13	0.12	0.11	-6.2	-10.4	-16.0	27
Iowa	0.43	0.46	0.44	0.41	0.35	1.0	-19.9	-19.1	34
Kansas	0.28	0.26	0.26	0.22	0.23	-9.7	-9.8	-18.5	33
Kentucky	0.39	0.37	0.34	0.35	0.30	-12.0	-12.7	-23.2	45
Louisiana	0.51	0.51	0.50	0.49	0.47	-1.1	-6.4	-7.4	9
Maine	0.51	0.51	0.50	0.50	0.45	-2.7	-9.6	-12.1	17
Maryland	0.39	0.35	0.34	0.36	0.31	-12.7	-8.7	-20.3	36
Massachusetts	0.32	0.33	0.33	0.32	0.32	2.2	-3.4	-1.3	5
Michigan	0.27	0.23	0.21	0.20	0.19	-20.1	-11.5	-29.2	49
Minnesota	0.33	0.32	0.30	0.29	0.29	-9.3	-1.1	-10.3	14
Mississippi	0.35	0.33	0.32	0.29	0.28	-9.2	-11.7	-19.8	35
Missouri	0.35	0.34	0.34	0.32	0.30	-4.7	-10.0	-14.2	22
Montana	0.49	0.50	0.45	0.42	0.38	-8.5	-14.7	-22.0	39

Nebraska	0.28	0.28	0.29	0.27	0.27	3.0	-7.0	-4.2	7
Nevada	0.30	0.28	0.27	0.31	0.30	-12.2	12.0	-1.6	6
New Hampshire	0.23	0.20	0.20	0.18	0.20	-14.5	-0.4	-14.9	24
New Jersey	0.47	0.48	0.49	0.47	0.47	3.9	-4.9	-1.3	4
New Mexico	0.45	0.42	0.38	0.35	0.35	-14.3	-9.0	-22.0	40
New York	0.65	0.65	0.64	0.63	0.60	-1.3	-6.9	-8.0	11
North Carolina	0.35	0.33	0.29	0.28	0.26	-16.8	-11.3	-26.1	47
North Dakota	0.38	0.39	0.35	0.31	0.27	-8.0	-22.0	-28.3	48
Ohio	0.52	0.49	0.46	0.43	0.41	-9.9	-12.5	-21.2	38
Oklahoma	0.55	0.47	0.39	0.37	0.34	-28.8	-14.5	-39.1	51
Oregon	0.35	0.33	0.33	0.31	0.30	-5.2	-8.2	-13.0	18
Pennsylvania	0.55	0.57	0.49	0.48	0.46	-10.9	-6.2	-16.5	31
Rhode Island	0.47	0.43	0.42	0.40	0.40	-12.1	-3.9	-15.5	25
South Carolina	0.63	0.62	0.61	0.60	0.58	-3.0	-4.6	-7.4	10
South Dakota	0.22	0.23	0.21	0.20	0.20	-7.5	-1.7	-9.1	13
Tennessee	0.20	0.17	0.15	0.13	0.13	-22.7	-16.5	-35.5	50
Texas	0.13	0.12	0.12	0.11	0.11	-10.3	-3.6	-13.5	19
Utah	0.15	0.14	0.13	0.13	0.11	-13.1	-13.6	-24.9	46
Vermont	0.56	0.52	0.51	0.47	0.47	-9.0	-8.2	-16.5	32
Virginia	0.19	0.18	0.18	0.17	0.16	-6.5	-8.9	-14.8	23
Washington	0.98	0.91	0.86	0.81	0.78	-12.0	-9.8	-20.6	37
West Virginia	0.77	0.81	0.72	0.69	0.60	-6.2	-17.9	-23.0	44
Wisconsin	0.21	0.20	0.19	0.19	0.18	-9.3	-7.7	-16.3	30
Wyoming	0.57	0.58	0.60	0.57	0.58	5.3	-2.4	2.8	2
Total Non-Federal	\$0.41	\$0.40	\$0.38	\$0.37	\$0.35	-6.4	-7.9	-13.8	
Federal Employees[a]	\$0.89	\$0.85	\$0.82	\$0.78	\$0.77	-8.1	-5.7	-13.4	
TOTAL[b]	\$0.43	\$0.42	\$0.40	\$0.39	\$0.37	-6.7	-7.9	-14.0	

Notes: Benefits are payments in the calendar year to injured workers and to providers of their medical care. Data source for each state is described in detail in *Sources and Methods 2021*, available at www.nasi.org.
a Includes Federal Employee Compensation Act compensation benefits from Table B1.
b Includes federal (cash) benefits as described in Table 8.

Source: National Academy of Social Insurance estimates based on data from state agencies, A.M. Best, National Association of Insurance Commissioners, the U.S. Department of Labor, and the Social Security Administration.

Table 12

Workers' Compensation Total Benefits Paid Per $100 of Covered Wages, by State, 2015-2019

State	2015	2016	2017	2018	2019	Percent Change			Ranking (1=largest percent increase, 2015-2019)
						2015-2017	2017-2019	2015-2019	
Alabama	$0.81	$0.77	$0.74	$0.75	$0.75	-8.6	1.9	-6.9	10
Alaska	1.41	1.38	1.32	1.36	1.19	-6.4	-10.1	-15.9	31
Arizona	0.61	0.60	0.56	0.53	0.50	-8.9	-10.5	-18.5	37
Arkansas	0.43	0.44	0.44	0.40	0.39	1.6	-10.0	-8.5	16
California	1.22	1.18	1.11	1.05	1.00	-9.1	-9.6	-17.8	35
Colorado	0.64	0.59	0.57	0.51	0.51	-11.7	-10.0	-20.5	43
Connecticut	0.91	0.82	0.83	0.78	0.77	-9.1	-6.8	-15.3	26
Delaware	0.99	0.97	0.91	0.85	0.74	-8.2	-18.6	-25.2	47
District of Columbia	0.36	0.36	0.34	0.34	0.34	-6.5	0.4	-6.1	8
Florida	1.01	0.96	0.92	0.87	0.82	-9.5	-10.1	-18.6	38
Georgia	0.68	0.67	0.64	0.64	0.60	-4.8	-6.5	-11.0	21
Hawaii	1.09	1.07	1.09	1.16	1.20	0.1	10.1	10.2	1
Idaho	1.05	1.01	1.00	0.96	0.99	-5.0	-1.2	-6.1	7
Illinois	0.75	0.72	0.69	0.64	0.60	-7.3	-12.6	-19.0	40
Indiana	0.45	0.44	0.44	0.41	0.41	-2.9	-5.5	-8.3	15
Iowa	0.93	0.98	0.95	0.92	0.85	1.2	-9.7	-8.7	17
Kansas	0.73	0.72	0.71	0.65	0.67	-3.5	-5.6	-8.9	19
Kentucky	0.88	0.80	0.74	0.75	0.70	-15.6	-5.8	-20.5	42
Louisiana	1.14	1.16	1.14	1.15	1.06	0.1	-6.4	-6.4	9
Maine	0.98	0.98	1.00	0.99	0.90	2.2	-9.8	-7.8	14
Maryland	0.72	0.65	0.65	0.69	0.59	-9.6	-9.9	-18.6	39
Massachusetts	0.48	0.50	0.49	0.48	0.47	0.8	-3.2	-2.4	2
Michigan	0.53	0.45	0.42	0.40	0.38	-21.3	-7.9	-27.6	49
Minnesota	0.71	0.69	0.65	0.64	0.63	-8.8	-3.0	-11.5	24
Mississippi	0.86	0.78	0.79	0.73	0.72	-8.3	-9.2	-16.7	33
Missouri	0.81	0.80	0.79	0.77	0.75	-2.5	-4.9	-7.3	12

Montana	1.49	1.49	1.39	1.25	1.15	-6.6	-17.3	-22.7	44
Nebraska	0.76	0.77	0.74	0.73	0.71	-2.1	-3.8	-5.7	6
Nevada	0.61	0.60	0.57	0.59	0.57	-7.5	-0.1	-7.6	13
New Hampshire	0.66	0.60	0.59	0.57	0.55	-10.0	-7.3	-16.5	32
New Jersey	0.98	0.97	0.97	0.92	0.93	-0.5	-4.7	-5.2	4
New Mexico	1.04	0.99	0.92	0.89	0.89	-11.7	-4.1	-15.3	28
New York	0.99	0.98	0.97	0.93	0.87	-2.0	-9.4	-11.2	22
North Carolina	0.66	0.62	0.55	0.50	0.49	-15.7	-12.1	-25.8	48
North Dakota	0.84	0.85	0.78	0.71	0.65	-6.9	-17.5	-23.2	46
Ohio	0.85	0.81	0.73	0.70	0.66	-14.4	-9.9	-22.8	45
Oklahoma	1.06	0.92	0.85	0.77	0.71	-19.2	-17.2	-33.1	51
Oregon	0.75	0.71	0.72	0.67	0.66	-3.5	-8.2	-11.5	23
Pennsylvania	1.03	1.07	0.92	0.91	0.87	-10.2	-5.7	-15.3	29
Rhode Island	0.68	0.64	0.61	0.59	0.61	-9.7	-0.4	-10.1	20
South Carolina	1.16	1.13	1.09	1.10	1.10	-6.0	0.6	-5.4	5
South Dakota	0.67	0.63	0.58	0.61	0.62	-14.2	8.3	-7.1	11
Tennessee	0.54	0.48	0.44	0.39	0.37	-17.2	-16.1	-30.5	50
Texas	0.31	0.29	0.27	0.27	0.26	-14.4	-4.3	-18.0	36
Utah	0.47	0.45	0.43	0.41	0.39	-9.1	-9.1	-17.4	34
Vermont	1.17	1.06	1.06	0.99	0.98	-9.4	-6.9	-15.6	30
Virginia	0.50	0.50	0.50	0.46	0.43	-0.2	-15.1	-15.3	27
Washington	1.41	1.32	1.24	1.17	1.12	-11.6	-9.8	-20.3	41
West Virginia	1.52	1.55	1.42	1.37	1.32	-6.7	-7.2	-13.4	25
Wisconsin	0.94	0.92	0.89	0.87	0.86	-5.9	-3.2	-8.9	18
Wyoming	1.71	1.80	1.78	1.59	1.63	4.2	-8.2	-4.4	3
Total Non-Federal	$0.84	$0.82	$0.78	$0.75	$0.72	-7.7	-8.1	-15.1	
Federal Employees[a]	$1.37	$1.32	$1.23	$1.18	$1.12	-9.6	-8.8	-17.6	
TOTAL[b]	$0.87	$0.84	$0.80	$0.77	$0.74	-7.9	-8.2	-15.4	

a Includes Federal Employee Compensation Act compensation benefits from Table B1.
b Includes federal (cash) benefits as described in Table 8.

Source: National Academy of Social Insurance estimates.

Legislative Changes Corresponding to Changes in Benefits

Between 2010 and 2013, Oklahoma enacted several significant revisions to its workers' compensation statutes with likely impacts on benefits between 2015-2019.[45] These revisions included: 2010 changes that raised the burden of proof to qualify for workers' compensation and reduced and capped benefits for permanently disabled workers; 2011 changes that reduced wage-replacement benefits for temporarily disabled workers by 50 percent; and 2013 changes in Senate Bill 1062, which changed to provider reimbursement and medical fee schedules (section 50H), reduced permanent disability ratings for PPD and PTD claims by the amount of impairment determined to be pre-existing (45C and D), reduced both the maximum benefit amount and duration for TTD claims (45A); and adopted an administrative system governed by a nine-member Workers' Advisory Council (164) (Oklahoma Senate, 2013).[46] The decline in standardized cash benefits in Oklahoma occurred primarily between 2015 and 2017 (-\$0.16 per \$100, or 28.8%, compared to -\$0.05 per \$100, or 14.5% between 2017-19) which makes sense in the context of when these laws were passed and enacted. The decline in standardized medical benefits, however, accelerated in 2017-2019 (-\$0.09 per \$100, or 19.5%, compared to -\$0.04 per \$100, or 8.7% between 2015-17). Overall in Oklahoma, standardized medical benefits declined by 26.5 percent and cash benefits by 39.1 percent over the study period.

In 2013, Tennessee enacted a Workers' Compensation Reform Act that took effect on January 1, 2014 (Tennessee Bureau of Workers Compensation, 2017). The legislation established a new administrative process for resolving claims, overseen by a new Court of Workers' Compensation Claims and a Workers' Compensation Appeals Board. Eligibility for benefits was restricted to cases in which work-related injuries were the primary cause of the workers' current disability, and PPD benefit rates were reduced, although the maximum duration of PPD benefits was increased from 400 to 450 weeks. The legislation also adopted new medical treatment guidelines, which narrowed reimbursable treatment regimens to those explicitly listed in the guidelines, with case-by-case exceptions.[47] These reforms help explain the sharp declines in both cash and medical benefits per \$100 of covered wages seen over the study period (35.5% and 27.5%, respectively).

In 2011, Michigan enacted changes to its workers' compensation laws that redefined disability and post-injury work capacity, making the criteria required to establish disability and/or wage loss more stringent. The law changed the definition of "disability" from "limitation of an employee's wage earning capacity in work suitable to his or her qualifications and training resulting from a personal injury or work-related disease" to "personal injury covered under this act [which] results in the employee's being unable to perform all jobs paying the maximum wages in work suitable to that employee's qualifications and training, which includes work that may be performed using the employee's transferable work skills." (Michigan Legislature) These legislative changes likely account some part of the 29.2 percent decline in standardized cash benefits over the study period, the third-largest decline in the country.[48] Standardized medical benefits also declined by 25.9

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45 As noted in previous reports, an Oklahoma statute allowed certain employers in the state to opt out of workers' compensation insurance from 2014 through part of 2016, when the state supreme court declared the statute unconstitutional. Therefore, its effect on benefits was minimal over this report's study period.

46 In addition to the statutory changes that reduced compensation paid per claim, the number of workers' compensation claims filed in Oklahoma declined dramatically after the legislative changes were implemented in 2014. There were 7,935 claims filed in 2018, down over 45 percent from 2012 (Oklahoma Workers' Compensation Commission, 2018). The decline is not due to a decline in employment – State employment rose by 4.2 percent between 2012 and 2018 (Oklahoma Quarterly Census…). The statutory changes also made some previously compensable injuries non-compensable, and there is anecdotal evidence that claimants or their attorneys may have foregone filing claims, including fraudulent claims that have been discouraged or weeded out by the statutory changes (Personal communication of Christopher McLaren with Stormy Moore, Director of Permitting Services, Oklahoma Workers' Compensation Commission.)

47 Tennessee Administrative Code 0800-02-25-.03. The rule change provides recommended treatments for workers using ODG and Chronic Pain Guidelines. If treatment under the guidelines is followed, it is considered reasonable and necessary, with two exceptions listed within section 2. Treatment in accordance with the guidelines does not require pre-authorization and injured workers can still receive treatment outside the guidelines, though it may be difficult.

48 The bulk of the decline in standardized cash benefits occurred between 2015-2017; 2017-2019 was in line with the rest of the country, suggesting that the impact of Michigan's 2011 legislative changes are fully reflected in the data by 2017.

percent, which may also be attributed to the more stringent criteria for qualifying claims.[49]

In 2015, Delaware began implementing changes to its workers' compensation laws outlined in House Bill 373, passed in 2014 (Delaware General Assembly). As described in the Bill's synopsis, the objective legislation was to implement "a 33% reduction in medical costs to the workers' compensation system, phased in over a period of three years [and] absolute caps, expressed as a percentage of Medicare per-procedure reimbursements, on all workers' compensation medical procedures beginning on January 1, 2017." Indeed, our data show a 33.5% decline in standardized medical benefits in Delaware between 2015 and 2019, the largest decline of any state. The largest year-over-year decrease occurred in 2017 (-13.3%), when the "absolute caps" on medical procedures were implemented.[50] It is not clear that the continued decline in standardized medical benefits in 2018 and 2019 can be as directly attributed to the legislative changes brought by House Bill 373.

In 2013 and 2018, Hawaii enacted changes to its fee schedule that increased reimbursements for medical services (NCLS, 2013 and Workers' Compensation Rules & Medical Fee Schedule EFF). Those changes help to explain why standardized medical benefits increased by 21.8% in Hawaii over the study period, while standardized cash benefits were relatively steady (0.9% increase).

Cash Benefits by Type of Claim

The National Council on Compensation Insurance (NCCI) provides data on the relative incidence (or frequency) of each type of disability claim (temporary total, permanent partial, and permanent total, as well as fatalities) as a proportion of the total number of cases receiving cash benefits and total benefits incurred (NCCIa, 2021). Data are reported for each state's "policy period," which may or may not correspond to a calendar year. Data are available for the 38 states in which NCCI is licensed. Figures 4a and 4b display the data for 1997 to 2017, the most recent year available.

Figure 4a shows the percentage of indemnity claims (claims involving cash benefits) attributed to each type of disability claim. Figure 4b shows the percentage of total benefits attributed to each type of indemnity claim. Consistently, the bulk of workers' compensation total benefits goes to workers with permanent disability claims, of which permanent partial disability claims are the most common.[51] In 2017, temporary total disability (TTD) claims accounted for 63.2 percent of all indemnity claims, but only 34.5 percent of benefits incurred (Figures 4a & 4b). PPD claims accounted for 36.1 percent of indemnity claims, but 55.0 percent of benefits incurred.

Permanent total disability and fatality claims are relatively rare, accounting for less than one percent of claims involving cash benefits (approximately 0.6 percent in every year from 2003 to 2017). However, these claims tend to be expensive. In 2017, PTD and fatality claims represented 0.6 percent of total indemnity claims, but 10.5 percent of benefits incurred (Figures 4a & 4b).

Employer Costs for Workers' Compensation

Data Sources for Estimating Employer Costs

This section describes the primary sources of data that we use to estimate employer costs for workers' compensation. The Academy's estimates of employer costs are equal to the sum of: premiums and deductibles paid to private insurers and state funds; benefits and administrative costs paid by self-insured employers; and assessments paid to special funds (e.g., second-injury funds). A detailed, state-by-state explanation of how the cost estimates are produced is provided in *Sources and Methods 2021: A Companion*

49 It is possible that the 2011 changes either reduced claim volumes by weakening the financial incentive to claim, or that the disability and work capacity changes led to previously compensable claims now falling outside of the system, but the data do not shed light on either of those potential explanations.

50 Fomenko and Liu, 2017 more closely explore the impacts of HB 373 in a WCRI research paper.

51 The NCCI typically classifies workers' compensation claims into discrete types according to the most severe type of disability benefit received. For example, a permanent partial disability beneficiary has typically received temporary disability benefits until the point of maximum medical improvement, but the entire cost of cash benefits for the claim is ascribed to permanent partial disability.

to Workers' Compensation Benefits, Costs, and *Coverage, 2019*, available on the Academy's website. The primary sources of cost data are the state surveys, A.M. Best, and NCCI.

The Academy's methods for estimating employer costs vary according to the employer's source of workers' compensation coverage. For employers purchasing insurance from private carriers or state funds, the costs of workers' compensation in any year equals the sum of premiums paid in that year plus reimbursements paid to the insurer under deductible provisions.

For self-insured employers, workers' compensation costs include medical and cash benefits paid during the calendar year, plus the administrative costs of providing those benefits. Administrative costs include the direct costs of managing claims, as well as expenditures for litigation, cost containment (e.g., utilization review, treatment guidelines) taxes, licenses, and fees. Self-insured employers generally do not report the administrative costs of workers' compensation separately from the costs of administering other employee benefit programs, so the costs associated with administering workers' compensation must be estimated. The National Association of Insurance Commissioners reports the ratio of administrative costs to total benefits paid for private insurers who report to them (NAIC, 2021). To estimate administrative costs for self-insured employers, we assume that the ratio of administrative costs to total benefits paid is the same for self-insured employers as it is for private insurers.[52]

For the federal employee workers' compensation program, employer costs are benefits paid plus administrative costs, as reported by the U.S. Department of Labor (DOL, 2021).

The Academy's estimates of employer costs also include estimates of assessments for special funds, second-injury funds, and guaranty funds. Employer payments to special funds or second-injury funds are estimated from the assessment rates a state applies either to premiums or losses (benefits paid). State assessment rates are provided either by state agencies or by NCCI. Assessments for insurance guaranty funds are paid by insurers, so these are included in reported premiums.

The 2019 data report implements a significant improvement to estimates of employer assessments relative to prior years' reports. The methodological change uses data from the NCCI Tax and Assessment Directory and state agencies to better estimate assessments paid by employers across the country (NCCI, 2021b).[53] This improved methodology is applied to all years beginning in 1999.

The fact that data on employer costs must be compiled from a variety of sources imposes some limitations on the report. First, there may be some direct workers' compensation costs not captured in the estimates. We may, for example, be missing some unreported expenditures, such as those for legal or case management services. Second, our estimates are limited to the monetary costs of work-related injuries and illnesses paid by employers. The estimates do not include the costs borne by employers who pay injured workers' full salaries during periods of light duty or other post-injury job accommodations. Some of this payment is a loss to the employer because of the reduced productivity of the worker(s) being accommodated. Finally, our estimates do not include the costs imposed on workers, families, and society in the form of pain and suffering, uncompensated lost wages, and unreimbursed medical costs. These costs are beyond the scope of this report.[54]

52 Private insurers face some cost factors, such as commissions, profit allowances, and taxes on premiums that self-insurers do not face. NAIC estimates of administrative costs are equal to the amount spent on direct defense and cost containment expenses plus taxes, licenses, and fees, divided by direct losses paid (for more detail see *Sources and Methods 2021*). NAIC's estimate of administrative costs is based on the experience of private insurers. Other reports have found higher administrative overhead costs as a percent of total premiums compared to those reported by NAIC (e.g., Neuhauser et al., 2010).

53 The average increase in total employer costs in a given year for 2015 through 2019 due to the methodological improvement is 3.1 percent. Broken down by private carriers, state funds, and self-insurers, the average increases in yearly costs over the study period are 2.3, 3.3, and 5.3 percent respectively, as many of the previously missed assessments were on self-insurers. The methodological change is further discussed in *Sources and Methods 2021*.

54 We have, however, updated our estimates of workers' contributions to workers' compensation benefits. See Appendix C for estimates from three states – New Mexico, Oregon, and Washington.

Table 13

Workers' Compensation Employer Costs, by Type of Coverage, 1999-2019

Year	Total (millions)	% Change	Private Insured[a] (millions)	Private Insured[a] % of total	State Fund Insured[a] (millions)	State Fund Insured[a] % of total	Self-Insured[a] (millions)	Self-Insured[a] % of total	Federal[b] (millions)	Federal[b] % of total
1999	58,013	2.5	34,523	59.5	7,830	13.5	12,164	21.0	3,496	6.0
2000	62,426	7.6	36,874	59.1	9,232	14.8	12,699	20.3	3,620	5.8
2001	69,358	11.1	38,995	56.2	12,172	17.5	14,413	20.8	3,778	5.4
2002	76,272	10.0	42,566	55.8	15,289	20.0	14,519	19.0	3,898	5.1
2003	84,704	11.1	46,549	55.0	18,416	21.7	15,768	18.6	3,970	4.7
2004	88,632	4.6	48,706	55.0	19,742	22.3	16,111	18.2	4,073	4.6
2005	92,466	4.3	52,156	56.4	18,835	20.4	17,379	18.8	4,096	4.4
2006	90,024	-2.6	52,847	58.7	16,255	18.1	16,785	18.6	4,138	4.6
2007	89,029	-1.1	53,505	60.1	14,363	16.1	16,925	19.0	4,236	4.8
2008	82,953	-6.8	48,437	58.4	12,653	15.3	17,521	21.1	4,341	5.2
2009	76,095	-8.3	43,962	57.8	10,996	14.5	17,071	22.4	4,065	5.3
2010	74,919	-1.5	43,792	58.5	9,885	13.2	17,014	22.7	4,228	5.6
2011	81,247	8.4	47,696	58.7	10,729	13.2	18,375	22.6	4,447	5.5
2012	87,142	7.3	52,458	60.2	11,362	13.0	18,782	21.6	4,539	5.2
2013	91,800	5.3	56,303	61.3	12,502	13.6	18,391	20.0	4,604	5.0
2014	96,578	5.2	58,770	60.9	13,764	14.3	19,129	19.8	4,914	5.1
2015	99,251	2.8	60,877	61.3	13,731	13.8	19,211	19.4	5,432	5.5
2016	100,219	1.0	61,746	61.6	13,474	13.4	19,340	19.3	5,658	5.6
2017	100,792	0.6	62,318	61.8	12,667	12.6	19,557	19.4	6,250	6.2
2018	101,360	0.6	61,970	61.1	12,565	12.4	19,821	19.6	7,004	6.9
2019	100,187	-1.2	60,882	60.8	12,008	12.0	19,806	19.8	7,491	7.5

a Costs for second injury funds and special funds are included in the totals. The costs for special funds are estimated from assessment rates, based on premiums and losses. Employee contributions to workers' compensation costs in New Mexico, Oregon, and Washington state are included in the totals from 2011 to 2018.

b Federal costs include costs to the Federal government under the Federal Employees' Compensation Act and employer costs associated with the Federal Black Lung Disability Trust Fund, and employer costs associated with the Longshore and Harbor Workers' Compensation Act. See Appendix B for more information about federal programs.

Sources: National Academy of Social Insurance estimates of costs for private carriers and state funds are based on information from A.M. Best and direct contact with state agencies. Costs for federal programs are from the Department of Labor and the Social Security Administration. Self-insured administrative costs are based on information from the National Association of Insurance Commissioners.

National Estimates of Employer Costs

Table 13 shows employer costs for workers' compensation by type of coverage for 1999 through 2019. In 2019, total employer costs were $100.2 billion, a decrease of 1.2 percent since 2018, and an increase of 0.9 percent since 2015 (Table 13). Controlling for growth in employment and wages, however, employer costs have decreased substantially over the study period. Between 2015 and 2019, standardized employer costs decreased by $0.21 per $100 of covered wages (15.0%) (Table 14). Among non-federal employers, costs per $100 of covered wages decreased by $0.23 (17.0%) over the study period, with the larger share of the decrease taking place in the latter years. Standardized employer costs decreased by $0.09, or 6.0%, between 2015 and 2017 ($1.38 to $1.29), and by $0.12, or 9.6%, between 2017 and 2019 ($1.29 to $1.17).

In 2019, costs for employers insured through private carriers were 60.8 percent of total workers' compensation costs ($60.9 billion); costs for employers insured through state funds were 12.0 percent ($12.0 billion); costs for self-insured employers were 19.8 percent ($19.8 billion); and costs for federal government programs were 7.5 percent ($7.5 billion) (Table 13). Over the five-year study period (2015-2019), the share of costs paid by state funds decreased by 1.5 percentage points, the share paid by self-insured employers rose slightly, the share paid by private insurers decreased slightly, and the share paid by the federal government increased by two percentage points.

State Estimates of Employer Costs

Table 14 reports estimates of employer costs for workers' compensation per $100 of covered wages by state from 2015 to 2019. Costs are aggregated across all types of insurers (excluding the federal government) and across all industries. Consistent with the national trend, employer costs per $100 of covered wages decreased in 50 of 51 jurisdictions over the study period (the same number as in the 2018 data report; 45 states experienced a decrease over the five years in the 2017 data report). Tennessee experienced the largest relative decrease in standardized costs (40.1%), followed by Oklahoma (30.8%), North Dakota (29.9%), and Ohio (28.1%).

Legislative Changes Corresponding to Changes in Employer Costs

Tennessee experienced the largest decrease in standardized costs by a significant margin. One likely contributor to this decline is the Workers' Compensation Reform Act (described in more detail on page 36), implemented in January 2014, which reduced benefits to workers' compensation claimants in the state. Consequently, as covered wages in Tennessee rose by 19.5 percent between 2015 and 2019 (Table 4), employer premiums declined by 10.6% (AM Best, 2021).

In North Dakota there were also large decreases in standardized employer costs between 2015-2017 ($0.25, or 21.5%), and then a smaller decline between 2017 to 2019 ($0.14, or 10.6%) (Table 14). The decreases likely reflect changes to the state's workers' compensation law that were enacted in 2013, which affected both medical and cash benefits.[55]

In Ohio, the 28.1 percent decline in standardized employer costs was largely driven by a 22.8 percent decline in standardized benefits. In the years this report covers, there were no substantial legislative changes, so there is no simple explanation. The "Grow Ohio Incentive Program (effective February 2012), which offered new employers a 25 percent discount on workers' compensation premiums for two years, or immediate access to the group rating program offered by the state fund, may have explained a small part of this decline. The latter option offers employers eligibility to reduce premiums up to the maximum allowable amount (53 percent since 2013). This program, however, does not explain the large corresponding decrease in standardized benefits observed in Ohio, suggesting that other factors have played a larger role in driving down employer costs.

Hawaii is the only state where standardized employer costs increased between 2015-2019. The modest increase (1.9%) likely reflects increases in the fee

55 In April 2013, the North Dakota legislature approved changes to the state's workers' compensation statute that include: disallowing pain as a sole factor to indicate increasing severity of a preexisting injury; increasing restrictions on benefits in cases of out-of-state filing or incarceration; reducing PPD ratings for some amputations; and allowing employers greater latitude in selecting among competing medical opinions (NCSL, 2013).

Figure 4a

Types of Disabilities in Workers' Compensation Cases with Cash Benefits, 1997-2017

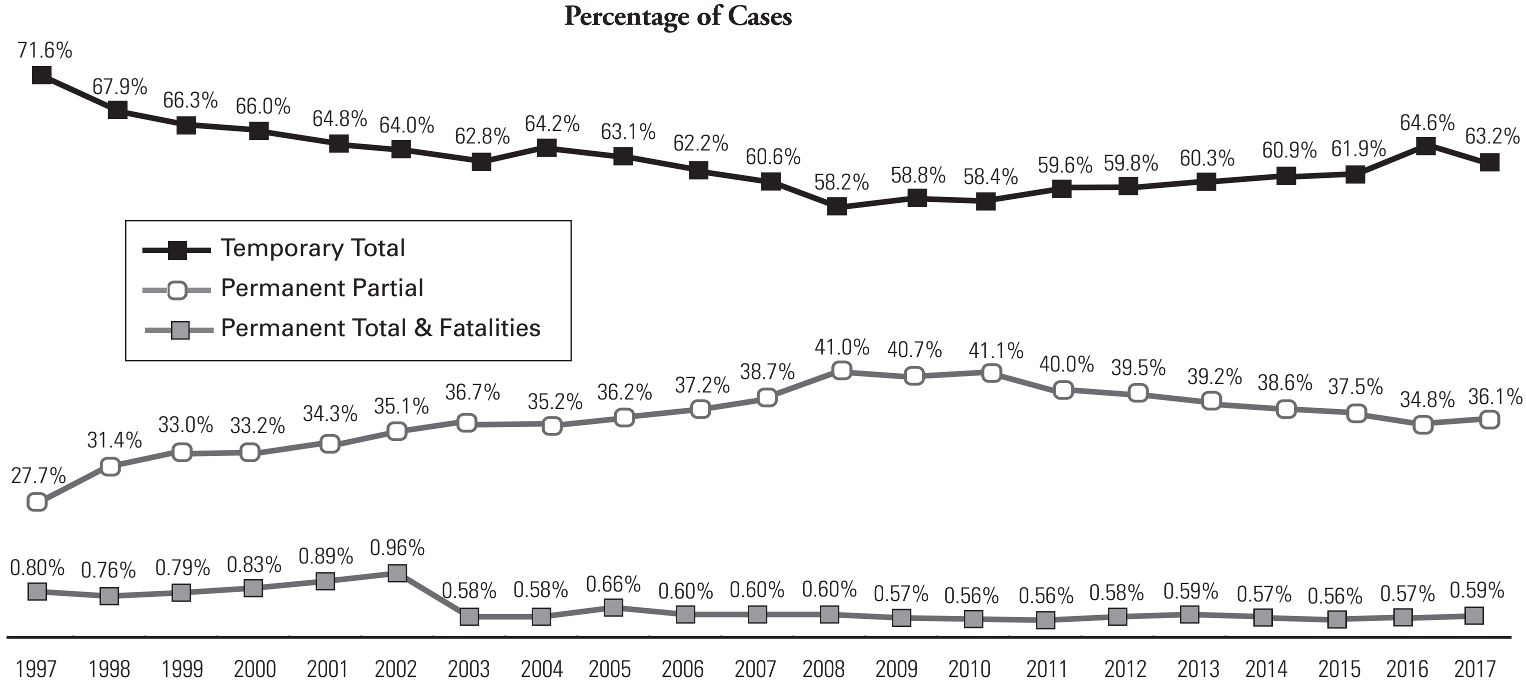
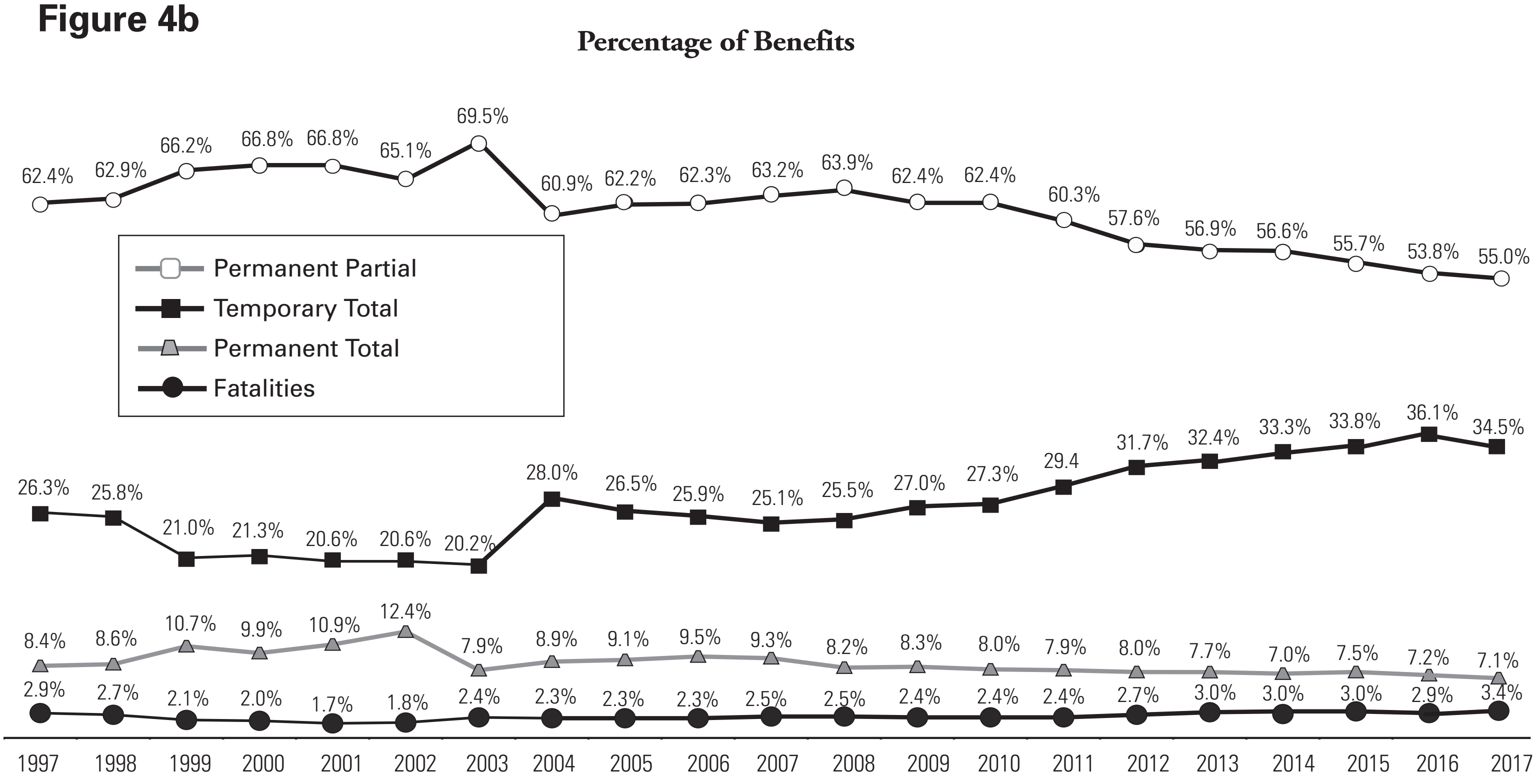


Figure 4b



Notes: Cases classified as permanent partial include cases that are closed with lump sum settlements. Benefits paid in cases classified as permanent partial, permanent total and fatalites can include any temporary total disability benefits also paid in such cases. The data are from the first report from the NCCI *Annual Statistical Bulletin*. A breakdown of the percentage of cases under "Permanent Total & Fatalities" can be found in *Sources and Methods 2018* at nasi.org.

Source: NCCI 2000-2020, *Annual Statistical Bulletin*, Exhibits X and XII.

Table 14

Employer Costs for Workers' Compensation Per $100 of Covered Wages, by State, 2015-2019

State	2015	2016	2017	2018	2019	Percent Change 2015-2017	Percent Change 2017-2019	Percent Change 2015-2019	Ranking (1=largest percent increase, 2015-2019)
Alabama	$1.14	$1.11	$1.06	$1.01	$1.03	-7.6	-2.9	-10.3	13
Alaska	2.33	2.36	2.23	2.28	1.95	-4.1	-12.9	-16.5	27
Arizona	0.99	0.95	0.88	0.84	0.78	-11.7	-11.2	-21.6	41
Arkansas	0.82	0.80	0.77	0.74	0.70	-5.4	-9.9	-14.8	18
California	2.04	2.03	1.90	1.75	1.61	-7.3	-15.2	-21.4	40
Colorado	1.06	1.02	0.97	0.93	0.86	-8.3	-11.2	-18.6	31
Connecticut	1.34	1.27	1.24	1.13	1.10	-7.2	-11.7	-18.1	29
Delaware	1.44	1.48	1.47	1.44	1.29	2.3	-12.5	-10.5	14
District of Columbia	0.75	0.61	0.60	0.62	0.59	-20.3	-1.8	-21.7	42
Florida	1.46	1.42	1.45	1.33	1.24	-0.6	-14.4	-14.9	19
Georgia	1.13	1.11	1.10	1.09	1.01	-2.5	-8.0	-10.3	12
Hawaii	1.66	1.69	1.64	1.70	1.70	-1.2	3.2	1.9	1
Idaho	1.70	1.70	1.70	1.64	1.60	-0.3	-5.5	-5.8	4
Illinois	1.22	1.16	1.09	1.01	0.94	-10.5	-13.5	-22.6	44
Indiana	0.85	0.82	0.75	0.71	0.68	-11.3	-9.3	-19.5	33
Iowa	1.56	1.54	1.49	1.35	1.25	-4.5	-16.1	-19.9	37
Kansas	1.23	1.15	1.07	0.99	0.99	-12.7	-8.0	-19.7	35
Kentucky	1.11	1.02	0.96	1.04	0.97	-13.8	1.1	-12.8	17
Louisiana	1.61	1.60	1.57	1.53	1.49	-2.5	-5.6	-7.9	7
Maine	1.41	1.41	1.39	1.33	1.28	-1.2	-8.4	-9.5	11
Maryland	1.10	1.03	1.02	1.04	0.90	-7.5	-12.0	-18.7	32
Massachusetts	0.74	0.76	0.75	0.74	0.71	1.6	-6.1	-4.5	2
Michigan	0.91	0.81	0.74	0.71	0.66	-18.9	-10.6	-27.5	47
Minnesota	1.19	1.18	1.09	1.02	1.00	-8.0	-8.7	-16.1	25
Mississippi	1.42	1.30	1.27	1.22	1.19	-10.3	-6.4	-16.1	24
Missouri	1.25	1.22	1.17	1.12	1.11	-6.2	-5.7	-11.5	15
Montana	2.20	2.18	2.06	1.89	1.77	-6.5	-14.0	-19.6	34
Nebraska	1.29	1.25	1.21	1.15	1.09	-6.7	-9.9	-15.9	23
Nevada	1.01	0.98	0.91	0.95	0.94	-9.6	2.9	-7.0	5

New Hampshire	1.18	1.12	1.06	1.00	0.90	-10.5	-14.8	-23.8	46
New Jersey	1.60	1.58	1.52	1.48	1.45	-4.9	-4.5	-9.2	9
New Mexicoa	1.58	1.46	1.40	1.35	1.32	-11.4	-5.8	-16.5	28
New York	1.59	1.64	1.59	1.54	1.44	0.4	-9.8	-9.4	10
North Carolina	1.09	1.05	0.97	0.90	0.84	-11.0	-13.9	-23.4	45
North Dakota	1.63	1.45	1.28	1.25	1.14	-21.5	-10.6	-29.9	49
Ohio	1.03	0.94	0.82	0.75	0.74	-20.7	-9.3	-28.1	48
Oklahoma	1.62	1.40	1.29	1.22	1.12	-20.8	-12.6	-30.8	50
Oregon	1.18	1.19	1.14	1.06	1.00	-3.9	-11.9	-15.3	20
Pennsylvania	1.49	1.47	1.38	1.38	1.26	-7.7	-8.4	-15.4	21
Rhode Island	1.12	1.14	1.08	1.05	1.06	-3.6	-1.5	-5.1	3
South Carolina	1.76	1.74	1.72	1.66	1.60	-1.8	-7.4	-9.1	8
South Dakota	1.28	1.20	1.15	1.13	1.03	-10.3	-10.7	-19.9	38
Tennessee	0.96	0.90	0.86	0.66	0.57	-10.3	-33.4	-40.2	51
Texas	0.68	0.58	0.54	0.55	0.52	-19.3	-3.8	-22.4	43
Utah	0.89	0.89	0.86	0.81	0.73	-3.6	-15.2	-18.2	30
Vermont	1.86	1.82	1.70	1.65	1.55	-8.5	-8.6	-16.4	26
Virginia	0.75	0.76	0.76	0.74	0.69	1.0	-8.2	-7.4	6
Washington[b]	1.69	1.73	1.61	1.49	1.34	-5.1	-16.4	-20.7	39
West Virginia	1.80	1.64	1.53	1.52	1.52	-15.2	-0.3	-15.5	22
Wisconsin	1.70	1.72	1.63	1.58	1.49	-4.3	-8.2	-12.2	16
Wyoming	2.46	2.46	2.05	1.55	1.98	-16.6	-3.7	-19.7	36
Total Non-Federal	$1.34	$1.31	$1.25	$1.19	$1.11	-6.8	-10.9	-17.0	
Federal Employees[c]	$1.44	$1.39	$1.31	$1.25	$1.20	-8.9	-8.4	-16.6	
TOTAL[c]	$1.38	$1.35	$1.29	$1.24	$1.17	-6.0	-9.6	-15.0	

Note: Generally states with exclusive state funds operate special funds (or their equivalents) and their experience is included in the benefit and costs entries for those exclusive state funds.

a In New Mexico, employers are assessed $2.30 per covered worker on the last day of each quarter. Of that assessment, $2.00 per employee fund the Workers' Compensation Administration of New Mexico, while the residual $0.30 per employee fund an Uninsured Employers' Fund. Employees also pay $2.00 each on the last day of each quarter toward funding the Workers' Compensation Administration.

b In Washington state both employers and employees contribute to workers' compensation premiums. In 2019, employees contributed 26.6 percent of state fund premiums and 50 percent of self-insured employer cost-of-living-adjustment premiums.

c The "Federal Employees" row depicts the total costs of the Federal Employees Compensation Act (Table B1) per $100 of federal employee covered wages. In past reports we have included costs of the Longshore and Harbor Workers' Compensation Act and the Black Lung Benefits Act. Consistent with Tables 10-12, data on all three programs is included in the "Total" row. See Appendices B and C for more information about federal programs.

Source: National Academy of Social Insurance estimates.

schedule for medical services that were enacted in 2013 (NCSL, 2013) and in 2018 (Workers' Compensation Rules & Medical Fee Schedule EFF). Indeed, Hawaii experienced the largest percentage increase in the country in standardized medical benefits paid (21.8%) between 2015 and 2019 (Table 10).

Although there is considerable interstate variation in employer costs for workers' compensation per $100 of covered wages, readers are cautioned against using the estimates in Table 14 to identify states with more or less favorable climates for employers or workers. The data on average costs by state do not mean that states with lower costs offer a more competitive environment for employers, because states differ in their mix of high-risk/low-risk industries. Consider, for example, two industries: logging, for which the workers' compensation rate is $40 per $100 of wages, and banking, for which the rate is $1 per $100 of wages. Suppose State A has 80 percent of its employees in logging and 20 percent in banking, so average costs for workers' compensation are $32.20 per $100 of wages. State B has 20 of its employees in logging and 80 percent in Banking, so average employer costs for workers' compensation are $8.20 per $100 of wages. If Timber-R-Us moved from State A to State B to take advantage of the lower average costs of workers' compensation, it would not save on those costs. Rather, Timber-R-Us would continue to pay workers' compensation premiums of $40 per $100 of its wages.

This simple example demonstrates that a meaningful comparison of employer costs across states must control for variations in the proportions of employers in different insurance classifications (which are, in turn, based on the riskiness of industries and occupations) in each state. Such comparisons are beyond the scope of this report.[56]

Furthermore, the cost data reported here likely do not capture the full impact of recent changes in laws that have altered the workers' compensation market within a state. Because the Academy reports costs paid in a particular year, regardless of injury date, cost data for 2019 include a substantial proportion of cash benefits paid for injuries that occurred in previous years, under legal regimes and economic conditions that may have been quite different from the current conditions in a state.

Benefits Paid Relative to Employer Costs

Table 15 reports ratios of workers' compensation benefits paid relative to employer costs, from 1999 through 2019. The benefits and costs measures are standardized estimates, per $100 covered wages. Employer costs in 2019 were $1.17 per $100 of covered wages, while benefits were $0.74 per $100. As shown in Figure 1, these are the lowest levels of both standardized costs and benefits in the past 40 years.

The reader is cautioned that the ratios represent benefits and costs paid in a given year, but not necessarily for the same claims. The benefits measure includes payments for all injuries/illnesses that occurred in the given year as well as for some injuries and illnesses that occurred in prior years. The costs measure (premiums paid to insurers and state funds), on the other hand, includes projected future liabilities for injuries and illnesses that occurred in the given year. In other words, the costs and benefits paid in a given year are not tracking the full costs of a particular set of claims.[57]

In 2019, the ratio of standardized workers' compensation benefits to costs was 0.63:1. In other words, on average, $0.63 of benefits were paid to injured workers for every dollar of employer costs. Employer costs for workers' compensation exceed benefits paid (i.e., the benefit/cost ratio is less than one) because some part of employer costs go to administrative expenses and profits for workers' compensation insurers. In addition, employer premiums must

56 As noted below in the section on estimates of employer costs and in Appendix E, Oregon's biannual report does provide such comparisons.

57 For employers covered by private insurers or state funds, costs are largely determined by premiums paid. However, in a given year, premiums paid by employers do not necessarily match benefits received by workers. Premiums in a given year pay for all compensable injuries that occur in the same year and for benefits paid (on the same injuries) in future years. On the other hand, the majority of cash benefits paid in any given year are for injuries that occurred in previous years (and are covered by the premiums paid in those same previous years). Premiums are influenced by a number of factors, including previous workers' compensation liability experience and insurers' past and anticipate investment returns on reserves set aside to cover future liabilities.

Table 15

Workers' Compensation Benefit to Cost Ratios, 1999-2019

Year	Medical Benefits per $100 Covered Wages	Cash Benefits per $100 Covered Wages	Total Benefits per $100 Covered Wages	Employer Costs per $100 Covered Wages	Total Benefits per $1 Employer Cost
1999	0.48	0.64	1.12	1.40	0.80
2000	0.47	0.59	1.06	1.39	0.76
2001	0.50	0.60	1.10	1.51	0.73
2002	0.52	0.61	1.13	1.65	0.69
2003	0.55	0.61	1.16	1.80	0.65
2004	0.53	0.60	1.13	1.79	0.63
2005	0.51	0.58	1.09	1.77	0.62
2006	0.47	0.52	0.99	1.62	0.61
2007	0.46	0.50	0.96	1.52	0.63
2008	0.49	0.50	0.99	1.39	0.71
2009	0.50	0.53	1.03	1.34	0.77
2010	0.49	0.51	1.00	1.28	0.78
2011	0.51	0.50	1.01	1.34	0.76
2012	0.49	0.50	0.99	1.38	0.72
2013	0.47	0.46	0.93	1.34	0.69
2014	0.47	0.46	0.93	1.41	0.66
2015	0.44	0.43	0.87	1.38	0.63
2016	0.42	0.42	0.84	1.35	0.62
2017	0.40	0.40	0.80	1.29	0.62
2018	0.38	0.39	0.77	1.24	0.62
2019	0.37	0.37	0.74	1.17	0.63

Notes: Notes: Benefits are calendar-year payments to injured workers and to providers of their medical care. Employer costs are calendar-year expenditures for workers' compensation insurance premiums, benefits paid under deductibles or self-insurance, and administrative costs.

Source: National Academy of Social Insurance estimates.

account for future inflation in medical costs. That is, employers are paying up front for the costs of current claims that will extend to future years. Finally, the costs of workers' compensation insurance include a risk premium to compensate for the expected variation in costs from year to year.

The benefit to cost ratio varies from year to year for a number of reasons, including: 1) the proportion of costs allotted to administrative expenses changes; 2) underwriting results for the workers' compensation industry (as measured by the overall operating ratio) change; 3) insurers use a larger (or smaller) portion of the returns on their investments (rather than relying on premiums) to defray all or part of their workers' compensation costs; 4) the expected number/severity of workplace injuries increases or decreases; 5) the proportion of workplace injuries that result in reported and compensated claims changes; and 6) the time lag between adjustments in employer costs (premiums collected) and benefits paid varies.

In 2019, the benefits to cost ratio increased slightly from the previous three years (0.62 to 0.63). The ratio decreased steadily between 1999-2006 (0.80 to 0.61), increased between 2007-2010 (0.63 to 0.78), decreased between 2011-2015 (0.76 to 0.63), and has remined roughly constant since. The ratio rose in 2019 in spite of 40-year lows in standardized benefits and costs because costs decreased at a faster rate than benefits in 2019. The trend in benefits to cost ratio tracks changes in the economy over time. In periods of recession (2007-2010), benefits decrease more slowly than employer premiums (because benefits largely reflect injuries in prior years while premiums reflect expected future benefits for current injuries), so the benefit-cost ratio increases. In periods of expansion (1999-2006, 2011-2015), the opposite occurs.

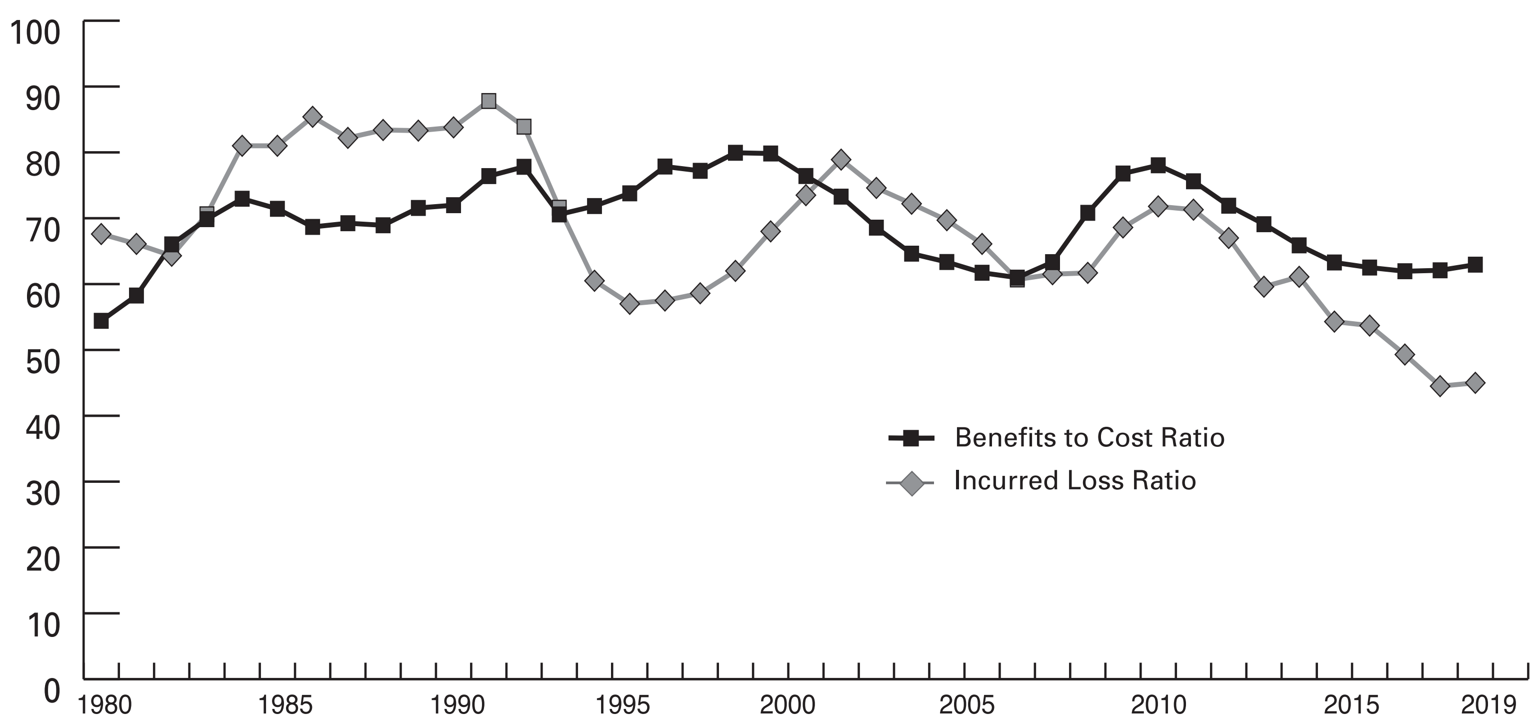
Underwriting Results

Figure 5 provides data on the benefits to cost ratio and on the Incurred Loss Ratio (ILR) for 1980 to 2019. The *benefits to cost ratio* (Table 15) measures benefits paid to workers divided by costs for employers during each year. The *Incurred Loss Ratio* is the sum of the benefits paid for injuries that occur in a year plus the reserves for future benefit payments for those injuries as a percentage of net premiums paid by employers in the year.

The data in Figure 5 reflect several important developments in workers' compensation since 1980.[58] The workers' compensation insurance industry was unprofitable from 1984-1992, with benefits and operating expenses exceeding premiums plus investment income in every year.[59] One result is that the ILR was unusually high during those years as shown in Figure 5. During this period, the

Figure 5

Benefits to Cost Ratios and Incurred Loss Ratios, 1980-2019



Source: National Academy of Social Insurance estimates. The percentage share of medical and cash benefits sum to 100 percent.

58 The data in Figure 5 uses updated data from Table 1 of Brandenburg et al. 2017 that was acquired by a private data request to Aaron Brandenburg and NAIC.

59 The underwriting results discussed in this section are from Brandenburg et al. 2017.

insurance industry successfully pursued deregulation of the workers' compensation insurance market, which previously relied on administered pricing.[60] In turn, the profitability of the industry improved rapidly through the 1990s.

Since 2000, changes in the benefits to cost ratio have tracked changes in the ILR.[61] After a brief period of unprofitability in the early 2000s, the workers' compensation insurance industry was a stable source of profit through 2011 (Brandenburg et al. 2017,). Following that one year of losses for the industry, profit levels have increased dramatically. The steep declines in the benefits to cost ratio and the ILR over that period—to near-record lows and record lows, respectively—may help explain the increasing profitability.

Both the benefits to cost ratio and the ILR provide information about the relationship between benefits paid to workers and costs to employers. There are, however, differences between the two measures that make their close relationship since 2000 particularly noteworthy. For example, the benefits to cost ratio pertains to all employers, including those who purchase insurance from private carriers or state funds or who self-insure, while the ILR only pertains to employers who purchase insurance from private carriers.[62]

The most comprehensive measure of underwriting results is the overall operating ratio (OOR), which is calculated as: total insurance company expenditures minus investment income expressed as a percentage of net premiums in a given year. In 2011, the last year in which the industry experienced net losses, the OOR was 100.4 ($100.40 per $100 of net premiums), while in 2019 the OOR was 75.7 ($75.70 per $100 of net premiums). As discussed in Brandenburg et al. (2017), the lower the OOR, the more profitable is the workers' compensation insurance industry. The decline in the OOR from 100.4 in 2011 to 75.7 in 2019 represents a substantial improvement in underwriting results. The 2019 OOR represents a slight increase from the 74.6 OOR of 2018, and the first increase in OOR since 2011. The 2018 and 2019 OORs represent the best and second-best underwriting results for the WC industry since the National Association of Insurance Commissioners data series began in 1976.

In summary, since 2010, the ratio of benefits paid to workers to costs for employers and the ILR steadily declined until 2019, at which point there was a slight uptick in both measures. The OOR lagged one year behind, beginning its decline following 2011 and rising similarly in 2019.

Estimates of Employer Costs from Other Sources[63]

The Academy's estimates compared to Bureau of Labor Statistics (BLS) estimates.

The BLS publishes a quarterly report on Employer Costs for Employee Compensation (DOL, 2020). Estimates are derived from a representative sample of establishments in the private sector, state and local governments. Costs are reported for five benefit categories (paid leave, supplemented pay, insurance, retirement and savings, and legally required benefits) per employee hour worked. Workers' compensation benefits are included within the legally required benefits category. The purpose of the BLS report is to provide average estimates of employer costs per hour

60 Thomason, Schmidle, and Burton (2001, 42-43) provide this discussion of deregulation in the 1990s: "After the initial moves to deregulation in the early 1980s, the introduction of open competition slowed in the balance of the 1980s… Deregulation reemerged with vigor during the 1990s: open competition statutes became effective in 16 states between 1991 and January 1, 1995, and in an additional 5 states after that date. Deregulation in some of those states – especially those that adopted open compensation in the early 1990s when the industry was still experiencing losses – reflected support from the insurance industry, but deregulation in other states (most notably California [in 1995]...) was generally resisted by the industry."

61 We performed a statistical test of the relationship between the benefits to cost ratio and the incurred loss ratio for the yearly observations from 2000 to 2018 shown in Figure 5. In a regression in which the dependent variable was the benefits to cost ratio, the coefficient on the incurred loss ratio as the independent variable was positive and highly significant. Further statistical analysis suggests that this relationship is driven by private insurance.

62 Another difference is that the benefits to cost ratio is based on benefits paid in the year while the ILR is based on benefits incurred in the year.

63 The Association of Workers' Compensation Boards of Canada (AWCBC) produces the most analogous report of its Key Statistical Measures (KSMs) for workers' compensation programs in Canada. See: https://awcbc.org/en/statistics/#KSM.

worked, inclusive of wages, salaries, and employee benefits.[64]

The purpose of the Academy's report is quite different. The BLS collects data on a broad range of employee benefits, while this Academy report focuses on workers' compensation. The Academy seeks to provide summary data on workers' compensation benefits paid to workers and costs borne by employers at the state and national levels. Our estimates of $63.0 billion in benefits paid and $100.2 billion in costs borne by employers in 2019 are the only data that answer questions about aggregate benefits and costs of workers' ompensation in the United States.

The Academy's estimates compared to Oregon Rate Ranking estimates.

The Oregon Workers' Compensation Rate Ranking study (Oregon Department of Consumer and Business Services, 2021) also provides estimates of employer costs for workers' compensation. The study, conducted on a biennial basis by the state of Oregon, compares workers' compensation premium rates across states for a standardized set of insurance classifications. The standardization is designed to factor out differences in hazard mix (riskiness of industries) across states to provide a measure of interstate differences in costs for comparable risk distributions. The standardized rates are based on the Oregon mix of insurance classifications; hence the rankings might be somewhat different if they were standardized based on another state. (See the table in Appendix E.)

When comparing results of the Oregon study with our results, readers should be aware of differences in methodology. Interstate differences in employer costs that appear in the Academy data are influenced in part by the different risk profiles presented by each state's economy, as well as by variations in self-insurance across states. The Oregon study reports rates for a constant set of risk classifications across states and does not include self-insured employers.[65]

Costs to Workers

In some states, a portion of the costs of workers' compensation are directly paid by workers, as discussed in more detail in Appendix C. In Washington, for example, workers contribute directly to the insurance premiums for workers' compensation through payroll deductions. In 2019, about 22.3 percent of the total costs of workers' compensation in Washington were paid directly by workers.[66] In some states, workers pay a portion of the costs for special workers' compensation funds. In Oregon, for example, workers pay into the Workers' Benefit Fund, which funds a benefit adjustment fund for long-term cases, return-to-work programs, and death benefits. New Mexico has a quarterly workers' compensation assessment for each employee that goes toward funding the Workers' Compensation Administration of New Mexico.[67] Data in this report primarily covers the employer-paid portion of workers' compensation, but New Mexico, Oregon, and Washington explicitly require employee contributions and are thus included in our estimates.[68]

In addition, workers bear considerable costs that are outside the workers' compensation system, such as the portion of lost wages that are not replaced by workers' compensation benefits. Most workers' compensation statutes provide for weekly benefits that are two-thirds of pre-injury wages. However, the statutes also include weekly maximum and minimum benefit amounts such that the mean

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64 Burton (2015) uses data from the BLS survey to calculate employer costs for workers' compensation per $100 of covered payroll and compares it with the Academy's national estimates. This series is derived from different methods of data collection compared to the Academy.

65 Burton (2013) and Manley (2013) provide more extended discussions of the differences between the measures of employer costs from the Academy and Oregon studies.

66 Employees contributed 26.6 percent of state fund premiums, accounting for 19.7 percent of total costs in the state. Employees also paid half of the cost-of-living adjustment premium for self-insurers in 2019, which accounted for 10.5 percent of self-insured workers' compensation costs and 2.7 percent of total costs.

67 See footnote a to Table 14 for details about New Mexico's assessment.

68 See Appendix C for details on these programs. Although workers in New Mexico, Oregon, and Washington are unique in that they observe a direct payroll reduction, all workers covered by workers' compensation "pay" for some portion of benefits and administration in the form of lower wages.

Table 16

Fatal Occupational Injuries - All and Private Industry, 1999-2019

	Number of Fatal Injuries		Fatal Injury Incidence Rates	
Year	All	Wage & Salary Workers	All	Wage & Salary Workers
1999	6,023	4,884	4.5	3.9
2000	5,915	4,731	4.3	3.7
2001[a]	5,900	4,770	4.3	3.8
2002	5,534	4,481	4.0	3.5
2003	5,575	4,405	4.0	3.4
2004	5,764	4,587	4.1	3.5
2005	5,734	4,592	4.0	3.5
2006	5,840	4,808	4.2	3.6
2007[b]	5,657	4,613	4.0	3.5
2008	5,214	4,183	3.7	3.2
2009	4,551	3,448	3.5	2.8
2010	4,690	3,651	3.6	3.0
2011	4,693	3,642	3.5	2.9
2012	4,628	3,571	3.4	2.8
2013	4,585	3,635	3.3	2.8
2014	4,821	3,728	3.4	2.8
2015	4,836	3,751	3.4	2.8
2016	5,190	4,098	3.6	3.0
2017	5,147	4,069	3.5	2.9
2018	5,250	4,178	3.5	2.9
2019	5,333	4,240	3.5	2.9

Note: Wage & Salary workers includes individuals employed in private industry or government, but excludes individuals who are self-employed.

a 2001 totals exclude fatalities from the September 11 terrorist attacks.

b Prior to 2007, fatal injury rates represented the number of fatal occupational injuries per 100,000 employed workers. These rates measure the risk of fatal injury for those employed during a given period of time, regardless of hours worked. Starting in 2007, the BLS adopted a new methodology to calculate fatal injury rates based on the number of hours worked. Hours-based rates measure fatal injury risk based on the average employment and average hours worked during a given period of time. Hours-based fatal injury rates are considered more accurate and should not be directly compared to employment-based rates.

Source: U.S. Department of Labor (2020a).

replacement rate is less than the two-thirds nominal replacement rate.[69] In addition, many states impose limits on the duration of permanent partial disability benefits (so that benefits may cease while workers are still experiencing lost earnings from a workplace

69 A study assessing ten-year losses and replacement rates in five states find that rates were far below the two-thirds ideal, ranging from a

injury or illness). The limits on duration further reduce the real replacement rate of cash benefits.[70]

Studies comparing lost earnings with workers' compensation benefits show that the proportion of lost earnings replaced by workers' compensation benefits is smaller than can be explained by statutory provisions purportedly making it more difficult to claim benefits for a host of substantive and procedural reasons. This suggests that conclusions drawn only from statutory provisions overestimate the extent of workers' injury-related lost earnings replaced by workers' compensation benefits. (See footnotes 44, 69, and 70.)

Workers also bear costs in the form of waiting periods. A waiting period is the time a worker must wait after experiencing a work-related injury before he or she can begin collecting cash benefits. All but three states (Hawaii, Rhode Island, and Oklahoma) have provisions to pay retroactive benefits to cover the waiting period for more serious (longer duration) lost-time injuries. In most states the retroactive period is between 7 and 21 days (1-3 weeks), but Alaska and New Mexico require workers to wait 28 days, and Nebraska's retroactive period is 42 days (see Appendix Table D). Waiting periods may result in lost wages or partial wage replacement if either 1) a worker is injured for fewer days than the waiting period and, thus, does not qualify for cash benefits, or 2) a worker is out of work for more days than the waiting period, but fewer days than the retroactive period. In these cases, the uncompensated time loss attributable to the waiting period constitutes a cost to the worker. The financial costs of uncompensated waiting periods are not routinely tracked or reported by individual states, however, and are therefore extremely difficult to collect and tabulate.

Some injured workers may incur costs because they have income that is not covered by workers' compensation at all. For example, workers holding multiple jobs may not be compensated for lost earnings from a second or subsequent job. Many states also have rules excluding certain types of income (e.g., overtime or shift differentials) from coverage.

Other costs to workers may include losses of fringe benefits that occur during periods of injury-related work absence; loss of home production attributable to a work-related injury or illness; and loss of employer contributions to health insurance premiums (unless the worker is also on leave under the Family and Medical Leave Act, or the employer's insurance plan allows continued participation during periods of injury-related work absence). Refer to Leigh and Marcin (2012) for estimates of how the costs of work-related injuries are allocated among insurers, government payers, and injured workers.

Disputed claims are responsible for significant costs to injured workers (and employers). Workers often hire attorneys to represent them in claims disputes, whose fees can reduce the cash benefit received by 20 percent of more.

Insured employers are represented by their insurance carrier in legal proceedings, although there are also unreimbursed costs to employers, such as reduced productivity related to injured workers' disability and the cost of time off work for managers and other witnesses to participate in hearings.

Finally, a large portion of costs borne by workers are for work-related injuries and illnesses that never result in a successful workers' compensation claim. Occupational illnesses in particular are frequently uncompensated (see, e.g., Boden and Ozonoff, 2008; Fan et al., 2006; Rosenman et al., 2006; and Spieler, 2017).

Incidence of Workplace Injuries and Workers' Compensation Claims

Incidence of Work-Related Injuries

Fatal injuries. The BLS collects information on work-related injuries that result in a worker's death from the National Census of Fatal Occupational Injuries (DOL, 2020a). In 2019, there were 5,333

high of 46% in New Mexico to a low of just 29% in Wisconsin, with the other three states, California (37%), Washington (41%), and Oregon (42%) in between. (Reville et al., (2001). "An evaluation of New Mexico workers' compensation permanent partial disability and return to work." Santa Monica, CA, Rand Institute for Civil Justice.

70 Seabury et al. (2014) estimated earnings losses for New Mexico workers' compensation claimants injured from 1994-2000. On average, workers lost 15% of earnings in the 10 years after injury; workers' compensation replaced 16% of earnings losses for the average worker.

work-related fatalities, the highest number since 2007 (Table 16). Controlling for employment, however, the fatality rate was 3.5 per 100,000 workers, slightly above the 20-year low of 3.3. Over the 20-year period from 1999-2019, total workplace fatalities declined by 11.5 percent, and the fatality rate declined by 25.6 percent.[71]

> Annual workplace fatalities declined by about 25.6 percent over between 1999 and 2019.

As in the past, the leading cause of work-related fatalities in 2019 was transportation incidents, accounting for 39.8% of all fatal injuries. Other leading causes of fatalities were: falls, slips, and trips (16.5%, an increase of 11.3% from 2018; violence and other injuries by persons or animals, (15.8%); and contact with objects and equipment (13.7%). Within these broad categories, the subcategories that were the most common causes of workplace fatalities in 2019 were "roadway incidents involving motorized land vehicle" (23.8%), "falls to lower level" (13.3%), "struck by object or equipment" (9.7%), "intentional injury by another person" (8.5%), and "pedestrian vehicular accident" (6.4%). The Department of Labor provides more detail within each of these subcategories (DOL, 2020a).

Nonfatal injuries and illnesses. The BLS also collects information on reported nonfatal work-related injuries or illnesses from a sample survey of employers (Survey of Occupational Injuries and Illnesses). The survey reported 2.81 million nonfatal workplace injuries and illnesses in private industry workplaces in 2019, roughly one-third of which (888,200) involved days away from work (DOL 2020b). Both –the numbers of nonfatal workplace injuries and illnesses, and cases involving days away from work, declined slightly from 2018, despite increases in employment over that time (Table 17).

The incidence rate of reported injuries per 100 full-time equivalent (FTE) workers, controls for changes in employment levels to better measure trends in the injury rate. The rate of injury was 2.8 per 100 FTE in 2017 (Table 17). This represents a break in the decline in the incidence of all reported nonfatal occupational injuries and illnesses that had been a consistent trend over the prior two decades. Between 1999 and 2019, the incidence rate decreased 55.6 percent, from 6.5 per 100 FTE workers, to 2.8 per 100 in 2019. (And since 2002, after the Occupational Safety and Health Administration (OSHA) changed recordkeeping requirements, the incidence rate per 100 FTE workers has decreased 36 percent.)[72]

The reader is cautioned that injury rates reported to the Bureau of Labor Statistics or extrapolated from workers' compensation claims data may not be wholly accurate because key stakeholders have incentives to under-report or over-report occupational injuries and illnesses.[73] There is also evidence that changes in workers' compensation laws and procedures since 1990 have made it more difficult for workers to file claims, resulting in reductions in reported injury and claim rates (Ruser and Boden 2003, Guo and Burton 2010).

There are many reasons to suspect under-reporting on the part of workers, employers, and/or medical providers. Workers may not report injuries for one or more of several reasons: they do not know that the injury is covered by workers' compensation; they believe that filing for benefits would be too time-consuming, difficult, or stressful; they believe that the injury is something to be expected as part of their job; or they fear employer retaliation (Galizzi et al., 2010; Pransky et al., 1999; Strunin and Boden, 2004). Employers may fail to report injuries because: their recordkeeping is faulty; they want to maintain a

71 Prior to 2007, BLS fatal injury rates represented the number of fatal occupational injuries per 100,000 employed workers. Since then, the incidence rate accounts for the total number of hours worked by all employees during the calendar year. Incidence rates are reported on a full-time equivalent basis (one FTE worker is defined as 2,000 hours worked per year). Rates before and after 2007 are therefore not strictly comparable, and the 25.6 percent reduction is an approximation.

72 The break in the trend lines in 2002 represents a change in OSHA recordkeeping requirements in that year, indicating that the data before and after 2002 may not be strictly comparable.

73 See Azaroff et al. (2002), Spieler and Burton (2012), and OSHA (2015) for reviews of studies on the reporting of work-related injuries and illnesses.

Table 17

Non-Fatal Occupational Injuries and Illnesses Among Private Industry Employers, 1999-2019

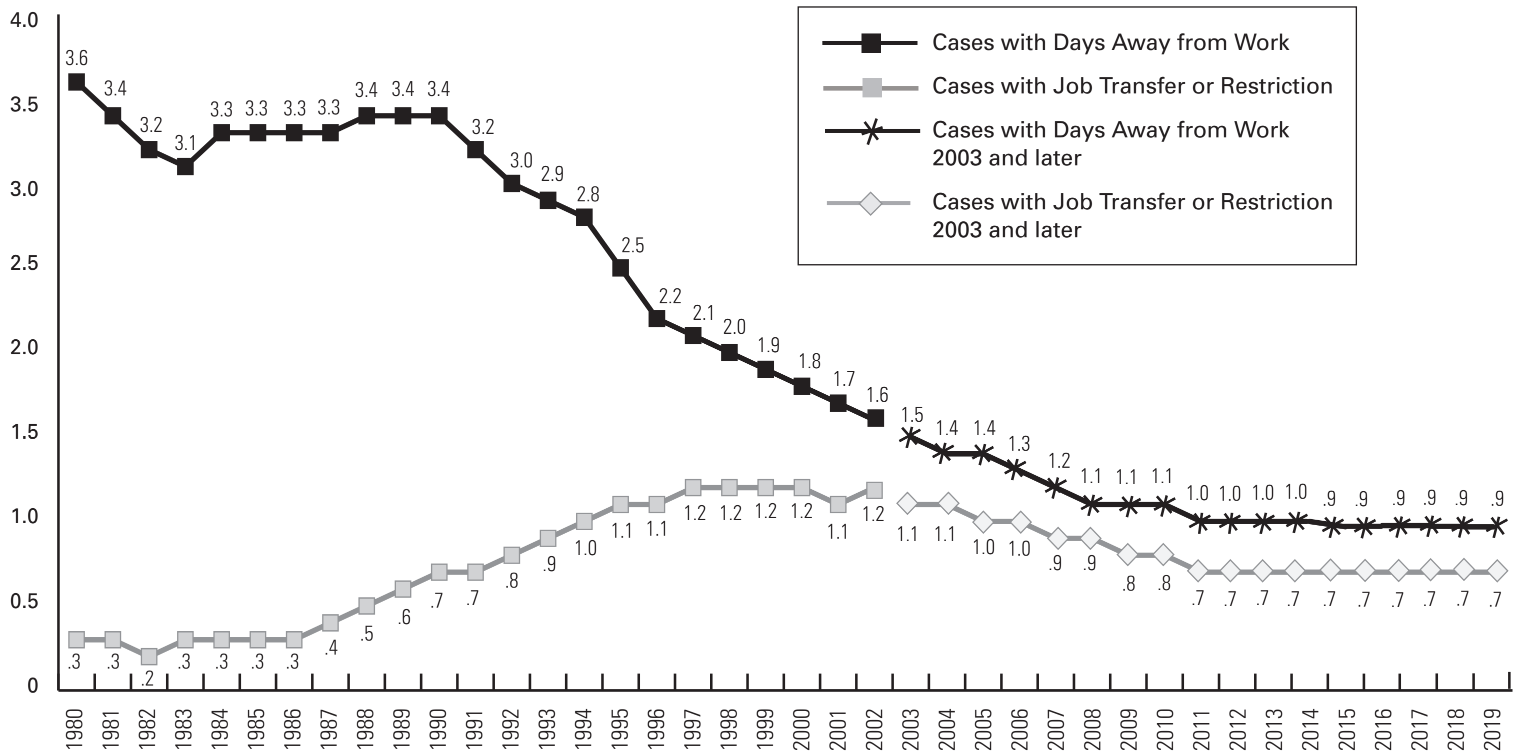
	Number of Cases (millions)			Incidence Rate (per 100 full-time workers)		
Year	All Cases	Cases with Any Days Away from Work	Cases with Job Transfer or Restriction	All Cases	Cases with Any Days Away from Work	Cases with Job Transfer or Restriction
1999	5.7	1.7	1.0	6.3	1.9	1.2
2000	5.7	1.7	1.1	6.1	1.8	1.2
2001	5.2	1.5	1.0	5.7	1.7	1.1
2002*	4.7	1.4	1.1	5.3	1.6	1.2
2003	4.4	1.3	1.0	5.0	1.5	1.1
2004	4.3	1.3	1.0	4.8	1.4	1.1
2005	4.2	1.2	1.0	4.6	1.4	1.0
2006	4.1	1.2	0.9	4.4	1.3	1.0
2007	4.0	1.2	0.9	4.2	1.2	0.9
2008	3.7	1.1	0.8	3.9	1.1	0.9
2009	3.3	1.0	0.7	3.6	1.1	0.8
2010	3.1	0.9	0.7	3.5	1.1	0.8
2011	3.0	0.9	0.6	3.4	1.0	0.7
2012	3.0	0.9	0.7	3.4	1.0	0.7
2013	3.0	0.9	0.7	3.3	1.0	0.7
2014	3.0	0.9	0.7	3.2	1.0	0.7
2015	2.9	0.9	0.7	3.0	0.9	0.7
2016	2.9	0.9	0.7	2.9	0.9	0.7
2017	2.8	0.9	0.7	2.8	0.9	0.7
2018	2.8	0.9	0.7	2.8	0.9	0.7
2019	2.8	0.9	0.7	2.8	0.9	0.7

Note: Data for 2002 and beyond are not strictly comparable to data from prior years because of changes in OSHA recordkeeping requirements.

Source: U.S. Department of Labor (2020b).

Figure 6

Private Industry Occupational Injuries and Illnesses: Incidence Rates, 1980-2019



Notes: The break in the graph indicates that the data for 2002 and beyond are not strictly comparable to prior year data due to changes in Occupational Safety & Health Administration recordkeeping requirements. Cases involving days away from work are cases requiring at least one day away from work with or without days of job transfer or restriction. Job transfer or restriction cases occur when, as a result of a work-related injury or illness, an employer or health care professional keeps, or recommends keeping an employee from doing the routine functions of his or her job or from working the full workday that the employee would have been scheduled to work before the injury or illness occurred.

Source: U.S. Department of Labor (2020b).

superior safety record to protect their experience rate; or they are unaware that an injury is covered by workers' compensation (Azaroff et al., 2002; Lashuay and Harrison, 2006; and Wuellner and Phipps, 2018). Medical providers may fail to report injuries and illnesses that take time to develop, such as carpal tunnel syndrome, noise-induced hearing loss, and lung diseases like silicosis, because they are unaware of the workplace connection.[74]

There are also incentives for workers and/or medical providers to over-report injuries or illnesses as work-related. The 100 percent coverage of medical costs under workers' compensation creates incentives for both groups to identify a work-related cause when the etiology of an injury or illness is uncertain. Workers have incentives to report an injury as work-related because there are no deductibles or co-payments for health care. They may also receive more generous cash benefits from workers' compen-

74 Studies have typically shown much less reporting of these types of conditions as work-related as is suggested by their prevalence in medical data (Stanbury et al., 1995; Biddle et al., 1998; Morse et al., 1998; Milton et al., 1998; DOL, 2008). According to a GAO report, some health care providers say that they have been pressured to provide less treatment than they believe is warranted in order to avoid the need to report an injury or illness as work-related (GAO, 2009).

sation than from a private disability plan or state unemployment insurance.

With respect to providers, there is evidence that soft-tissue conditions are more likely to be classified as work-related in states with higher workers' compensation physician reimbursement rates (Fomenko and Gruber, 2016). The trend towards capitated payment systems in health care also influences medical provider incentives. One study found that an increase in capitation payments under group health plans led to an increase in the number of soft-tissue conditions that were labeled work-related and paid by workers' compensation (Victor et al., 2015).

Injuries involving lost work time or work restrictions. Figure 5 and Table 17 show trends in the incidence of reported work-related injuries and illnesses among private-industry employees for cases involving either days away from work or injury-related job accommodations (job transfer or restrictions on work) (DOL, 2020b). These data also come from the BLS employer survey (DOL, 2020d).

Consistent with the declining incidence of fatal workplace injuries, the incidence of reported injuries or illnesses involving days away from work has also declined, down from 1.9 per 100 FTE workers in 1999 to 0.9 per 100 in 2019. This is the fifth year in which the rate has been below 1.0 per 100 workers across the 20-year study period (Table 17 and Figure 5). While the incidence rate of injuries or illnesses involving days away from work has declined steadily since 1999, the incidence of cases resulting in job transfers or work restrictions only began to fall more recently, around 2004-2005. In 2005, that rate was 1.0 per 100 but has since fallen to 0.7, where it has been since 2011—a decline of roughly one third.

Some of the changes in the 1990s, when the incidence of reported injuries involving work absence was decreasing while the incidence of transfers/work restrictions was increasing, may reflect a greater focus on employer accommodations that enable injured workers to return to modified work until they are fully recovered and able to return to their pre-injury jobs. The declining incidence rate of cases with job transfer or restriction in recent years is not necessarily indicative of less focus on employer accommodations, because the overall incidence rate of cases with any days away from work is also declining. In fact, over time, the proportion of cases with job transfers or restrictions is rising as a share of total cases with either days away from work or with a job transfer or restriction. This suggests that workers today are more likely than they were in the past to benefit from employer accommodations.

In 2019, the most common reported nonfatal workplace injuries and illnesses that resulted in days away from work in private industry were: sprains, strains, and tears (just over one third of all cases); bruises and contusions and fractures (18.7%); and soreness or pain, including back pain (17.7%) (DOL, 2020b). The major industry sectors with the highest *incidence* of injuries and illnesses involving days away from work in private industry were: transportation and warehousing (2.0 per 100 FTE); agriculture, forestry, fishing, and hunting (1.7); arts, entertainment, and recreation (1.1) and construction (1.1). In terms of total *number* of cases with days away from work, the health care and social assistance industry had 151,400, far ahead of retail trade (120,200) and manufacturing (116,100), which had the second and third highest totals (DOL, 2020b).

Incidence of Workers' Compensation Claims

The National Council on Compensation Insurance collects information on the number of workers' compensation claims paid by private carriers in 38 states (NCCI, 2021a).[75] The data, replicated in Table 18 for years 1997-2017 (the most recent year reported), show declining trends in the incidence (or frequency) of claims similar to the declining trends in the incidence of work-related injuries reported by the BLS.

According to the NCCI data, the number of workers' compensation claims accepted by privately insured employers declined by 57.3 percent between 1997 and 2017 (compared to the BLS estimate of a 54.4 percent decrease in injuries and illnesses for private industry employers over the same time period). The NCCI data indicate that the number of temporary total disability claims from private industry declined by 58.2 percent between 1997 and 2017

75 NCCI measures the frequency of lost time claims for injuries occurring in the accident year per $1 million of earned premium in that year, adjusted by state for changes in average weekly wages.

Table 18

Workers' Compensation Claims Per 100,000 Insured Workers: Private Carriers in 38 Jurisdictions, 1997-2017

Policy Period	Total	Medical Only (MO)	MO as Percent of Total	Temporary Total (TTD)	TTD as Percent of Total	Permanent Partial (PPD)	PPD as Percent of Total
1997	6,725	5,230	77.8%	1,070	15.9%	414	6.2%
1998	6,474	5,035	77.8%	977	15.1%	452	7.0%
1999	6,446	5,047	78.3%	927	14.4%	461	7.2%
2000	6,003	4,685	78.0%	870	14.5%	437	7.3%
2001	5,510	4,277	77.6%	799	14.5%	423	7.7%
2002	5,239	4,036	77.0%	770	14.7%	422	8.1%
2003	4,901	3,747	76.5%	725	14.8%	423	8.6%
2004	4,728	3,635	76.9%	702	14.8%	385	8.1%
2005	4,571	3,514	76.9%	667	14.6%	383	8.4%
2006	4,376	3,351	76.6%	638	14.6%	381	8.7%
2007	4,076	3,107	76.2%	587	14.4%	375	9.2%
2008	3,615	2,730	75.5%	515	14.2%	363	10.0%
2009	3,452	2,659	77.0%	521	15.1%	357	10.3%
2010	3,492	2,621	75.1%	509	14.6%	358	10.3%
2011	3,412	2,566	75.2%	504	14.8%	338	9.9%
2012	3,277	2,464	75.2%	486	14.8%	321	9.8%
2013	3,208	2,405	75.0%	484	15.1%	315	9.8%
2014	3,082	2,313	75.0%	468	15.2%	297	9.6%
2015	2,951	2,221	75.3%	452	15.3%	274	9.3%
2016	2,872	2,165	75.4%	457	15.9%	246	8.6%
2017	2,869	2,162	75.4%	447	15.6%	255	8.9%
Percent change, 1997-2017	-57.3	-58.7		-58.2		-38.4	

Source: National Council of Compensation Insurance, 1997-2021, Exhibit XII, *Annual Statistical Bulletin*. The most recent data available is 2017.

(compared to the BLS estimate of a 50.0 percent decline in injuries and illnesses involving days away from work for private industry employers between 2009 and 2019) (Tables 17 & 18).[76]

76 While the trends in private-sector injury or illness claims from the BLS and NCCI are similar over time. There are a number of reasons why they may differ. First, there are discrepancies in the classification of claims. In workers' compensation, there is generally a three-to-seven-day waiting period before a claim is recorded (and would be reported in NCCI data), whereas any case in which a

Addendum

Alternative, Additional and Other Disability Benefits for Disabled Workers

The primary purpose of this report is to describe trends in workers' compensation benefits, costs, and coverage with respect to two key stakeholder groups: the injured workers who receive benefits (and in three states pay part of the costs of the program), and the employers who pay for most of the costs. As the exclusive remedy for work-related injury and death, workers' compensation is often the only insurance to compensate for lost wages or earning capacity and medical or rehabilitation expenses.

However, workers' compensation cash and medical benefits can be supplemented by other sources of income and medical care. Disability plans for injured workers may provide financial compensation, coverage for medical expenses, and other benefits to workers as well as to their dependents, and survivors.

The following section presents some of the alternative and additional benefits that may be available to injured workers and their families. Unless otherwise noted, the employer costs and worker benefits of these programs are not reflected in the main body of this report. The extent to which any of these benefits replace workers' compensation or provide additional coverage that may be stacked on, integrated into, or coordinated with workers' compensation varies greatly, as does the extent to which choosing one program over another shifts costs to or from one or more parties. Full descriptions and analysis of these programs are beyond the scope of this report.

This addendum describes the major disability support programs that interact with workers' compensation, namely: temporary sick leave, short- and long-term disability benefits, Social Security Disability Insurance, and Medicare & Medicaid.

Alternative Disability Plans

Paid sick leave. Paid sick leave is a common form of wage replacement for short-term absences from work due to illnesses or injuries unrelated to work. 73 percent of all private-sector employees had access to some type of paid sick leave in 2019, provided either through their employer or a private short-term disability plan (DOL, 2020d). Sick leave typically pays 100 percent of wages for a number of days, depending on the worker's job tenure and hours worked. Unlike workers' compensation, paid sick leave provided by the employer or an employer-funded disability insurance plan is a taxable benefit and does not cover medical or rehabilitation expenses.

Paid sick leave may sometimes be utilized to cover work absences and resulting lost earnings associated with minor work-related injuries or during the waiting period (three to seven days) of their workers' compensation disability claims. Compared to filing a claim for workers' compensation temporary disability benefits, sick leave is administratively much easier for workers to access and employers to administer. For employers, the workers' compensation option has reporting requirements and may carry negative impacts on premium rates for workers' compensation. For workers, the decision to report and pursue a workers' compensation claim involves a lower wage replacement rate and a minimum three-day wage penalty (unless there is a provision to use paid sick leave).[77] Although these factors may provide incentives for employers and injured workers to rely on paid sick leave rather than workers' compensation for wage replacements, evidence of cost-shifting is limited. One limitation of paid sick leave is that it applies to lost earnings.

Short-term disability benefits. Eight jurisdictions (California, Hawaii, Massachusetts, New Jersey, New York, Puerto Rico, Rhode Island, Washington, and Washington, D.C) have Temporary Disability Insurance (TDI) programs, also known as State Disability Insurance (SDI) or paid medical and

worker misses at least one day away from work is classified as a "days away from work" (DAFW) case by OSHA and reflect as such in BLS published data. Second, the BLS and NCCI cover different jurisdictions – the BLS covers injuries and illnesses across the entire U.S., whereas NCCI only records workers' compensation claims for private insurers and competitive state funds in 38 jurisdictions. And even in these jurisdictions, NCCI does not record any workers' compensation claims that occurred at self-insured firms. Third, there is evidence that some employers do not comply with OSH recordkeeping or Survey of Occupational Injuries and Illness reporting instructions, leading to underreporting of workers' compensation-eligible claims in BLS data (Rappin et al., 2016).

77 Workers' compensation typically replaces two-thirds of a worker's pre-injury wages before tax up to a maximum, but these benefits are not taxed. A useful wage-replacement comparison is workers' compensation benefits and post-tax wages.

family leave, that provide short- to medium-term disability benefits for employees (Ernst & Young). Another three (Colorado, Connecticut, and Oregon,) have passed legislation establishing programs but have not initiated the actual funding or payment of benefits (Williams, 2021; Dickinson & Rinehart, 2021; Oregon Employment Dept, 2021.). In these jurisdictions, SDI is a statutory program that provides partial wage replacement for workers taking time off to recover from a non-work-related injury or illness, or from pregnancy (Glynn et al, 2017).

Some private employers offer short-term disability insurance to their workers even in states in which such insurance is not required. Short term disability is available to approximately 42 percent of private industry workers (DOL, 2020d). Employers pay the full cost of the short-term disability insurance in most cases, but about 15 percent of workers with short-term disability plans are required to contribute to the plan. Typically, workers must have a specified amount of past employment or earnings to qualify for benefits, and benefits replace about half of the worker's prior earnings. In general, workers receiving workers' compensation benefits are not eligible to simultaneously receive these types of short-term disability benefits.

There are also state and municipal short-term disability benefit programs for public employees (particularly for police and firefighters) that coordinate with workers' compensation programs.

Short-term disability plans typically pay a lower proportion of average earnings (40 to 60 percent vs. two-thirds of gross wages or 80 percent of spendable earnings that are typical in workers' compensation), but STD benefits are not limited by a statutory maximum weekly benefit but rather by the provisions of the STD policy. The proportion of benefits supported by employer contributions are taxable (i.e., benefits from temporary disability plans fully paid for by the employer are fully taxable). Benefits from STD plans fully paid for by the employee with pre-tax dollars are also fully taxable, while benefits from group STD plans paid for by the employee with post-tax dollars and individually purchased STD plans are not taxable. The degree to which STD plans may be coordinated with workers' compensation is typically defined by the individual policy.

Long-term disability insurance. Long-term disability (LTD) insurance plans were offered to 34 percent of private-sector employees in 2019 (DOL, 2020d). Such coverage is most common among relatively high paying management, professional, and related occupations. About 59 percent of workers in management and professional-related occupations had access to long-term disability plans as of 2019, compared to 32 percent of workers in sales and office occupations and 12 percent of workers in service occupations (DOL, 2020d). LTD insurance may be a fully employer paid insurance, group insurance fully paid by workers, or a shared cost. Long-term disability insurance is also sold in individual policies, typically to high-earning professionals. Individual policies are not included in the coverage statistics reported to the DOL.

Long-term disability benefits are usually paid after a waiting period of three to six months or after short-term disability benefits end. Long-term disability insurance is generally designed to replace 60 percent of earnings, although replacement rates of 50 or 66 percent are also common. Almost all long-term disability insurance is coordinated with Social Security Disability Insurance (SSDI) and workers' compensation. That is, private long-term disability benefits are reduced dollar-for-dollar by the amount of Social Security or workers' compensation benefits received. If Social Security benefits replace 40 percent of a worker's prior earnings, for example, a long-term disability benefit that replaces 60 percent of earnings would pay the balance (20%) to achieve a 60 percent wage replacement. The taxation status of LTD plans mirrors those of the STD plans described above. The Social Security benefit formula is progressive, meaning it replaces a larger share of lower income workers. Given the Social Security offset provision, this will make LTD less attractive to lower-wage workers (CBO, 2019).

Retirement benefits. Retirement benefits may also be available to workers who become disabled because of a work-related injury or illness. Retirement plans are funded by employee and employer contributions. They provide income based on either a formula (Defined Benefit) or investment performance (Defined Contribution). Most defined-benefit pension plans have some disability provision; in these cases, benefits may be available at the time of disability or may continue to accrue until retirement age. Defined-contribution pension plans will often

Table 19

Dual Eligible Individuals: Social Security Disability Insurance (SSDI) Beneficiaries with Workers' Compensation (WC) or Public Disability Benefits (PDB), 2019

	Total		Workers		Dependents	
Type of Case	Number	Percent	Number	Percent	Number	Percent
All Disability Insurance Beneficiaries	9,925,468	100.0	8,378,374	100.0	1,547,094	100.0
Total Dual Eligibles	1,050,141	10.6	880,479	10.5	169,662	11.0
Currently Receiving SSDI and WC or PDB	512,070	5.2	431,702	5.2	80,368	5.2
SSDI Reduced by Cap	78,987	0.8	61,494	0.7	17,493	1.1
SSDI Not Reduced by Cap	337,092	3.4	288,488	3.4	48,604	3.1
Reverse Jurisdiction	38,925	0.4	32,812	0.4	6,113	0.4
Pending Decision on WC or PDB	57,066	0.6	48,908	0.6	8,158	0.5
SSDI Previously Offset by WC or PDB	538,071	5.4	448,777	5.4	89,294	5.8

Notes: Social Security disability benefits are offset against workers' compensation and certain other public disability benefits (PDB) in most states. In general, PDBs refer to disability benefits earned in state, local, or federal government employment that are not covered by Social Security. There are 15 states with reverse offset laws where SSDI is the first payer for some or all types of workers' compensation benefits. The states are Alaska, California, Colorado, Florida, Louisiana, Minnesota, Montana, Nevada, New Jersey, New York, North Dakota, Ohio, Oregon, Washington, and Wisconsin. California's reverse offset laws only apply to workers' compensation benefits paid through the Subsequent Injuries' Fund and Industrial Disability Leave. SSDI previously offset by WC or PDB consists of the entire universe of beneficiaries who are currently receiving SSDI benefits that at one point had their SSDI benefits offset by WC or PDB, but no longer do.

Source: Social Security Administration, Master Beneficiary Record, 100 percent data, and Social Security Administration Workers' Compensation and Public Disability Benefit file, 100 percent data (SSA, 2021).

make funds in an employee's account available without penalty if the worker becomes disabled, but these plans do not have the insurance features of defined-benefit pensions or disability insurance.

Federal disability programs. Social Security Disability Insurance (SSDI) and Medicare & Medicaid provide cash and medical benefits, respectively, to workers who become disabled and unable to work prior to normal retirement age. These programs are funded by employee and employer contributions based on a percentage of earned income. SSDI benefits are available to workers with disabilities whether or not the disability results from a work-related injury, but the eligibility rules for SSDI differ from the rules for workers' compensation. For a small proportion of workers who are ineligible or excluded from workers' compensation coverage – those who are self-employed or who are classified as independent contractors or "gig" workers, and workers in Texas and Wyoming whose employers choose not to cover them -- SSDI effectively serves this role. However, this is true only for workers deemed by SSA to be totally and permanently disabled. SSDI benefits are taxable federally if the recipient's income exceeds a threshold amount ($25,000 if single. $32,000 if married joint filing). Most states do not tax SSDI, but 13 states (Colorado, Connecticut, Kansas, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, Rhode Island, Utah, Vermont, and West Virginia) tax SSDI benefits to varying degrees (Depersio, 2021).

Workers are eligible for workers' compensation benefits from their first day of employment, while eligibility for SSDI requires workers to have a history of contributions to the Social Security system.[78]

Workers' compensation cash benefits for temporary disability commence immediately following the injury and applicable three-to-seven-day waiting period (waiting periods are typically compensated for claims with durations that exceed a "retroactive period" of five to forty-one days), while SSDI benefits begin only after a five-month waiting period. Workers' compensation provides benefits for both short- and long-term disabilities and for partial as well as total disabilities. SSDI benefits are paid only to workers who have long-term impairments that preclude gainful employment that is suitable for the worker by virtue of his or her training and expertise.

Medicare pays health care costs for persons who receive SSDI benefits after an additional 24-month waiting period (or 29 months after the onset of disability). (Medicaid may pay workers if their income and assets meet requirements.) Medicare covers all medical conditions, but as described below, when the primary disability is work-related, workers' compensation is the required benefit provider.

Workers' compensation and SSDI dual beneficiaries. According to the Medicare Secondary Payer Act, workers' compensation is the primary payer for illnesses and injuries covered under workers' compensation laws. Medicare is the secondary payer for medical costs after the workers' compensation payer's obligation is met.[79]

If a worker becomes eligible for both SSDI and workers' compensation cash benefits, one or both programs will reduce benefits to ensure that the payments to beneficiaries do not exceed allowable limits based on the worker's past earnings.[80] The Social Security Amendments of 1965 require that SSDI benefits be reduced (or "offset") such that the combined total of workers' compensation and SSDI benefits does not exceed 80 percent of the worker's prior earnings. The offset provision affects 35 states; 15 states that had established reverse-offset laws prior to the 1965 legislation received exemptions.[81] In reverse-offset states, workers' compensation benefits are reduced (offset) by SSDI benefits (as opposed to the other way around).

As of December 2019, about 8.4 million workers with disabilities and 1.5 million dependents received SSDI benefits (SSA, 2021). (Table 19) About 512,000 (5.2%) of these individuals were dual beneficiaries of workers' compensation or other public disability benefit (PDB) programs in 2019.[82] Of these, about 79,000 persons (0.8% of total beneficiaries; 15.8% of beneficiaries currently receiving SSDI and WC or PDB) had their scheduled SSDI benefits reduced because of the offset provision.

Between 2009 and 2019, the total number of disabled workers receiving SSDI benefits increased

78 To qualify for SSDI, individuals must meet two different earnings tests: 1) a recent work test, based on age at the time of disability; and 2) a duration of work test. Generally, workers must have earned at least 20 work credits in the 10 years immediately before becoming disabled, although younger workers may qualify with fewer credits.

79 The interaction between workers' compensation and SSDI is complex. Studies have investigated the impact of changes to workers' compensation programs on SSDI outcomes using aggregate data and found mixed results (e.g. Guo and Burton, 2012; McInerney and Simon, 2012). While the potential impact and magnitude of changes in workers' compensation on SSDI is unclear, studies using individual-level data have found evidence that work-related injuries are a significant source of disability later in life (e.g., Reville and Schoeni, 2004; O'Leary et al., 2012). Burton and Guo (2016) examine the relationship between SSDI and workers' compensation programs in detail and provide a number of policy options aimed to improve the interaction between the two.

80 The cap remains at 80 percent of the worker's average earnings before disability except that, in the relatively few cases when Social Security disability benefits for the worker and dependents exceed 80 percent of prior earnings, the benefits are not reduced below the Social Security amount. This cap also applies to coordination between SSDI and other public disability benefits derived from jobs not covered by Social Security, such as state or local government jobs where the governmental employer has chosen not to cover its employees under Social Security. The portion of workers' compensation benefits that offset (reduce) SSDI benefits are subject to federal income tax (IRC section 86(d)(3)).

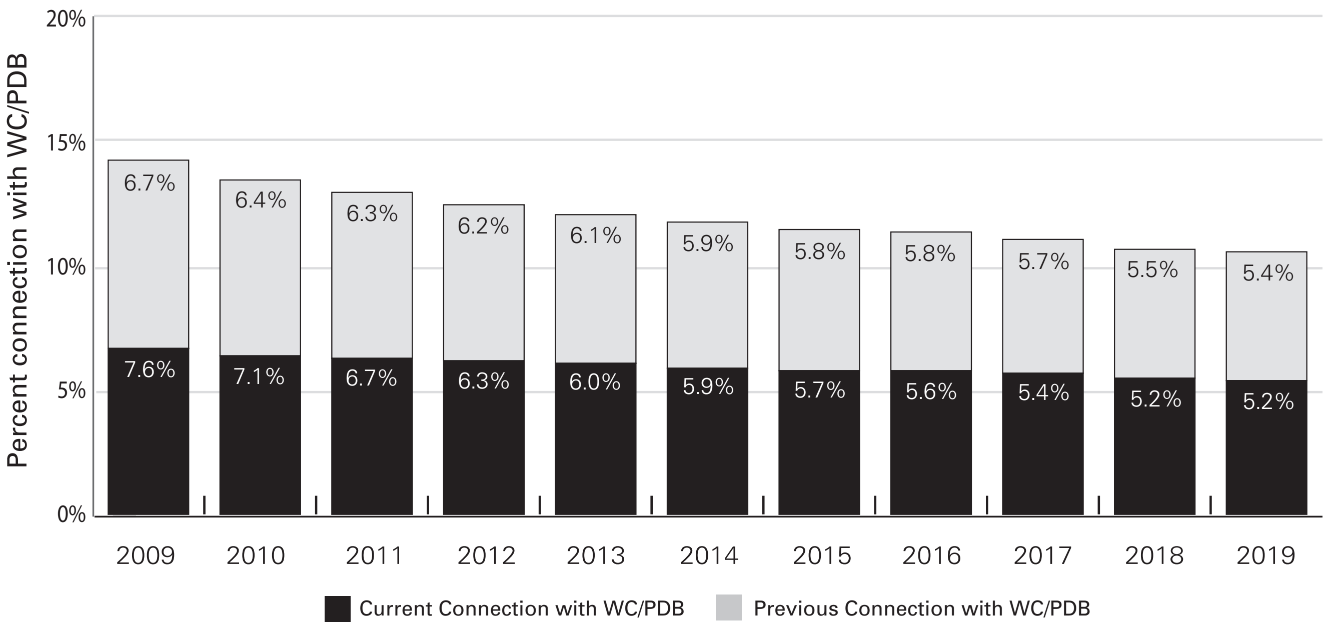
81 States with reverse offset laws for some or all types of workers' compensation benefits are: Alaska, California, Colorado, Florida, Louisiana, Minnesota, Montana, Nevada, New Jersey, New York, North Dakota, Ohio, Oregon, Washington, and Wisconsin. California's reverse offset laws apply only to workers' compensation benefits paid through the Subsequent Injuries Fund and Industrial Disability Leave. In addition, there are reverse offset rules for other types of public disability benefits in Hawaii, Illinois, New Jersey, and New York (SSA, 2017). Legislation in 1981 eliminated states' option to adopt reverse offset laws.

82 In general, PDBs refer to disability benefits earned in state, local, or federal government employment that are not covered by Social Security.

by 7.6 percent. Since the number of SSDI beneficiaries peaked in 2014, however, there was a 6.4 percent decline in beneficiaries through 2019. Over the entire time period, the proportion of workers with disabilities receiving SSDI benefits with a current connection to WC or other PDB programs fell by 2.7 percentage points to 5.2 percent of all SSDI recipients in 2019. The decline in the proportion of SSDI recipients with a current connection to WC or PDB is due to the combination of the increased number of SSDI recipients and a decline in the number of workers with a current connection to WC or PDB—down 28.9 percent over the ten-year period. The proportion of SSDI recipients with a previous connection to WC or PDB also declined between 2009 and 2019 due to a 14.0 percent decrease in the total number of beneficiaries with a previous connection to WC or PDB corresponding with the 2.4 percent increase in the total number of SSDI beneficiaries.

Figure 7

Proportion of Worker SSDI Beneficiaries with Connection to Workers' Compensation or Public Disabilty Benefits, 2009-2019



Aspects of Various Disability Policies that Support Injured Workers

Program	Paid by	Pre or post tax dollars	Earnings replacement	Medical Expenses	Commencement/ Duration	Taxation of benefits	Included in NASI Costs and Benefits
Workers' Compensation	*Employer*	*n/a*	*60% of gross to 85% of Net of pre-injury average earnings*	*Covered*	*Immediately following injury or after unwaived waiting period of 3 to 41 days. Typically continues as long as disability lasts.*	*Not taxable*	*Yes*
Paid Sick Leave	Employer	n/a	100% regular wage or salary	Not covered	Immediately following injury. Typically limited to two weeks or extent of accumulated credits if allowed but practices vary widely	Taxable	No
Short Term Disability (STD)	Employer only	n/a	40-60% regular wage or salary	Not covered	Varies from immediately following absence or immediately following end of paid sick leave or a defined post initial absence period	Taxable	No
Short Term Disability (STD)	Employer Employee	n/a Pre-tax	40-60% regular wage or salary	Not covered	Varies from immediately following absence or immediately following end of paid sick leave or a defined post initial absence period	Taxable	No
Short Term Disability (STD)	Employer Employee	n/a Post-tax	40-60% regular wage or salary	Not covered	Varies from immediately following absence or immediately following end of paid sick leave or a defined post initial absence period	Employer-paid portion and employee-paid portion paid with pre-tax dollars are taxable	No
Long-term disability (LTD)	Similar to STD	Similar to STD	50% - 70% of regular wages	Not covered	Typically commences end of STD and, or depletion of Paid Sick Leave	Employer-paid portion and employee-paid portion paid with pre-tax dollars are taxable	No
State Disability Insurance	Employee Payroll tax	Post-tax dollars	60% - 70% of average earnings in previous 5 to 18 months	Not covered	Date of Injury to a maximum of 52 weeks	Not taxable unless a substitute for Unemployment Insurance	No
"Carve-outs" and parallel programs compensation	Employer only	n/a	Typically, equivalent to workers'	Covered	Equivalent to workers' compensation	Not taxable	No
Social Security Disability Insurance For workers not covered by Workers' Compensation	Employer and worker or Worker only if self-employed	Pre-tax	Subject to formula based on age, average earnings, years working, dependents; approx. 25-90% of average earnings	Not covered	Five months post on-set of disability that is going to last more than 12 months; payable to retirement age subject to reviews depending on expectation of improvement.	Part of taxable income so total taxable income may be taxed if above exempt thresholds.	No

Source: Terry Bogyo produced this table for the 2020 report. Citations for data points can be found throughout the addendum.

Glossary

Accident Year: The year in which an injury occurred, or the year of onset or manifestation of an illness.

Accident Year Incurred Benefits: Benefits associated with all injuries and illnesses occurring in the accident year, regardless of the years in which the benefits are paid. (Also known as calendar accident year incurred benefits.)

Black Lung Benefits: See: Coal Mine Health and Safety Act.

BLS: The Bureau of Labor Statistics (BLS) in the U.S. Department of Labor is a statistical agency that collects, processes, analyzes, and disseminates statistical data about the labor market. For more information, visit **www.bls.gov**.

Calendar Year Paid Benefits: Benefits paid during a calendar year regardless of when the injury or illness occurred.

Coal Mine Health and Safety Act: The Coal Mine Health and Safety Act (Public Law 91-173) was enacted in 1969 and provides black lung benefits to coal miners disabled as a result of exposure to coal dust and to their survivors.

Combined Ratio After Dividends: The combined ratio after policy holder dividends is a measure of the profitability of an insurer. The ratio equals the sum of losses, loss adjustment expenses, underwriting expenses, and dividends to policyholders, divided by net premiums. The ratio is expressed as a percent. (See: Overall Operating Ratio.)

Compromise and Release (C&R) Agreement: An agreement to settle a workers' compensation case. State laws vary as to the nature of these releases, but there are typically three elements to a C&R agreement: a compromise between the worker's claim and the employer's offer concerning the amount of cash and/or medical benefits to be paid; the payment of the compromised amount in a fixed amount (commonly called a "lump sum" but which may or may not be paid to the claimant at once); and the release of the employer from further liability. Unless it was "full and final", the release may allow for reopening medical or indemnity payments under specific conditions.

Covered Employment: The Academy's coverage data include jobs in firms that are required to be covered by workers' compensation programs. A more inclusive measure of covered employment would also include jobs in firms that voluntarily elect coverage. A less inclusive measure of covered employment would exclude workers who are legally required to be covered by workers' compensation programs who actually are not covered.

Deductibles: Under deductible policies written by private carriers or state funds, the insurer is responsible for paying all the workers' compensation benefits, but employers are responsible for reimbursing the insurer for those benefits up to a specified deductible amount. Deductibles may be written into an insurance policy on a per injury basis, or an aggregate basis, or a combination of a per injury basis with an aggregate cap.

Defense Base Act: The Defense Base Act (DBA-42 U.S.C. §§ 1651-54) is a federal law extending the Longshore and Harbor Workers' Compensation Act (33 U.S.C. §§ 901-50), passed in 1941 and amended later, to persons: (1) employed by private employers at U.S. defense bases overseas; (2) employed under a public work contract with the United States performed outside the U.S.; (3) employed under a contract with the United States, for work performed outside the U.S. under the Foreign Assistance Act; or (4) employed by an American contractor providing welfare or similar services outside the United States for the benefit of the Armed Services.

DI: Disability insurance from the Social Security program. See: SSDI.

Disability: A loss of functional capacity associated with a health condition.

Experience Rating: An insurance policy is experience rated if insurance premiums reflect the relative risk of loss of the insured. There are two levels of experience rating in workers' compensation. Manual rates (or pure premiums) are developed for each insurance classification (category of work) in a state based on previous benefit payments by all firms operating in that classification. Firm-level experience rating compares an employer's loss experience to the average losses of other firms in the same insurance classification. An experience modification is developed and applied to the premium of firms which are large enough for the insured's experience to be a reliable indicator of benefit costs in the future.

FECA: The Federal Employees' Compensation Act (FECA) Public Law (103-3 or 5 U.S.C. §§ 8101-52), enacted in 1916, provides workers' compensation coverage to U.S. federal civilian and postal workers around the world for work-related injuries and occupational diseases.

FELA: The Federal Employers' Liability Act (FELA 45 U.S.C. § 51 et seq.), enacted in 1908, gives railroad workers engaged in interstate commerce an action in negligence against their employer in the event of work-related injuries or occupational diseases.

Guaranty Fund: A guaranty fund is a special state-based fund that assumes all or part of the liability for workers' compensation benefits provided to a worker when the employer or insurance carrier legally responsible for those benefits is unable to make payments. Guaranty funds for private insurance carriers (all states with private carriers have these) and for self-insuring employers (less than half the states have these) are always separate funds. Both types are financed by assessments on insurers or self-insured employers, respectively.

Group Self-Insurance: A special form of self-insurance that is available to groups of employers, which is only available in a little over half of the states. This is similar to a mutual insurance company and, as such, is closely regulated.

IAIABC: The International Association of Industrial Accident Boards and Commissions (IAIABC) is the organization representing workers' compensation agencies in the United States, Canada, and other nations and territories. For more information, visit **www.iaiabc.org**.

Impairment: An impairment is an anatomical or functional abnormality or loss resulting from an injury or disease. The impairment can be physical or mental.

Incurred Losses (or Incurred Benefits): Benefits paid to the valuation date plus liabilities for future benefits for injuries that occurred in a specified period, such as an accident year.

Jones Act: The Jones Act is Section 27 of the Merchant Marine Act (P.L. 66-261), passed in 1920, which extends the provision of the Federal Employers' Liability Act to qualifying sailors (individuals assigned to a vessel or fleet that operates in navigable waters, meaning waterways capable of being used for interstate or foreign commerce).

LHWCA: The Longshore and Harbor Workers' Compensation Act (LHWCA 33 U.S.C. §§ 901-50), enacted in 1927, requires employers to provide workers' compensation protection for longshore, harbor, and other maritime workers. See: Defense Base Act (DBA).

Loss Adjustment Expenses: Salaries and fees paid to insurance adjusters, as well as other expenses incurred from adjusting claims.

Losses: A flexible term that can be applied in several ways: Paid benefits, incurred benefits, fully developed benefits, and possibly including incurred but not reported benefits.

Manual Equivalent Premium (MEP): A firm's payroll multiplied by the approved rate for the firm's insurance classification code. The manual equivalent premium represents an employer's costs for workers' compensation without adjustment for schedule rating, deductible credits, or experience rating.

NAIC: The National Association of Insurance Commissioners (NAIC) is the national organization of chief insurance regulators in each state, the District of Columbia, and five U.S. territories. It assists state insurance regulators, individually and collectively, to achieve insurance regulatory goals. For more information, visit **www.naic.org**.

NCCI: The National Council on Compensation Insurance, Inc. (NCCI) is a national organization that assists private carriers and insurance commissioners in collecting statistical information for pricing workers' compensation coverage in 38 states. For more information, visit **www.ncci.com**.

No-fault: A liability rule that, in workers' compensation, holds the employer fully liable for medical costs and compensation for injury-related work absences, without proof of negligence or culpability.

Overall Operating Ratio: The combined ratio after dividends minus net investment gain/loss and other income, as a percent of net premium.

OSHA: The OSH Act created the Occupational Safety and Health Administration (OSHA) within the U.S. Department of Labor. OSHA is responsible for promulgating standards, inspecting workplaces for compliance, and prosecuting violations.

OSH Act: The Occupational Safety and Health Act (OSH Act Public Law 91-596) is a federal law enacted in 1970 that establishes and enforces workplace safety and health rules for nearly all private-sector employers.

Paid Losses (or Paid Benefits): Benefits paid during a specified period, such as a calendar year, regardless of when the injury or disease occurred.

Permanent Partial Disability (PPD): A disability that, although permanent, does not completely limit a person's ability to work. A statutory benefit award is paid for qualifying injuries.

Permanent Total Disability (PTD): A permanent disability that is deemed by law to preclude material levels of employment.

Residual Market: The mechanism used to provide insurance for employers who are unable to purchase insurance in the voluntary private market. In some jurisdictions, the state fund is the "insurer of last resort" and serves the function of the residual market. In others, there is a separate pool financed by assessments of private insurers, which is also known as an assigned risk pool.

Schedule Rating: A debit and credit plan that recognizes variations in the hazard-causing features of an individual risk.

Second Injury Fund: A second injury fund is a special fund that assumes all or part of the liability for workers' compensation benefits provided to a worker because of the combined effects of a work-related injury or disease with a preexisting medical condition. The second injury fund pays costs associated with the prior condition to encourage employers to hire injured workers who want to return to work.

Self-insurance: Self-insurance is a state-regulated arrangement in which the employer assumes responsibility for the payment of workers' compensation benefits to the firm's employees with workplace injuries or diseases. Most employers do not self-insure but instead purchase workers' compensation insurance from a private carrier or state fund.

SSA: The U.S. Social Security Administration (SSA) administers the Social Security program, which pays retirement, disability, and survivors' benefits to workers and their families, and the federal Supplemental Security Income program, which provides income support benefits to low-income, aged, and disabled individuals. For more information, visit **www.ssa.gov**.

SSDI: Social Security Disability Insurance (SSDI) pays benefits to insured workers who sustain severe, long-term work disabilities due to any cause. See: DI.

Temporary Partial Disability (TPD): A temporary disability that does not completely limit a person's ability to work.

Temporary Total Disability (TTD): A disability that temporarily precludes a person from performing the pre-injury job or another job at the employer that the worker could have performed prior to the injury.

Unemployment Insurance (UI): Federal/state program that provides cash benefits to workers who become unemployed through no fault of their own and who meet certain eligibility criteria set by the states.

U.S. Census County Business Patterns (CBP): County Business Patterns is an annual series that provides subnational economic data by industry. CBP basic data items are extracted from the Business Register (BR), a database of all known single and multi-establishment employer companies maintained and updated by the U.S. Census Bureau.

U.S. DOL: The U.S. Department of Labor administers a variety of federal labor laws including those that guarantee workers' rights to safe and healthy working conditions, a minimum hourly wage and overtime pay, freedom from employment discrimination, unemployment insurance, and other income support. For more information, visit **www.dol.gov**.

WC: Workers' compensation. A social insurance program established by statute that is mandatory for most employers, and that provides cash and medical benefits for covered work-related injuries and illnesses.

WCRI: The Workers' Compensation Research Institute (WCRI) is a research organization providing information about public policy issues involving workers' compensation systems. For more information, visit **www.wcrinet.org**

Work-Related Injury/Illness: An injury or illness caused by activities related to the workplace. The usual legal test for "work-related" is "arising out of and in the course of employment." However, the definition of a work-related injury or disease that is compensable under a state's workers' compensation program can be quite complex and varies across states.

Appendix A: Coverage Estimates

The basis for the NASI estimates of workers' compensation coverage is the number of jobs in each state which are covered by unemployment insurance (UI) (DOL, 2020c). Jobs which are not required to be covered by UI include: some farm and domestic jobs which pay less than a threshold amount; some state and local jobs (such as elected positions); jobs in some nonprofit organizations (such as religious organizations, for whom coverage is optional in some states); jobs held by self-employed persons or unpaid family workers; and railroad jobs (which are covered under a separate unemployment insurance program.) Railroad jobs are also covered under a separate workers' compensation program (see Appendix B).

All U.S. employers who are required to pay unemployment taxes must report quarterly data to their state employment security agencies regarding their jobs and wages covered by unemployment insurance. These employer reports are the basis for statistical reports prepared by the U.S. Bureau of Labor Statistics, known as the ES-202 data. These data are a census of the universe of U.S. jobs which are covered by unemployment insurance (DOL, 2020c).

Key assumptions underlying the Academy's estimates of workers' compensation coverage, shown in Table A, are:

(1) Jobs which are not reported as covered by UI are assumed not to be covered by workers' compensation.

(2) Jobs which are reported to be covered by UI are assumed to be covered by workers' compensation as well, except in the following cases:

  (a) Jobs in small firms (which are required to be covered by unemployment insurance in every state) are assumed to be not covered by workers' compensation if the state law exempts small firms from mandatory workers' compensation coverage.

  (b) Jobs in agricultural industries (which may or may not be covered by UI) are assumed to be not covered by workers' compensation if the state law exempts agricultural employers from mandatory workers' compensation coverage.

  (c) Jobs in Texas, where workers' compensation coverage is elective for almost all employers, require a different calculation. For Texas, we base our coverage estimates on periodic surveys conducted by the Texas Department of Insurance Workers' Compensation Research and Evaluation Group (TDI, 2020).

(3) All federal jobs are covered by workers' compensation, regardless of the state in which they are located.

Small Firm Exemptions

Private firms with fewer than three employees are exempt from mandatory workers' compensation coverage in five states: Arkansas, Georgia, New Mexico, North Carolina, and Virginia. Firms with fewer than four employees are exempt in two states: Florida and South Carolina. Firms with fewer than five employees are exempt from mandatory coverage in four states: Alabama, Mississippi, Missouri, and Tennessee.[83] The Academy assumes that jobs are not covered by workers' compensation if they are in a small firm that meets the specific exemption requirements in one of these states.

To estimate the number of jobs affected by the small firm exemptions, we use data from the U.S. Census Statistics of Small Businesses (SUSB). The SUSB is an annual data series that reports national and state-level employment by enterprise size and industry.[84]

83 In previous reports we have reported Michigan, Oklahoma, West Virginia, and Wisconsin as having small business exemptions of 3, 5, 3, and 3 respectively. Further research has revealed that: in Michigan, "all private employers regularly employing 1 or more employees 35 hours or more per week for 13 weeks or longer during the preceding 52 weeks" must carry workers' compensation (Michigan.gov, 2020); in Oklahoma, the exemption applies only to employers who employ five or fewer of their relatives by blood or marriage (we assume this number to be negligible) (85A Okl. St. § 2(18)(b)(5); in West Virginia, employers with fewer than 3 "intermittent" employees who work fewer than 11 days in a quarter are exempt (we assume this number to be negligible) (W. Va. Code § 23-2-1); and in Wisconsin, employers with less than 3 employees who are "paid wages of $500 or more in any calendar quarter" must have coverage (we assume the number of employers with 1 or 2 employees being paid less than $500 in any quarter to be negligible) (Wis. Stat. § 102.04.1(b)2).

84 Through 2017, the Academy's report relied on the Census County Business Patterns (CBP) to estimate small firm employment.

These data identify the number of jobs in firms with fewer than five employees.

For the four states with workers' compensation exemptions for firms with fewer than five employees, we directly apply the fraction of jobs in these small firms as reported by the SUSB to the number of UI-covered jobs to calculate the number of jobs affected by the exemption. In 2018 (the most recent year the data are available), these proportions were: Alabama, 4.1 percent; Mississippi, 4.5 percent; Missouri, 4.4 percent; and Tennessee, 3.4 percent (Census SUSB, 2021).

For the states that exempt firms with fewer than three or four workers, the SUSB proportions of jobs in small firms (fewer than five employees) must be adjusted downward to correspond to the workers' compensation cutoff in each state. We use national data on small firms from the U.S. Census Bureau (2005) to make the adjustments. The data indicate that, among those jobs reported to be in small firms by the SUSB, 71.8 percent are in firms with fewer than four employees and 43.9 percent are in firms with fewer than three employees.

For the five states that exempt firms with fewer than three workers, the proportions of jobs in small firms were reported to be: Arkansas, 4.6 percent; Georgia, 4.4 percent; New Mexico, 5.0 percent; North Carolina, 4.4 percent; and Virginia, 4.3 percent (Census SUSB, 2021). These proportions are adjusted by a factor of 43.9 percent to estimate the proportion of jobs in exempt firms. For example, the proportion of Arkansas jobs in firms with fewer than three employees was estimated to be 2.0 percent (4.63% x 43.9%).

For the two states that exempt firms with fewer than four workers, the proportions of jobs in small firms were: Florida, 5.5 percent, and South Carolina, 4.2 percent. These proportions were adjusted by a factor of 71.8 percent to estimate the proportion of jobs in exempt firms. For South Carolina, the proportion of jobs in firms with fewer than four employees is estimated to be 3.0 percent (4.19% x 71.8%).

The adjusted ratios were applied to the total number of UI-covered jobs in each state to calculate the number of exempt jobs. In total, we estimated that 903,110 jobs were excluded from workers' compensation coverage in 2019 because of small-firm exemptions from mandatory coverage.

Agricultural Exemptions

We assume that agricultural jobs are excluded from workers' compensation coverage if they are in a state where agricultural jobs are exempt from mandatory coverage. Only 15 jurisdictions have no exemption for agricultural jobs: Alaska, Arizona, California, Connecticut, District of Columbia, Florida, Hawaii, Idaho, Massachusetts, New Hampshire, New Jersey, Ohio, Oregon, Washington and Wyoming.[85,86] In states with agricultural exemptions, we identify the number of agricultural jobs using the Quarterly Census of Employment and Wages (DOL, 2020c). The Quarterly Census provides estimates of total employment by state and industry using North American Industry Classification System (NAICS) codes. We estimated that 390,196 jobs were excluded from workers' compensation in 2019 because of state agricultural exemptions.

However, the CBP only measures employment at establishments, which refers to a single physical location where business is conducted. The SUSB publishes data on the number of establishments and the number of firms, which is a more appropriate measure for our purposes because workers' compensation coverage exemptions are based on the size of the firm, not the size of a particular establishment. The differences in employment between the SUSB and the CBP are small. Previous estimates were updated in 2018 using the SUSB for consistency.

85 Washington also has an exemption for agricultural workers, but it is limited to some family members of family-owned operations. RCW 51.12.020 – employments excluded include "…Any child under eighteen years of age employed by his or her parents in agricultural activities on the family farm…"

86 It recently came to our attention that, under Florida's Title XXXI 440.2 (17)(c)2, only farmers that employ "5 or fewer regular employees and that [employ] fewer than 12 other employees at one time for seasonal agricultural labor that is completed in less than 30 days, provided such seasonal employment does not exceed 45 days in the same calendar year" are exempt from workers' compensation coverage. We assume that this exempt group makes up a small minority of farmers in Florida and have thus removed their exemption in the data as of the 2019 report for 2019 and all prior years. Notably, under our prior methodology Florida had the largest number of exempt agricultural workers of any state. This number would have been 50,364 in 2019—11.4% of all exempt agricultural workers in the country.

Texas

In Texas, where workers' compensation coverage is elective for almost all employers, the Academy's estimate of coverage is based on periodic surveys conducted by the Texas Department of Insurance Workers' Compensation Research and Evaluation Group (TDI, 2020). Their most recent survey estimated that 81 percent of private-sector jobs were covered by workers' compensation in 2019. We applied this ratio to all UI-covered jobs in Texas (other than federal government jobs, which were not included in the Texas surveys) to determine the total number of jobs covered by workers' compensation. In 2019, we estimate that 2.40 million jobs in Texas were not covered by workers' compensation.

Wyoming

In Wyoming, where employers of "extra hazardous" occupations must provide coverage and other employers must opt-in if they are to provide coverage, the Academy's estimate of coverage is based on data in the 2017 and 2018 Workplace Safety & Occupational Injury and Illness Annual Impact Report (Wyoming Department of Workforce Services, 2018 & 2019). The data in the corresponding 2019 report is not comparable, and the 2020 report has not been released as of this writing. The data in the 2017 report indicate that 75.4 percent of all employees are covered, and that in the 2018 report indicates 90.0 percent coverage. With no better data provided, we average these two figures to estimate 82.7 percent of total jobs in Wyoming to be covered by workers' compensation each year. In 2019, we estimate that forty-seven thousand jobs were not covered by workers' compensation.

Employed Workforce Coverage Estimates

The workers' compensation coverage estimates described above are an estimate of the proportion of UI-covered jobs that are also covered by workers' compensation. However, there are a number of jobs that are not covered by either UI or workers' compensation. To develop an estimate of the proportion of all jobs in the economy that are covered by workers' compensation, not just UI-covered jobs, we rely on data from the Current Population Survey (CPS). The CPS reports total employment in the country – which was 157.538 million in 2019 (DOL, 2020e). However, the CPS is a household survey that questions individuals about their employment, and provides an estimate of the total number of employed workers. The Quarterly Census of Employment and Wages (QCEW), on the other hand, is an employer-based survey that tracks jobs.

Some individuals have multiple jobs, so comparing the number of workers' compensation covered jobs to the total number of employed workers in the population may overestimate the overall workers' compensation coverage rate. To improve this estimate, we used the Integrated Public Use Microdata Series of the CPS (IPUMS-CPS, 2020) to identify the distribution of employed individuals with one, two, three, four or more jobs. Using that distribution of multiple jobholders, combined with the number of employed workers and multiple jobholders, we expanded total employment to develop an estimate of the total number of jobs in the economy.[87,88] This measure allowed us to calculate the percentage of total jobs among the employed workforce that are covered by workers' compensation using a consistent unit of measure in the numerator and denominator: jobs.

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87 We start by subtracting the number of multiple jobholders from total employment as reported by the CPS to get the number of workers with only one job (DOL, 2020e). Next, we use data from the Integrated Public Use Microdata Series of the CPS (IPUMS-CPS, 2020) to identify the distribution of multiple jobholders based on whether they have two, three, or four or more jobs. Using this distribution, we expand the number of multiple jobholders to get the total number of jobs held by multiple jobholders. Using this approach, we calculate total jobs as: Total Jobs = (Total Employment – Multiple Jobholders) + Multiple Jobholders*[(2*% Two Jobs) + (3*% Three Jobs) + (4*% Four or More Jobs)].

This approach differs slightly from what was used in the 2015 data report and prior years. That measure was calculated using total employment from the CPS, expanded by the distribution of multiple jobholders as: Total Jobs = Total Employment*[(% One Job) + (2*% Two Jobs) + (3*% Three Jobs) + (4*% Four or More Jobs)]. The key difference in our updated approach is that we use the total number of multiple jobholders as reported by the CPS, instead of only relying on the distribution of jobholders as reported in the IPUMS to estimate the number of multiple jobholders. The differences between the two approaches are small. The approach we use now minimizes the impact of weighting estimates to achieve population level totals. All of the estimates in Table A.2 have been updated to reflect the update.

88 The BLS reports that 5.1 percent of the U.S. employed workforce held more than one job in 2019.

As Table A.2 shows, workers' compensation covered 86.8 percent of the total jobs in the economy in 2019. Since 2015, the proportion of total jobs covered by workers' compensation remained relatively stable. Between 2015 and 2019, total employment and total jobs increased by 5.8 and 6.1 percent respectively, while workers' compensation covered jobs increased by 6.2 percent. The number of multiple-job holders as reported by the CPS increased to 8.1 million in 2019, up 3.8 percent from 2018 and exceeding a pre-recession high of 7.7 million in 2007 (DOL, 2020e).

Table A.1

Documenting Workers' Compensation Coverage Estimates, 2019 Annual Averages

State	Unemployment Insurance (UI) Covered Jobs[a] Total (1)	Private, Non-Farm Firms (2)	Workers' Compensation (WC) Exemptions Small Firm[b] (3)	Agriculture[c] (4)	WC Covered Jobs (6)	WC as a Percent of UI (7)
Alabama	1,935,499	1,617,156	66,667	5,304	1,863,528	96.3
Alaska	308,828	248,242	-	-	308,828	100.0
Arizona	2,851,868	2,499,440	-	-	2,851,868	100.0
Arkansas	1,197,812	1,014,746	20,646	7,316	1,169,850	97.7
California	17,384,735	14,937,526	-	-	17,384,735	100.0
Colorado	2,683,110	2,292,141	-	16,031	2,667,079	99.4
Connecticut	1,652,497	1,441,429	-	-	1,652,497	100.0
Delaware	447,049	387,971	-	1,199	445,850	99.7
District of Columbia	580,812	539,504	-	-	580,812	100.0
Florida	8,739,951	7,757,354	304,010	-	8,435,941	96.5
Georgia	4,409,402	3,844,727	74,090	14,433	4,320,879	98.0
Hawaii	624,320	530,877	-	-	624,320	100.0
Idaho	739,146	612,655	-	-	739,146	100.0
Illinois	5,917,147	5,196,784	-	14,998	5,902,149	99.7
Indiana	3,038,565	2,671,608	-	13,549	3,025,016	99.6
Iowa	1,535,752	1,294,706	-	17,332	1,518,420	98.9
Kansas	1,367,680	1,135,848	-	11,294	1,356,386	99.2
Kentucky	1,863,059	1,601,024	-	5,500	1,857,559	99.7
Louisiana	1,892,004	1,608,202	-	4,449	1,887,555	99.8
Maine	605,475	520,406	-	3,882	601,593	99.4
Maryland	2,553,014	2,203,235	-	4,753	2,548,261	99.8
Massachusetts	3,589,339	3,195,572	-	-	3,589,339	100.0
Michigan	4,305,863	3,765,742	-	24,970	4,280,893	99.4
Minnesota	2,870,003	2,497,213	-	18,777	2,851,226	99.3
Mississippi	1,110,072	895,641	40,540	6,174	1,063,358	95.8
Missouri	2,757,321	2,390,139	105,174	9,449	2,642,698	95.8

Montana	457,223	382,519	-	4,376	452,847	99.0
Nebraska	965,533	808,986	-	12,398	953,135	98.7
Nevada	1,389,160	1,245,154	-	4,896	1,384,264	99.6
New Hampshire	657,396	578,851	-	-	657,396	100.0
New Jersey	4,034,424	3,502,418	-	-	4,034,424	100.0
New Mexico	807,595	649,618	14,260	8,582	784,753	97.2
New York	9,428,126	8,098,256	-	23,639	9,404,487	99.7
North Carolina	4,424,334	3,773,686	73,610	19,558	4,331,166	97.9
North Dakota	413,542	347,678	-	3,805	409,737	99.1
Ohio	5,359,749	4,696,847	-	-	5,359,749	100.0
Oklahoma	1,572,496	1,288,990	-	7,434	1,565,062	99.5
Oregon	1,924,803	1,644,991	-	-	1,924,803	100.0
Pennsylvania	5,827,484	5,229,158	-	20,574	5,806,910	99.6
Rhode Island	474,484	423,675	-	810	473,674	99.8
South Carolina	2,093,654	1,768,494	53,250	5,386	2,035,018	97.2
South Dakota	418,827	350,004	-	5,438	413,389	98.7
Tennessee	2,982,775	2,608,390	89,785	5,953	2,887,037	96.8
Texas[d]	12,385,606	10,647,214	-	46,935	10,109,262	81.6
Utah	1,483,443	1,279,265	-	4,890	1,478,553	99.7
Vermont	303,476	254,289	-	2,991	300,485	99.0
Virginia	3,757,096	3,218,415	61,078	8,623	3,687,395	98.1
Washington	3,363,229	2,800,436	-	-	3,363,229	100.0
West Virginia	664,737	553,016	-	795	663,942	99.9
Wisconsin	2,857,063	2,483,298	-	23,703	2,833,360	99.2
Wyoming[e]	269,545	209,244	-	-	269,545	100.0
Total Non-Federal	145,276,123	125,542,780	903,110	390,196	141,804,613	97.6
Federal Employees	2,824,293				2,824,293	100.0
TOTAL	148,100,416	125,542,780	903,110	390,196	144,628,906	97.7

a. UI-covered employment reported in the ETA-202 data produced by the Bureau of Labor Statistics (DOL, 2020c)
b. Data on employees at small firms came from the U.S. Census Bureau (2005; 2021).
c. Data on agricultural workers came from the Quarterly Census of Employment and Wages (DOL, 2019b)
d. In 2019 there were 2,400,200 workers not covered by workers' compensation in Texas. Data on workers not covered by workers' compensation in Texas came from the Texas Department of Insurance (TDI, 2020).
e. In 2019 there were 46,631 workers not covered by workers' compensation in Wyoming. Data on the percent of uncovered workers in Wyoming comes from the Wyoming Department of Workforce Services (Wyoming Department of Workforce Services, 2018 and 2019).

Source: National Academy of Social Insurance estimates.

Table A.2

Workers' Compensation Coverage as a Percent of the Employed Workforce, 2009-2019 National Averages

Year	Total Employment[a] (thousands)	Total Jobs[b] (thousands)	WC Covered Jobs[c] (thousands)	WC % Coverage of Total Jobs	WC % Coverage of Total Employment
	(1)	(2)	(3)	(4) = (3) / (2)	(5) = (3) / (1)
2009	139,877	147,856	125,255	84.7%	89.5%
2010	139,077	146,640	124,871	85.2%	89.8%
2011	139,885	147,468	126,290	85.6%	90.3%
2012	142,475	150,110	128,348	85.5%	90.1%
2013	143,941	151,680	130,570	86.1%	90.7%
2014	146,319	154,218	133,074	86.3%	90.9%
2015	148,845	156,887	136,008	86.7%	91.4%
2016	151,439	159,788	138,468	86.7%	91.4%
2017	153,334	161,742	140,424	86.8%	91.6%
2018	155,760	164,393	142,635	86.8%	91.6%
2019	157,529	166,463	144,407	86.8%	91.7%

a. Data on total employment as reported in the Current Population Survey (IPUMS-CPS, 2020).
b. Total Jobs are estimated by multiplying total employment by the proportional distribution of single- and muliple-jobholders. Data on the proportional distribution of single- and multiple-jobholders processed from the Integrated Public Use Microdata Series-CPS (IPUMS-CPS, 2020).
c. Workers' Compensation Covered Jobs from Table A and previous editions of this report.

Source: National Academy of Social Insurance estimates.

Appendix B: Federal Programs

Various federal programs compensate certain categories of workers and their dependents for work-related injuries or illnesses. The standard approach in this report has been to include in the national totals of workers' compensation data those federally administered programs that are financed by employers and are not included in the data reported by the states. The standard approach, however, excludes programs that cover private sector or public sector workers and are financed by general federal revenues. Henceforth the "standard approach" will be referred to as Scope I. For estimates of the total costs of workers' compensation to the United States, including those financed by federal or state general revenues, please see the Scope II and Scope III data in Appendix C: Alternative Measures of Workers' Compensation Benefits and Costs.

One difficulty with the data on the costs of federal programs is the relative incomparability to state program cost data. For the state data, cost estimates for employers who purchase insurance from private carriers and state-funds are based on a given year's premiums, which include estimates of the benefits that will be paid for injuries that occur during the year plus a loading factor that covers the carriers' underwriting expenses and other administrative expenses. For state data on the costs for self-insuring employers, costs are the sum of benefits paid in the year plus a loading factor added by the Academy in a procedure described at page 38. For most Federal programs, there are no data comparable to the state data on premiums, which includes both benefits and administrative costs. Most cost estimates in the following tables are based on benefits paid to workers in each year plus the administrative costs for that program to the extent such data are available. To this extent the data in this Appendix are not perfectly comparable to much of the cost data in the body of the report. Federal program data on costs are comparable to state program data on employers that self-insure since the estimates of costs represent benefits paid plus administrative costs. Details on specific federal programs are provided below.

Federal Programs Included in the Academy Scope I Estimates

Federal Employees

The Federal Employees' Compensation Act of 1916 (FECA) provided the first comprehensive workers' compensation program for federal civilian

Table B.1

Federal Employees' Compensation Act, Benefits and Costs, 2015-2019 (in thousands)

	2015	2016	2017	2018	2019
Benefits					
Compensation Benefits	1,946,890	1,860,675	1,841,930	1,835,333	1,834,405
Medical Benefits	1,041,353	1,029,995	938,569	921,028	843,601
Total Benefits	2,988,242	2,890,670	2,780,499	2,756,361	2,678,006
Administrative Costs					
Direct Administrative Costs	156,233	161,130	167,752	171,852	175,036
Indirect Administrative Costs[a]	10,398	8,765	7,113	9,746	9,747
Total Administrative Costs	166,631	169,895	174,865	181,598	184,783
Costs borne by Federal Agencies[b]	3,144,475	3,051,800	2,948,251	2,928,213	2,853,042
Costs borne by General Revenues[c]	10,398	8,765	7,113	9,746	9,747

a Includes legal and investigative support from the Office of the Solicitor and the Office of the Inspector General.
b Includes "Total Benefits" and "Direct Administrative Costs".
c Includes "Indirect Administrative Costs".
Source: U.S. Department of Labor (2021).

employees. In 2019, total FECA benefits were approximately $2.7 billion (Table B1). Thirty-two percent of benefits were for medical care, down three percent since 2015. The share of benefits for medical care is lower in the FECA program than in most state workers' compensation systems because federal cash benefits, particularly for higher-wage workers, replace a larger share of pre-injury wages than do most state programs.[89] Total administrative costs for the FECA program were $185 million in calendar year 2019, or 6.9 percent of total benefits paid (DOL, 2021). The benefits and direct administrative costs of the FECA program are included in the national totals in Scope I. Indirect administrative costs are included in Appendix C.

Table B.2

Longshore and Harbor Workers' Compensation Act (LHWCA), Benefits, Costs, and Death Claims,[a] 2015-2019 (in thousands)

	2015	2016	2017	2018	2019
Benefits					
Insurance Carriers[a]	893,226	881,492	865,913	739,257	696,626
Self-Insured Employers	421,030	416,151	406,888	414,077	424,283
LHWCA Special Fund	113,307	109,643	107,117	102,612	99,518
DCCA Special Fund[b]	8,078	6,856	6,117	6,864	6,411
Defense Base Act[a,c]	667,644	673,083	669,667	562,021	521,749
Total Benefits	$2,103,284	$2,087,225	$2,055,701	$1,824,830	$1,748,587
Administrative Costs					
General Revenue	12,116	12,423	12,636	12,740	12,740
Special Funds	2,164	2,166	2,165	2,164	2,172
Indirect Administrative Costs[d]	1,426	915	842	949	889
Total Administrative Costs	15,705	15,503	15,642	15,853	15,801
Employer Assessments					
LHWCA Special Fund Assessment	108,000	112,000	114,000	106,000	91,500
DCCA Special Fund Assessment[b]	8,000	8,000	6,000	7,000	5,000
Total Employer Assessments	116,000	120,000	120,000	113,000	96,500
Costs borne by Private Employers[e]	2,219,284	2,207,225	2,175,701	1,937,830	1,845,087
Costs borne by General Revenues[f]	13,542	13,337	13,477	13,689	13,629

a Includes benefit costs for cases under the Defense Base Act (DBA) and other extensions to the LHWCA.
b The District of Columbia Workmen's Compensation Act Special Fund is an extension of the LHWCA to provide workers' compensation benefits in certain employments in the District of Columbia.
c Civilian overseas deaths in 2014 totaled 146; 2015 totaled 100; 2016 totaled 88; 2017 totaled 103; and 2018 totaled 74.
d Includes legal and investigative support from the Office of the Solicitor and the Office of the Inspector General. These are not employer costs but are provided through general revenue appropriations.
e Equal to sum of "Insurance Carriers", "Self-Insured Employers", "Defense Base Act", 'LHWCA Special Fund Assessment", and "DCCA Special Fund Assessment". Does not include special fund administrative costs as they are financed by the employer assessments. Special fund benefits in each year are funded by prior years' assessments.
f Includes administrative costs paid out of general revenues, and indirect administrative costs.

Source: U.S. Department of Labor (2021).

89 Statutory wage-replacement rates replace, on average, about two-thirds of a workers' pre-injury gross wage subject to minimum and weekly maximum benefits, which vary by state. For FECA covered workers, "compensation is generally paid at the rate of two-thirds

FECA financing is similar to the financing of workers' compensation in the private sector in that costs charged to each federal agency reflect benefits paid to the employees of that agency. In this regard the employer is paying for the benefits (as opposed to general revenues directly).

Longshore and Harbor Workers

The Longshore and Harbor Workers' Compensation Act (LHWCA) requires employers to provide workers' compensation protection for longshore, harbor, and other maritime workers. The original program was enacted in 1927 in response to a U.S. Supreme Court decision holding that the Constitution prohibits states from extending workers' compensation coverage to maritime employees who are injured while working over navigable waters. The LHWCA excludes coverage of the master or crew of a vessel. In 1941, the Defense Base Act (DBA) extended the LHWCA to require coverage for other types of workers who fall outside the jurisdiction of state workers' compensation programs, such as employees working on overseas military bases, and persons working overseas for private contractors of the United States. Other extensions of the Act have required coverage for special groups of workers, such as workers on offshore drilling rigs.

Private employers cover workers protected by the LHWCA by purchasing private insurance or self-insuring. The Division of Longshore and Harbor Workers' Compensation also administers two special funds. The first pays certain types of claims authorized under the LHWCA (e.g., for second injuries, or in cases where an employer and their workers' compensation carrier are insolvent or out of business). The special fund is underwritten by annual assessments on employers. The second, the District of Columbia Compensation Act (DCCA) Special Fund, pays benefits to DC government employees who filed claims for injuries prior to July 26, 1982, when the District of Columbia Workers' Compensation Act was enacted. As such, all benefits paid by the DCCA special fund today are for injuries prior to that date (CRS, 2021).

The Academy's data series on benefits of workers' compensation allocate part of the benefits paid under the LHWCA to the states where the companies operate, and part to federal programs. Benefits paid by private carriers under the LHWCA are not identified separately in the information provided by A.M. Best or the state agencies, so these benefits appear in Scope I in the state data. Benefits paid by private employers who self-insure under the LHWCA, and benefits paid from the LHWCA special fund, are not reported by the states or A.M. Best. Consequently, these benefits are included in Scope I in the federal data.

As shown in Table B2, employers paid $92 million to the LHWCA special fund in 2019, which helped cover benefit payments of $100 million. Direct and indirect administrative costs to the federal government totaled approximately $13.6 million. The administrative costs of the two special funds, about $2.2 million in 2019, are financed by assessments on private employers.

Coal Miners with Black Lung Disease

The Black Lung Benefits Act, enacted in 1969, provides compensation for coal miners with pneumoconiosis (black lung disease) and their survivors. The program has two parts. Part B is financed by federal general revenues and was administered by the Social Security Administration until 1997, when administration shifted to the U.S. Department of Labor. Part C is paid through the Black Lung Disability Trust Fund, which is financed by coal mine operators through a federal excise tax on all coal that is mined and sold in the United States. In this report, only the Part C benefits that are financed by employers are included in Scope I. Benefits under Part C are paid directly by the responsible mine operator or insurer, or otherwise from the federal Black Lung Disability Trust Fund.

Table B3 shows benefits paid under both parts of the black lung program from 2015 through 2019. Total benefits in 2019 were $230 million, of which $63.5 million was paid under Part B and $166.6 million under Part C. Part C benefits included $40 million for medical care (24% of Part C benefits paid). Medical benefits are a relatively small share of black lung benefits because many of the recipients of benefits are deceased coal miners' dependents, whose medical care is not covered by the program.

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of the salary if the employee has no dependents, and three-fourths of the salary if one or more dependents are claimed." (DOL compliance regulations).

Table B.3

Black Lung Benefits Act, Benefits and Costs, 2015-2019 (in thousands)

	2015	2016	2017	2018	2019
Benefits					
Part B Compensation	112,651	98,651	82,646	72,297	63,477
Part C Compensation	141,290	143,212	136,508	129,674	126,664
Part C Medical Benefits	33,900	36,733	46,320	45,000	39,896
Total Benefits	$287,841	$278,596	$265,474	246,972	230,037
Costs of Past Benefits					
Interest Payments on Past Advances[a]	1,037,392	1,335,288	2,015,732	2,890,135	3,785,000
Bond Payments[b]	498,739	523,262	545,554	449,888	117,929
Total Current Costs of Past Benefits	1,536,131	1,858,550	2,561,286	3,340,022	3,902,929
Administrative Costs					
Part B (SSA)	4,822	4,964	5,093	5,040	4,924
Part C (DOL)	31,198	33,236	35,472	35,590	35,785
Indirect Administrative Costs[c]	28,972	29,430	30,608	30,681	23,047
Total Administrative Costs	64,991	67,630	71,172	71,311	63,756
Employer Assessments					
Coal Tax Paid by Employers	524,230	436,889	417,628	342,443	237,848
Deferred Costs					
Trust Fund Advances from U.S. Treasury[d]	666,250	1,003,750	1,438,750	1,892,500	1,983,150
Costs borne by Private Employers[e]	524,230	436,889	417,628	342,443	237,848
Costs borne by General Revenues[f]	812,695	1,136,795	1,557,097	2,000,518	2,074,598
Costs borne by the Black Lung Trust Fund[g]	1,742,519	2,071,731	2,779,585	3,550,287	4,105,274

a The amount shown is the repayment of one-year obligations of the Trust Fund, which include the previous year's advances from the U.S. Treasury and applicable interest due on those advances, as required under the EESA.

b Repayment of bond principal and interest on principal debt as required by the Trust Fund debt restructuring portion of the EESA.

c Includes legal and investigative support from the Office of the Solicitor and the Office of the Inspector General, services provided by the Department of the Treasury, and costs for the Office of Administrative Law Judges (OALJ) and the Benefits Review Board (BRB). OALJ and BRB costs are not included for any other program but cannot be separately identified for Coal Mine Workers' Compensation.

d Advance of funds required when Trust Fund expenses exceed tax revenues received in a given year. Under the Emergency Economic Stabilization Act of 2008 (EESA), total Trust Fund debt (cumulative advances) at the end of 2008 was converted to zero coupon bonds that are repayable to the U.S. Treasury on an annual basis.

e Equal to "Coal Tax Paid by Employers".

f Includes Part B compensation, Part B administrative costs, indirect administrative costs, and trust fund advances from the U.S. treasury.

g Includes "Part C Compensation", "Part C Medical Benefits", "Interest Payments on Past Advances", "Bond Payments", and "Part C" administrative costs.

Source: U.S. Department of Labor (2021).

Table B.4

Benefits and Costs of the Energy Employees Occupational Illness Compensation Program Act: Parts B and E 2015-2019 (in thousands)

	2015	2016	2017	2018	2019
Benefits					
Part B					
Medical Benefits[a]	367,858	487,618	569,060	678,134	763,192
Compensation Benefits	286,540	293,228	277,294	258,389	263,879
Part E[b]					
Medical Benefits[c]	69,564	77,005	85,793	90,726	116,038
Compensation Benefits	264,166	278,859	326,351	335,859	357,166
Total Benefits	988,129	1,136,710	1,258,497	1,363,109	1,500,276
Administrative Costs					
Part B					
Direct Administrative Costs[d]	52,079	54,319	58,014	55,540	53,823
Indirect Administrative Costs[e]	763	1,024	1,215	1,340	1,427
Part E					
Direct Administrative Costs[d]	67,530	68,499	70,142	71,466	71,560
Indirect Administrative Costs[e]	793	530	522	657	750
Total Administrative Costs	121,165	124,373	129,892	129,004	127,560
Total Costs (Benefits and Admin Costs)	1,109,294	1,261,082	1,388,389	1,492,112	1,627,836

a Medical payments made for claimants eligible under Part B only and claimants eligible under both Part B and Part E.
b The Energy Part E benefit program was established in October 2004.
c Medical payments made for claimants eligible under Part E only.
d Part B costs for 2002-2008 include funding for the Department of Health and Human Services/National Institute for Occupational Safety and Health's (DHHS/NIOSH) conduct of dose reconstructions and special exposure cohort determinations. For 2002, these costs were $32.7 million; 2003, $26.8 million; 2004, $51.7 million; 2005, $50.5 million; 2006, $58.6 million; 2007, $55.0 million; and 2008, $41.5 million. Beginning in 2009, these costs are a direct appropriation to DHHS/NIOSH. Part B costs for 2009-18 include funding for an Ombudsman position. For 2009, these costs were $0.1 million; 2010, $0.4 million; 2011, $0.2 million; 2012, $0.3 million; 2013, $0.5 million; 2014, $0.6 million; and 2015, $0.6 million; 2016, $0.7 million; 2017, $0.8 million; and 2018, $0.7 million. Part E costs for 2005-19 also include funding for an Ombudsman position. For 2005 these costs were $0.2 million; 2006, $0.5 million; 2007, $0.7 million; 2008, $0.8 million; 2009, $0.8 million; 2010, $0.5 million; 2011, $0.8 million; 2012, $0.8 million; 2013, $0.8 million; 2014, $0.8 million; 2015, $0.7 million; 2016, $0.7 million; 2017, $0.9 million; 2018, $0.9 million; and 2019, $0.8 million.
e Includes legal and investigative support from the Office of the Solicitor and the Office of the Inspector General.

Source: U.S. Department of Labor (2021).

Table B3 also shows accounting data for the Black Lung Trust Fund, and federal costs for administering the program. In 2019, direct administrative costs for Part C were $35.8 million. Together with benefit payments of $166.6 million, expenditures under Part C were $202.3 million. Employers paid $237.8 million into the trust fund in 2019, but payments on past debt, totaling $3.9 billion in 2019, far exceeded the extra revenues.

To the extent that treasury loans to the Trust Fund are funded by general revenues, "Trust Fund Advances from the U.S. Treasury" are included under "Costs borne by General Revenues". A recent Government Accountability Office testimony stated that "under federal law the Trust Fund borrows from Treasury's general fund when necessary to cover its expenditures. Federal law does not limit the amount the Trust Fund may borrow from Treasury's general fund—and hence from the taxpayer—as needed to cover its relevant expenditures." (GAO, 2019)

Assuming the borrowed money is paid back, these advances will not represent costs against general revenues in the long-run, though the aforementioned GAO testimony is not optimistic about the Trust Fund's financial future under current law. As the coal tax and Treasury advances provide income which allows the Trust Fund to cover its obligations, it is not appropriate to add any of the three latter items in the table.

No data are available on the experience of employers who self-insure under the black lung program. Any such benefits and costs are not reflected in Table B3 and are not included anywhere in the report.

Federal Programs Included in Academy Scope II Estimates

Energy Employees

Part B of the Energy Employees Occupational Illness Compensation Program Act (EEOICPA) provides workers' compensation benefits to civilian workers (and/or their survivors), who become ill as a result of exposure to radiation, beryllium, or silica, in the production or testing of nuclear weapons and other materials. The program pays medical benefits for the treatment of covered conditions, and lump sum cash payments of up to $150,000 for eligible workers.

Part E of the EEOICPA provides compensation for employees of Department of Energy contractors and for uranium miners, millers, and ore transporters who become injured on the job. Workers (or their qualifying survivors) are eligible for cash awards of up to $250,000. Wage loss, medical, and survivor benefits are also provided under certain conditions.

Table B4 provides information on benefits and costs of both Parts B and E of the EEOICPA for 2015-2019. In 2019, total benefits paid under Part B were $1.02 billion, of which $263.9 million (25.9%) were paid as compensation benefits (DOL, 2021). Part E benefits were $473.2 million, of which $357.2 million (75.5%) were compensation. Benefits under both Parts B and E are financed by general federal revenues and are not included in our national totals. Benefits and costs associated with both Part B and

Table B.5

Section 4 Radiation Exposure Compensation Act, Benefits Approved and Costs, 2015-2019 (in thousands)

	2015	2016	2017	2018	2019
Total Benefits Approved[a]	70,673	60,280	60,262	62,078	60,752
Total Administrative Costs[b,c]	2,318	1,977	1,977	2,036	1,993
Total Costs (Benefits and Admin Costs)	72,991	62,257	62,239	63,114	62,744

a Only Section 4 (downwinders and on-site) are shown here as "the National Defense Authorization Act for FY 2005 contained language requiring the Energy Employees Occupational Illness Compensation Fund to pay uranium workers – uranium miners, millers, and ore transporters". (US DoJ RECA Trust Fund FY 2020 Budget & Performance Plan) Section 5 beneficiaries are thus captured in Table B4.

b RECA "established monetary compensation for individuals who contracted specified diseases in three defined population", and is thus very striaghtforward to administer. As of March 2019, the program was "administered by a staff of five attorneys, eight claims examiners, and eight contractors within the Constitutional and Specialized Torts Section of the Civil Division's Torts Branch."

c A job posting in August of 2020 by the U.S. Department of Justice Civil Division for a trial attorney position indicates a salary between $86,335 and $157,709 per year. Glassdoor indicates average salaries in August of 2020 of $80,555 and $44,500 for a Department of Labor claims examiner and a Department of Justice paralegal specialist, respectively. Using the average salary for the trial attorney position ($122,022) and the figures from Glassdoor, then multiplying by the staff numbers in note "b" yields administrative salary costs of $1,610,550. This figure is divided by 1.028154 to account for inflation between July 2018 and July 2020 (BLS CPI Inflation Calculator). Finally, we multiply the resulting figure by 1.2, assuming an additional 30% of administrative costs beyond salary costs. This method is used to estimate administrative costs in 2018. An equal portion of administrative costs is assumed for 2015-2017 and 2019.

Source: U.S. Department of Justice (2020).

Part E are included in Scope II and Scope III in Appendix C.

Workers Exposed to Radiation

The Radiation Exposure Compensation Act of 1990 provides lump sum compensation payments to individuals who contracted certain cancers and other serious diseases as a result of exposure to radiation released during above-ground nuclear weapons testing or during employment in underground uranium mines. The lump sum payments are specified by law and range from $50,000 to $100,000. Table B5 shows annual approved benefits under the Radiation Exposure Compensation Act (RECA) from 2015 through 2019. The $60.8 million in benefits approved in 2019 represents a two percent decrease from 2018 and a decrease of 14 percent over the five-year study period (DOJ, 2020). The program is financed with federal general revenues and is not included in national totals in this report. Benefits and costs associated with RECA are included in Scope II and Scope III in Appendix C.

Federal Programs Included in Academy Scope III Estimates

Veterans of Military Service

U.S. military personnel are covered by the Federal Veterans' Compensation Program of the Department of Veterans Affairs. The program provides cash benefits to veterans who sustain total or partial disabilities while on active duty. This program includes four sub-categories under which benefits may be paid:

Table B.6

Federal Veterans' Compensation, Benefits and Costs, 2015-2019 (in thousands)

	2015	2016	2017	2018	2019
Recipients					
Veterans Less than 30 Percent Disabled[a]	1,718	1,727	1,731	1,735	1,726
Veterans 30 Percent Disabled or More	2,544	2,728	2,917	3,109	3,287
Total Recipients	4,263	4,455	4,648	4,844	5,013
Benefits					
Disability Compensation Benefits	62,463,382	67,352,772	73,350,268	80,812,210	88,170,569
Survivors DIC Benefits[b]	6,245,000	6,425,000	6,690,000	7,035,000	7,380,000
Total Benefits	68,708,382	73,777,772	80,040,268	87,847,210	95,550,569
Administrative Costs					
Direct Administrative Costs[c]	1,807,011	1,855,028	2,187,997	2,342,942	2,068,797
Indirect Administrative Costs[d]	946,143	1,103,927	1,193,515	1,310,558	1,329,387
Total Administrative Costs	2,753,154	2,958,955	3,381,513	3,653,500	3,398,184
Total Costs (Benefits + Admin Costs)	71,461,536	76,736,727	83,421,781	91,500,710	98,948,753

a Does not receive dependency benefit.
b Dependency and Indemnity Compensation and Death Compensation.
c These figures come from the "General Operating Expenses" line of the VA Agency Financial Report, and are multiplied according to the portion of total VBA benefits accounted for by Veterans' Comp and Survivors DIC benefits.
d These figures come from the "Indirect Administrative Program Costs" line of the VA Agency Financial Report, and are multiplied according to the portion of total VA program costs accounted for by the VBA, and then according to the portion of total VBA benefits accounted for by Veterans' Comp and Survivors DIC benefits.

Source: U.S. Department of Veterans Affairs (2020 and 2021).

Disability Compensation, Dependency and Indemnity Compensation (DIC), Special Monthly Compensation (SMC), and Claims Based on Special Circumstances (VA, 2018). For the purposes of this report, we only discuss the former two options, which more closely mirror the types of benefit payments under state workers' compensation programs.

Table B6 shows the number of recipients, and the value of cash benefits paid, and estimates of administrative costs for 2015 through 2019. As shown in Table B6, 5.01 million veterans were receiving monthly compensation payments for service-connected disabilities in 2019. Of these, 65.6 percent of veterans had a disability rating of 30 percent or more.

Due to its large number of beneficiaries, the inclusion of a high proportion of serious injuries, and the provision of medical care through an entirely separate health care system, Veterans' Compensation data is included only in Scope III of the data estimates in Appendix C.

Federal Programs Not Included in Academy Estimates

Railroad Employees and Merchant Mariners

Federal laws specify employee benefits for railroad workers involved in interstate commerce, and for merchant mariners. These programs provide health insurance as well as short- and long-term cash benefits for ill or injured workers whether or not their conditions are work-related. The benefits are not exclusively workers' compensation benefits and are not included in our national totals. Under federal laws, these workers also retain the right to bring tort suits against their employers if the worker believes a work-related injury or illness was caused by employer negligence (Williams and Barth, 1973).

Appendix C: Three Measures of Workers' Compensation Benefits and Costs[90]

Summary

Three measures of the scope of workers' compensation programs in the United States are examined in this Appendix. Each has its merits and limitations.

The **Standard Approach** represents the measures of benefits and costs of the workers' compensation programs that are paid directly by employers and employees. This approach is the only measure of workers' compensation programs that has been used in previous versions of the Academy report and in the main text of this year's edition. The Standard Approach will continue to be the primary measure of the workers' compensation that will be used in subsequent years in order to maintain continuity of the Academy data. In 2019, the Standard Approach indicates that the amount of benefits paid to workers by the workers' compensation system was $63.046 billion and that costs totaled $100.187 billion.

The **Augmented Approach** represents a measure of benefits and costs of the workers' compensation that adds those workers' compensation programs that are paid from general revenues of states or the Federal government. The additional benefits provide a more comprehensive measure of the assistance provided to workers disabled at the workplace by workers' compensation programs as well as a better accounting of the costs to society (including taxpayers) of the costs of the programs. A drawback of the Augmented Approach is that considerable effort is required to collect the data. In 2019, the Augmented Approach accounted for an additional $1.625 billion to the benefits paid to workers and an additional $3.797 billion to the costs of the program.

The **Expansive Approach** adds the benefits and costs of the Federal Veterans' Compensation Program, which provides benefits to veterans who "are disabled by injury or disease incurred in or aggravated during active military service." This program arguably is not a workers' compensation program. However, the Academy Report on Workers' Compensation Benefits, Coverage, and Costs has included the Veterans Program in its list of Federal Programs in the Appendix since the 2003 edition. In 2019, the Expansive Approach accounted for an additional $95.551 billion to the benefits and $98.949 billion to the costs of programs for persons disabled in their occupations

Introduction to Three Measures of the Scope of Workers' Compensation Programs

Three measures of the scope of workers' compensation programs in the United States are examined in this Appendix. The Appendix will also explore which benefits and costs associated with work-related injuries and diseases should be included in or excluded from the Academy's data.

Scope I—Standard: workers' compensation programs for civilian workers prescribed by state or federal laws that are *paid directly by employers or workers*. This **standard approach** has been used (with minor exceptions discussed below) in previous editions of *Workers' Compensation: Benefits, Costs, and Coverage* published by the National Academy of Social Insurance. The standard approach is also used in all tables, figures, and text in the 2019 data report except for Appendix C.

Scope II—Augmented: Scope I plus workers' compensation programs for civilian workers prescribed by state or federal government laws *paid from general revenues of state or federal governments*. This **augmented approach** is introduced in this Appendix.

Scope III—Expansive: Scope II plus workers' compensation programs for veterans prescribed by state or federal government laws that are paid directly by employers, workers or from general revenues of state or federal governments.[91] This **expansive approach** is also introduced in this Appendix.

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90 This new expanded version of Appendix C was developed jointly by John Burton and Griffin Murphy in August 2020. Appendix C in its current form was included for the first time in the 2018 data report on workers' compensation published by the Academy.

91 Veterans are technically "civilians", so they may receive benefits from veterans' compensation programs in addition to from programs under the Standard and/or Augmented scopes depending on their circumstances.

Table C.1

Employee Costs, Employer Costs, and Benefits for States in which Employees Directly Pay for a Portion of the Workers' Compensation Program, 2015–2019
(Millions of Dollars)

	2015	2016	2017	2018	2019
New Mexico					
Employee Costs	6.0	6.0	6.1	6.2	6.3
Employer Costs	488.7	449.7	444.4	450.4	469.3
Employee Costs as a percent of Total Costs	1.2%	1.3%	1.3%	1.4%	1.3%
Total Costs	494.7	455.8	450.5	456.5	475.6
Benefits	327.0	308.7	296.7	300.1	318.8
Oregon					
Employee Costs	47.0	48.5	41.9	42.7	37.9
Employer Costs	953.7	1009.6	1029.9	1018.9	1018.3
Employee Costs as a percent of Total Costs	4.7%	4.6%	3.9%	4.0%	3.6%
Total Costs	1000.1	1058.1	1071.8	1061.6	1056.2
Benefits	633.2	631.0	681.6	669.3	699.3
Washington					
Employee Costs	628.7	667.6	681.0	706.9	699.5
Employer Costs	2,276.6	2,515.6	2,507.0	2527.6	2,432.4
Employee Costs as a percent of Total Costs	21.6%	21.0%	21.4%	21.9%	22.3%
Total Costs	2,905.2	3,183.2	3,188.0	3,234.5	3,131.9
Benefits	2,412.3	2,437.1	2,464.8	2,537.8	2,614.3
Total					
Employee Costs	681.7	722.1	729.0	755.8	743.7
Employer Costs	3,718.3	3,975.0	3,981.3	3,996.8	3,920.1
Total Costs	4,400.1	4,697.1	4,710.3	4,752.6	4,663.8
Benefits	3,372.5	3,376.8	3,443.1	3,507.1	3,632.5

Sources: New Mexico Workers' Compensation Administration Economic Research & Policy Bureau; Oregon Department of Consumer and Business Services; and Washington State Department of Labor & Industries.

Definition of Workers' Compensation Programs

Workers' compensation programs are no-fault statutory programs that (a) provide medical and/or cash benefits to current or former workers who receive benefits because they have an impairment and/or disability caused by a work-related injury or disease, or (b) provide cash benefits or other benefits to survivors of workers who died as a result of a work-related injury or disease. Significant components of this definition have this meaning:

- An *impairment* is an anatomic or functional abnormality or loss resulting from an injury or disease. The impairment can be physical or mental.[92]
- A *disability* is a loss of earning capacity and/or an actual loss of earnings.[93]
- *Work-related* means the worker meets the compensability requirements in the jurisdiction's workers' compensation statute[94]
- The workers' compensation program also includes these definitions:
  - the worker is entitled to workers' compensation benefits even if he or she is negligent
  - the worker is entitled to workers' compensation benefits even if the employer is not negligent
  - workers' compensation is the worker's exclusive remedy against the employer even if the employer is negligent

Which Programs Should be Included in NASI Measures of Workers' Compensation Benefits, Costs, and Coverage

Scope I—Standard

Workers' compensation programs for civilian workers prescribed by state or federal laws that are paid directly by employers or workers.

In most states, the direct costs of the workers' compensation programs are paid by employers who either purchase insurance from private carriers or state funds or self-insure and thus pay the costs directly. In three states, however, a portion of the direct costs of workers' compensation is paid by employees.

States in Which Costs Are Paid by Employees. New Mexico applies a per-capita assessment based on employment on the last day of the quarter. Since 2004, the quarterly workers' compensation fee has been $4.30 per covered worker, which is split between employers and employees. The employers' share is $2.30 per covered worker, and the employees' share is $2.00. Most of the total fee ($2.00 from employers and $2.00 from employees) is now used primarily to fund the operation of the New Mexico Workers' Compensation Administration. (Funds from General Revenue previously paid for these administrative costs.) The additional $0.30 per covered worker is paid by employers to fund the Workers' Compensation Uninsured Employers Fund.

Oregon assesses employers and employees for the Workers Benefit Fund, which pays monthly cost-of-living increases for workers. Between April of 2014 and 2016, the Oregon Workers Benefit Fund Assessment was 3.3 cents per hour worked – employers paid 1.65 cents and workers paid 1.65 cents per hour. In 2017 and 2018, the assessment

92 The National Commission on State Workmen's Compensation Laws (National Commission, 1972, 137) defines impairment as "an anatomic or functional abnormality or loss."

93 The National Commission (1972,137) defines disability as "loss of actual earnings or earning capacity as a consequence of impairment."

94 Compensability rules vary among jurisdictions. Larson and Robinson (§ 1.1 (Desk ed. 2017) indicate that in the typical act "an employee is automatically entitled to certain benefits whenever the employee suffers 'a personal injury by accident arising out of or in the course or employment' or an occupational disease" (Larson and Robinson, 2017).

fell to 2.8 cents per hour worked—1.4 cents per hour for each party. The assessment fell once again in 2019 to 2.4 cents per hour worked, or 1.2 cents per hour each.

Washington state employees pay part of the workers' compensation premium costs through payroll deductions. These deductions go toward state fund medical benefits and cost-of-living adjustments for the Supplemental Pension Fund. In 2019, employees contributed 26.6 percent of state fund premiums and paid half of the cost-of-living adjustment premium for the aforementioned fund.

Treatment of the Costs Paid by Employees in Academy Reports. Prior to the 2019 Academy Report, costs paid by workers in Washington were included as costs of the program, but the costs paid by workers in New Mexico and Oregon were not included.[95] There are four reasons why all payments by workers to a workers' compensation program should be included as costs of the program, as is the case for the 2018 and 2019 data reports:

(1) To provide results that are consistent across all states.

(2) To provide a more accurate measure of the costs of workers' compensation programs.

(3) To ensure that the data for both benefits and costs are accurate for workers in New Mexico and Oregon. Prior to 2019, the benefits received by injured workers who paid for part of the costs of workers' compensation in New Mexico and Oregon were included in the Academy data for those states but the costs were not, and it is misleading to include the benefits but not the costs.

(4) To recognize the distinction between the nominal incidence of the costs of a program and the actual incidence. The nominal incidence for employees is the assessments, fees, or payroll deductions paid by employees in New Mexico, Oregon, and Washington. In other states, workers' compensation is nominally free for employees, as there are no explicit taxes or payroll reductions to fund the program. In all cases, the actual incidence of the program is the nominal incidence plus any reduction in wages that is the result of being covered by a workers' compensation program. As such, although the employees in these three states face different nominal costs, these costs should not be distinguished from "employer costs" in any strict sense.[96]

Data on Costs Paid by Employees. Based on these four reasons, the Academy will now include employee contributions in all tables, figures, and analysis in the annual reports on *Workers' Compensation: Benefits, Costs, and Coverage.*[97] The amounts for the last five years are shown in Table C.1.

The importance of the employee costs relative to the total costs of the program varies substantially among the three states. In New Mexico, the $6.3 million of costs paid by employees represented 1.3 percent of the total costs of $475.6 million in 2019. In Oregon, the $37.9 million of employee costs represented 3.6 percent of the total costs of $1,056.2 million for the workers' compensation program in 2019. In Washington, the employee contributions

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95 McLaren, Baldwin, and Boden (2018) a note in *Table 13. Workers' Compensation Cost by Type of Insurer, 1996-2016* indicates that "Employee contributions to workers' compensation costs in Washington state are included in the total from 2011 to 2016."

96 Most labor economists understand that employers bear the nominal incidence of workers' compensation insurance because the premiums are paid by those employers. However, these economists assert that a substantial portion of the actual cost of workers' compensation is paid by workers in the form of wages that are lower than the workers would have received in the absence of workers' compensation. While the degree of cost shifting to workers may have changed to some degree since the 1990s, the consensus remains that it is invalid and misleading to assess who pays for the costs of the program by focusing solely on the nominal share paid by employers.

A review of the theory and empirical findings by Chelius and Burton (1994, 26) reached this conclusion: *"a substantial portion of workers' compensation costs (and even, according to some estimates, all of the costs) are shifted onto workers.* [emphasis in original]" Leigh et al. (2000, 178-79)) provide another survey of the incidence of the costs of workers compensation. They noted a lack of consensus among economists but offered this "suggestion" for the incidence of workers' compensation costs: employers 40 percent; consumers 20 percent; and workers 40 percent.

97 Employee costs in these states are included in Tables 13 and 14. In Table 13, costs are allocated by using the ratios of privately insured benefits, state fund insured benefits, and self-insured benefits to total benefits.

Table C.2

Costs of Workers' Compensation Programs Paid from General Revenue and Benefits Associated with those Payments: The Augmented Approach
(Millions of Dollars)

		2015	2016	2017	2018	2019
Federal Programs[a]						
FECA						
	Costs	10	9	7	10	10
LHWCA						
	Costs	14	13	13	14	14
Black Lung						
	Costs	813	1,137	1,557	2,001	2,075
	Benefits	113	99	83	72	63
EEIOCPA						
	Costs	1,109	1,261	1,388	1,492	1,638
	Benefits	988	1,137	1,258	1,363	1,500
Radiation						
	Costs	73	62	62	64	63
	Benefits	71	60	60	62	61
State Programs						
Rhode Island						
	Costs[b]	21	20	18	18	18
Total of Augmented Costs and Benefits						
	Costs	2,039	2,493	3,039	3,588	3,797
	Benefits	1,171	1,296	1,401	1,497	1,625

a See Appendix B for more information on federal programs.
b Contact did not indicate whether revenue was used for specific purposes.

Sources: U.S. Department of Labor (2021); U.S. Department of Justice (2020); and Rhode Island Department of Labor and Training.

were a much more important share of program costs than in the two other states. The costs paid by employees of $699.5 million represented 22.3 percent of the total costs of $3,131.9 million in Washington in 2019.

The employee contribution in the three states of $743.7 million represent only 0.7% of the national total. Nonetheless, the inclusion of the costs paid by employees provides a more accurate measure of the magnitude of the program.

Scope II—Augmented:

Workers' compensation programs for civilian workers prescribed by state or federal Laws that are paid directly by employers or workers or from general revenues of a state or federal government.

Previous Coverage of Workers' Compensation Programs in the Academy Report. Reports prior to the 2018 data report (published in 2020) restricted the data on benefits, coverage, and costs to those

Table C.3

Costs and Benefits of Workers Compensation Programs in Scope I (Standard Approach) and Scope II (Augmented Approach)
(Millions of Dollars)

	2015	2016	2017	2018	2019
Scope I					
Costs	62,780	62,607	62,450	62,949	63,046
Benefits	62,780	62,607	62,450	62,949	63,046
Additional Costs and Benefits in Scope II					
Costs	2,039	2,493	3,039	3,588	3,797
Benefits	1,171	1,296	1,401	1,497	1,625
Scopes I and II, Cumulative					
Costs	101,291	102,712	103,831	104,948	103,984
Benefits	63,951	63,902	63,851	64,446	64,670

workers' compensation programs for which the costs are paid by employers or workers in the form of (1) insurance premiums to private or public insurers, (2) direct payment by employers of benefits to workers or to health care providers, and (3) payments by workers in the form of assessments or a portion of the insurance premiums. (This represents the Standard Approach.)

The 2020 Academy Report (pp. 5-6) provides additional information on the scope of the report:

> Consistent with previous editions of this report, the current report uses a *standard approach* to [determine] which workers' compensation programs to include in the estimates in all tables, figures, and the main text:
>
> - The *standard approach* includes workers' compensation programs prescribed by state or federal laws that are paid directly by employers or workers. The scope of this approach includes all state workers' compensation programs plus the Federal Employees' Compensation Act (FECA), which provides benefits to federal civilian employees, the portion of the Longshore and Harbor Workers Act (LHWCA) paid by employers, which provides protection to longshore, harbor, and other maritime workers, and the portion of the Black Lung Benefits Act financed by employers, which provides compensation to coal miners with black lung disease.

Analysis of the Previous Coverage of Workers' Compensation Programs. The previous procedure used by the Academy (the Standard Approach) only considers the coverage, benefits, and costs of workers' compensation programs that are financed by employers or workers. The exclusion of programs that are not financed by employers or workers underestimates the full extent of coverage, benefits, and costs of workers' compensation programs in the United States. Accurately measured, workers' compensation programs provide more benefits to disabled workers and their survivors than the $62.0 billion reported by NASI for 2017 (*2019 Academy Report:* Table 1). And while, according to the *2019 Academy Report* (Table 1), the costs to employers of workers' compensation in 2017 were $97.4 billion, the total costs to the economy include not just costs directly paid by employers and workers, but the costs of the workers' compensation program paid from general revenues, which are in turn are paid for by taxes on employers and individuals. This means that past Academy reports understated both benefits and costs.

The Scope II—Augmented version of coverage includes the costs of workers' compensation programs (or portions of programs) that are funded by general revenues, and any benefits associated with the general revenue funding. This approach excludes payments under the Federal Veterans' Compensation Program due to its unique structure and magnitude relative to other workers' compensation-like programs. (The inclusion of the benefits and costs of the Federal Veterans' Compensation Program in Scope III—Expansive is discussed in the next subsection.)

Which federal programs are already included in the current coverage of workers' compensation data by relying on Scope I coverage?

- The Federal Employees Compensation Act (FECA)
  - Total benefits and direct administrative costs
- The Longshore and Harbor Workers' Compensation Act (LHWCA)
  - Total benefits and special fund administrative costs
- The Black Lung Benefits Act
  - Part C benefits, costs of past benefits, and Part C administrative costs

Which federal or state programs (or portions of programs) are added to the current coverage of workers' compensation programs by adopting Scope II—Augmented coverage?

The additional Federal programs (or portions of programs) shown in Table D.2 include:

- The Federal Employees Compensation Act (FECA)
  - Indirect administrative costs
- The Longshore and Harbor Workers' Compensation Act (LHWCA)
  - Administrative costs paid by general revenues and indirect administrative costs
- The Black Lung Benefits Act paid from general revenue
  - Part B benefits, Part B administrative costs, indirect administrative costs, and advances from the U.S. Treasury
- The Energy Employees Occupational Illness Compensation Act (EEIOCPA)
- The Radiation Exposure Compensation Act (RECA) of 1990

In addition to these Federal programs, which are funded at least in part by general revenues, Table C.2 also includes limited information on state workers' compensation programs for which benefits and/or costs are financed from general revenue and thus fall within the Scope II—Augmented definition of coverage. However, the sole state program which

Table C.4

Costs and Benefits of the Federal Veterans' Compensation Program
(Millions of Dollars)

	2015	2016	2017	2018	2019
Costs	71,462	76,737	83,422	91,501	98,949
Benefits	68,708	73,778	80,040	87,847	95,551

Source: U.S. Department of Veterans' Affairs (2021 and 2020)

Table C.5

Costs and Benefits of Workers Compensation Programs in Scope I (Standard Approach), Scope II (Augmented Approach), and Scope III (Expanded Approach)
(Millions of Dollars)

	2015	2016	2017	2018	2019
Scope I					
Costs	99,251	100,219	100,792	101,360	100,187
Benefits	62,780	62,607	62,450	62,949	63,046
Scopes I and II, Cumulative					
Costs	101,291	102,712	103,831	104,948	103,984
Benefits	63,951	63,902	63,851	64,446	64,670
Additional Costs and Benefits in Scope III					
Costs	71,462	76,737	83,422	91,501	98,949
Benefits	68,708	73,778	80,040	87,847	95,551
Scope III, Cumulative					
Costs	172,752	179,448	187,253	196,448	202,933
Benefits	132,660	137,680	143,892	152,293	160,221

relies on general revenues and for which there is available data is Rhode Island. Further research is needed regarding the extent to which other state programs are general revenue financed.

The results in Table C.2 show that, using the Augmented Approach (Scope II), the total of workers' compensation costs increased from $2.039 billion in 2015 to $3.797 billion in 2019, or by 86 percent. Over the same time period, the total amount of benefits added by the Augmented Approach increased from $1.171 billion to $1.625 billion, which represents a 39 percent increase.

The information in Table C.3 helps to assess the difference in costs and benefits associated with the augmented approach (Table C.2), versus the standard approach. The Scope I—Standard entries in Table C.3 are the data included in the Tables and Figures in the 2019 data report. Table C.3 also includes the totals from Table C.2 showing the amounts of benefits and costs added by Scope II—Augmented.

The Standard Approach indicates that the costs of workers' compensation programs in 2019 were $100.2 billion. The additional costs associated with the Augmented Approach were $3.8 billion, which represents a 3.8 percent increase in costs. The combined costs of the Scope I—Standard and Scope II—Augmented measures are $104.0 billion.
The Standard Approach indicates that the benefits provided by workers' compensation in 2019 were $63.0 billion. The additional benefits associated with the Augmented Approach were $1.6 billion, which represents a 2.6 percent increase in benefits. The combined benefits of the Scope I and Scope II measures in 2019 are $64.7 billion.

Scope III—Expansive:
Workers' compensation programs for civilian workers and veterans pre-

scribed by state or federal Laws that are paid directly by employers or workers or from general revenues of a state or the federal government

Scope III—Expansive is the most inclusive measure of the costs and benefits of workers' compensation programs because it adds data on the Federal Veterans' Compensation Program to the programs included in Scope II. The data on the detailed information on the Federal Veterans' Compensation Program are included in Appendix Table B.6. The data in Table C.4 pertain to the benefits paid to veterans "who are disabled by injury or disease incurred in or aggravated during active military service."

The results in Table C.4 show that the costs of the Federal Veterans' Compensation Program increased from $71.5 billion in 2015 to $98.9 billion in 2019, which is a 37.8 percent increase over five years. The benefits paid to disabled veterans increased from $68.7 billion in 2015 to $95.6 billion in 2019, which is an increase of 39 percent over the five-year period.

How significant are the costs and benefits associated with the Expanded Approach shown in Table C.4? The information included in Table C.5 helps answer that question. The Scope I—Standard entries in Table C.5 are the data included in the Tables and Figures in the 2021 Academy Report. Table C.5 also includes the totals from Table C.3 showing the cumulative amounts of benefits and costs associated with Scope I—Standard and Scope II—Augmented. The cumulative amount of the Standard Approach and the Augmented Approach indicates that the costs of workers' compensation programs in 2019 were $104.0 billion. The additional costs associated with the Expanded Approach, which includes the Federal Veterans' Compensation Program, were $98.9 billion, a 95.0 percent increase relative to when those costs are excluded. In 2019, the Expanded Approach costs totaled $202.9 billion.

The cumulative amount of the Standard Approach and the Augmented Approach indicates that the benefits paid by workers' compensation programs in 2019 were $64.7 billion. The additional benefits associated with the Expanded Approach were $95.6 billion, which represents a 147.3 percent increase in benefits due to the inclusion of the Federal Veterans' Compensation Program. In 2019, the Expanded Approach benefits totaled $160.2 billion.

Public and private programs that should not be included in the report's measures of benefits, costs, and coverage

Several programs that provide cash or medical benefits to disabled workers, their dependents, or their survivors are not included in the Academy's data because these programs do not comply with the definition of workers' compensation programs presented in this Appendix.

Public Programs

Several public programs that provide cash and/or medical benefits should continue to be excluded from Academy's reports because they do not meet the Academy's definition of workers' compensation:

- The benefits and costs of the Social Security Disability Insurance Program. This program does not meet the definition of a workers' compensation program because the benefits are not restricted to workers disabled by a work-related injury or disease.
- The benefits and costs of Temporary Disability Insurance Programs available in several states. These programs do not meet the definition of a workers' compensation program since benefits are not restricted to workers disabled by a work-related injury or disease.
- The cash benefits, medical care, or damages received by disabled workers under the Federal Employers' Liability Act of 1908 (FELA), which applies to interstate railroad workers disabled on the job. The Act *inter alia* allows workers to sue their employers for negligence in industrial accidents.[98]
- The cash benefits, medical care, and damages received by disabled workers under the Jones Act of 1920, which allows merchant seamen to sue their employers for negligence under statutory provisions similar to the FELA.[99]

98 The discussion of the Federal Employers' Liability Act of 1908 (FELA) is based on Williams and Barth (1973, 50-52).

99 The discussion of the Jones Act of 1920 is based on Williams and Barth (1973, 52).

- The benefits provided by the September 11th Victim Compensation Fund (VCF). The benefits are not limited to workers but are also available to “certain persons who lived, worked, or were near the World Trade Center on September 11, 2001.” (Szymendera, 2019).

Programs Provided by Employers and Other Remedies

Employee benefits plans other than workers’ compensation that provide cash or medical benefits to workers with disabilities should not be included as a cost of workers’ compensation since the plans are not based on a statute and/or are provided to workers whether or not their disabilities are work-related. These employee benefit plans include:

- Paid sick leave, as described on page 56 in the Addendum of the 2021 Academy Report.
- Long-term disability benefits, as described on page 57 of the Addendum to the 2021 Academy Report.
- Retirement benefits, as described on page 57 of the Addendum to the 2021 Academy Report.
- The damages received by workers in tort suits against employers or third parties because of negligence or other criteria for recovery (such as intentional injury). Tort suits do not meet the definition of a workers’ compensation program, since the recoveries are not based on a statutory remedy and/or because the recoveries require the employer to be negligent.

Benefits and costs associated with work-related injuries and diseases that should be included in Scope I of the Academy data based on the previous analysis

Benefits and Costs that Should Continue to be Included in Scope I of the Academy Report

- All benefits and costs used to prepare the tables in the Academy’s *2021 Report*.
- The benefits and costs of all special funds within the workers’ compensation system should be included as benefits and costs of the program. These funds include Second Injury Funds, Guaranty Funds, Uninsured Employer Funds, Benefit Adjustment funds for long-term beneficiaries, Occupational Disease Funds, and Return-to-work funds, among others.[100]
- Direct payments by workers to a workers’ compensation program should be included as costs of the program. As previously discussed, the payments by workers in New Mexico, Oregon, and Washington were included the Standard Approach beginning with the 2019 Academy Report on 2017 data.

Benefits and Costs that Should be Added to Scope I—Standard of the Academy Report (To the Extent these Benefits and Costs are not Already Included)

- The expenses incurred by state or federal agencies that administer workers’ compensation programs should be included as a cost of the programs. These expenses should include all items in an agency’s budget, including interest payments. In some states, the agencies’ costs are included as assessments on premiums charged by carriers and/or in assessments on self-insuring employers. In some state or federal programs, some or all of these administrative costs are paid from general revenues. All of these costs of administering the program should be included.
- Medical rehabilitation or vocational rehabilitation benefits that are a component of a state’s workers’ compensation program should be included as a benefit and a cost of the state’s workers’ compensation programs. However, vocational rehabilitation benefits for persons with disabilities provided by the federal-state Vocational Rehabilitation (VR) Program should not be considered benefits or costs of the work-

100 A compilation of the various types of special funds then in existence and of the variety of financing mechanisms for the funds is provided by Larson and Burton (1985, 117-57).

ers' compensation program, since these benefits are provided to many persons for whom the source of disability is not work-related.

- Expenditures for the prevention of injuries or diseases are already included in the Academy's estimates of the costs of workers' compensation if they are included in the premiums paid to workers' compensation carriers. The costs of workers' compensation should also include safety and health programs if the expenditures are included in the budgets of workers' compensation agencies. However, expenditures for the prevention of injuries or diseases should be excluded from the Academy estimates of the costs of workers' compensation if they are made by separate state or federal agencies, such as the Occupational Safety and Health Administration (OSHA). Expenditures for the prevention of injury or diseases should also be excluded from Academy estimates of the costs of workers' compensation if they are incurred by employers or workers but not included in workers' compensation premiums paid by employers or in payments by workers to the program. These excluded expenditures are important to improving workplace safety and health, but as a practical matter are beyond the scope of this report.

Benefits and costs that should continue to be excluded from the Academy report

The losses to workers of earnings (including wages or other employer-provided benefits) as a result of work-related injuries or diseases that are not compensated by workers' compensation programs should be excluded. The measurement of these losses is a legitimate and important subject for researchers and policy makers but is beyond the scope of the Academy reports. These losses include:

- Lost earnings that are not compensated because not all employers and employees are covered by workers' compensation programs

- Lost earnings that are not compensated because not all work-related injuries and diseases meet the compensability rules of workers' compensation programs

- Lost earnings during the temporary disability period that are not compensated because of waiting periods, maximum weekly benefits, replacement rates of less than less than 100 percent, or duration limits on temporary disability benefits.

- Lost earnings during the permanent disability periods that are not compensated because of maximum weekly benefits, replacement rates of less than 100 percent, or duration limits on permanent partial and permanent total disability benefits.

- Earnings losses of deceased workers that are not considered in determining death benefits because of maximum weekly benefits, replacement rates of less than 100 percent, or duration limits on survivors' benefits.

- The risk premiums in the wages received by workers for performing jobs with risks of injury or disease should not be included as benefits for workers or as costs for employers. The risk premiums are a legitimate and important subject for researchers and policy makers but are beyond the scope of this report.

- Employee benefits which go toward attorney's fees. The level of attorneys' fees is a legitimate and important subject for researchers and policy makers but is beyond scope of this report.

- Potential losses in workers' compensation cases that are settled with compromise and release (C&R) agreements, in which the workers and the employer (or insurance carrier) agree on a compromise on the amount of the benefits, the benefits are paid in a lump sum, and the employer is absolved of additional liability for the injury. These benefits should be captured in our state questionnaires under "compromise lump sum settlements", though any losses associated with the present value of a settlement potentially being lower than that of the claim which is settled are not discussed. There have been several studies of the effect of C&R agreements, which perhaps should be mentioned in the text of the Academy of annual report, but research on this topic is complicated and beyond the capability of the Academy.

- The loss of tax revenues to federal, state, and local governments because workers' compensation benefits are not taxable. There are costs to the governments in the loss of tax revenue, and there are benefits to workers because the benefits replace a higher percentage of lost wages than if benefits were taxable. The tax-free status of workers' compensation benefits is also probably advantageous to employers because the benefits are more adequate than taxable benefits would be, thus reducing the pressures on state legislatures to increase cash benefits. However, the effect of workers' compensation benefits not being taxable is beyond the scope of this report.

Appendix D: Workers' Compensation under State Laws

Table D identifies the parameters that determine workers' compensation benefits under the current laws in each jurisdiction.

The benefit parameters defined in this table include the following:

- The waiting period before a worker becomes eligible for cash benefits.
- The retroactive period when a worker becomes eligible for compensation for the waiting period.
- The minimum and maximum weekly benefit payments for temporary total disability.
- The maximum duration of temporary total disability benefits.
- The maximum weekly benefit and benefit limitations for permanent partial disability.
- The maximum weekly benefit and benefit limitations for permanent total disability.
- The maximum weekly benefit and benefit limitations for death benefits.

Table D

Workers' Compensation State Laws as of 2021

	Waiting Period		Temporary Total Disability (TTD)			Permanent Total Disability (PTD)				Permanent Partial Disability (PPD)		Death Benefits (DB)	
State	Waiting Period	Retro-active Period	Min Weekly Benefit	Max Weekly Benefit	Max Duration (Weeks)	Basis of PTD Calculation	Max Weekly Benefit	Max Duration (Weeks)	Limit to Monetary PTD Benefits	Max Weekly Benefit	Max Benefit for "Unscheduled Injuries"	Max Weekly Benefit[a]	Statutory Limit for Dependency Benefits
Alabama	3 days, TTD only	21 days	$253	$920	Duration of TTD disability	66 2/3% PIWW	$920	300	None	$920	300 weeks	$920	500 weeks
Alaska	3 days, for income benefits only	28 days	$286	$1,298	Until medically stable	80% of spendable earnings	$1,298	No	None	% of impairment x $177k, paid in lump sum[b]	No unscheduled PPD	$1,298	12 years[c]
Arizona	7 days	14 days	n/a	$1,258	Duration of TTD disability	66 2/3% AMW	$1,258	No	None	$1,258	None unless rearranged by Industrial Commission	$1,258	None[d]
Arkansas	7 days	14 days	$20	$736	450 weeks	66 2/3% PIWW	$736	No	None	$552	450 weeks	$736	$225,875; benefit in excess payable from Death and PD Trust Fund; stop at 18 for children, or 25 for full-time students
California	3 days	14 days	$195	$1,299	104 weeks[e]	66 2/3 of AWW	$1,299	No	None	f	none	$1,299	$320,000 Spouse plus Children[g]
Colorado	3 days	14 days	$364	$1,159	Duration of TTD disability	66 2/3% of AWW	$1,159	No	213,819	$337 for scheduled injuries; $1,159 unscheduled	400 weeks[h]	$1,159	None[d]
Connecticut	3 days	7 days	$275 or 75% of AWW	$1,373	Duration of TTD disability	75% (of after-tax income)	$1,373	No	None	$1,373	520 weeks plus healing period	$1,373	None
Delaware	3 days	7 days	$249	$748	Duration of TTD disability	66 2/3% AWW	$748	No	None	$748	300 weeks	Spouse = $748 With Children = $897	None
District of Columbia	3 days	14 days	$388	$1,554	Duration of TTD disability	66 2/3% PIWW	$1,554	No	None	$1,554	500 weeks; may petition for additional 167 weeks	$1,554	None

Florida	7 days	21 days	$20	$1,011	260 weeks, for other injuries 6 months	66 2/3% PIWW	$1,011	Age 75[i]	None	$690	2 weeks for each % of impairment from 1-10%; 3 weeks from 11-15%; 4 weeks from 16-20%; and 6 weeks for each rating over 21%	$1,011[j]	$150,000
Georgia	7 days	21 days	$50	$675	400 weeks unless catastrophic injury	66 2/3% PIWW	$675	400	None	$675	300 weeks	$675	$270,000 for surviving spouse with no dependents; 400 weeks or until age 65 if spouse remarries
Hawaii	3 days, TTD only	None	$228	$911	Duration of TTD disability	66 2/3% PIWW	$911	No	None	$911	312 weeks	Spouse = $683 With Children = $91	312 weeks
Idaho	5 days	14 days	$122	$734	Duration of TTD disability. Benefit continues in recovery period.	67% of AWW	$734	No	None	$448	500 weeks	Spouse = $367 With Children = $489	500 weeks
Illinois	3 days, TTD only	14 days	Varies w/ dependency[k]	$1,614	Duration of TTD disability	66 2/3% AWW	$1,614	No	None	$872	500 weeks	$1,614	$500,000 or 25 years[d]
Indiana	7 days	21 days	$50	$780	500 weeks[L]	66 2/3% AWW	$780	500 weeks[L]	$390,000	$780	$390,000	$780	$390,000 or 500 weeks[d]
Iowa	3 days; no waiting period for PPD	14 days	35% SAWW; $326	$1,864	Duration of TTD disability	80% (of spendable earnings)	$1,864	No	None	$1,715	500 weeks	$1,864	None[d]
Kansas	7 days	21 con- secutive days	$458	$687	Duration of TTD disability	66 2/3% AWW	$687	No	$155,000	$687	415 weeks; functional impairment only = $75,000, all other cases = $130,000	$687	$300,000
Kentucky	7 days	14 days	$184	$1,010	Duration of TTD disability; injuries & diseases after 7/14/18, award terminates upon age 70	66 2/3% AWW	$1,010	No	None	$757	425 weeks if rating is 50% or less; 520 wks if over 50%; limited to qualification for normal old age Social Security	Spouse = $504 With Children = $757	None
Louisiana	7 days	14 days	$188	$705	Duration of TTD disability	66 2/3% PIWW	$705	No	None	$705	520 weeks	$705	None

Table D continued

Workers' Compensation State Laws as of 2019 (implemented at various points)

	Waiting Period		Temporary Total Disability (TTD)			Permanent Total Disability (PTD)				Permanent Partial Disability (PPD)		Death Benefits (DB)	
State	Waiting Period	Retro-active Period	Min Weekly Benefit	Max Weekly Benefit	Max Duration (Weeks)	Basis of PTD Calculation	Max Weekly Benefit	Max Duration (Weeks)	Limit to Monetary PTD Benefits	Max Weekly Benefit	Max Benefit for "Unscheduled Injuries"	Max Weekly Benefit[a]	Statutory Limit for Dependency Benefits
Maine	7 days[m]	14 days	None	$1,112	520 weeks[n]	66 2/3% AWW; 80% after-tax AWW injuries prior to 1/13	$1,112	No	None	$1,112	None	$1,112; $899 from 1/13-12/19; $800 from 1/93-12/12	500 weeks
Maryland	3 days, TTD only	After 14 days	$50	$1,050	Duration of TTD disability	66 2/3% PIWW	$1,050	No	None	$788	None	$1,050	144 months[o]
Massa-chusetts	5 days	21 days	20% SAWW; $298	$1,488	156 weeks	60% AWW	$1,488	260	None	$1,488	None	SAWW at time of death; $1,488	250 weeks; time limit does not apply to children[d]
Michigan	7 days	14 days	$271	$1,083	Duration of TTD disability	80% (of spendable earnings)	$1,083	800 weeks[p]	None	$975	None	$975	500 weeks; time limit does not apply to children
Minnesota	3 days	10 days	$130 or the worker's actual wage, whichever is less	$1,167[q]	90 days after MMI or after end of retraining, up to a total of 130 weeks	66 2/3% PIWW	$1,167[q]	Until age 72 or 5 years after injury, whichever is later	None	$1,167[q]	$540,800	$1,167[q]	Benefits end after 10 years or 10 years after the last child is no longer depen-dent, minimum payable is $60,000
Mississippi	5 days[r]	14 days	$25	$523	450 weeks	66 2/3% AWW	$523	450	$235,422	$523	450 weeks	$523	450 weeks or $222,516
Missouri	3 days	14 days	$41	$1,012	400 weeks	66 2/3% PIWW	$1,012	No	None	$1,012	400 weeks	$1,012	None[d]
Montana	4 days or 32 hours, whichever is less	21 days or more[s]	None	$849	Disability until MMI, restrictions are identified and job analyses are approved, or return to work	66 2/3% PIWW	$849	Until injured worker qualifies for normal old age Social Security benefit	None	$424	400 weeks	$849	benefits cease to spouse at 500 weeks or upon remarriage but continue to any other beneficiaries
Nebraska	7 days	42 days	$49	$914	Until MMI or return to work	66 2/3% PIWW	$914	No	None	$914	300 weeks	$914	None
Nevada	5 days[t]	5 days[t]	None	$935	Duration of TTD disability	66 2/3% PIWW	$935	No	Per maximum compensation limit and formula	$935	Benefits paid for 5 years or to age 70, whichever is later	$935	None

New Hampshire	3 days	14 days or more	$337[u]	$1,686	Duration of TTD disability	90% of after-tax AWW	$1,686	No	None	$1,686	350 weeks for a whole person award	$1,686	None
New Jersey	7 days	7 days	$258	$969	400 weeks	70% PIWW	$969	600 weeks	None	$969	600 weeks	$969	Lifetime with exceptions
New Mexico	7 days	28 days	$36	$883	Disability rating of 80% or higher = 700 weeks; lower than 80% = 500 weeks	66 2/3% PIWW	$883	No	None	$883	$557,872 if disability rating > 80%; $398,480 if < 80%	$883	700 weeks[d]
New York	7 days, wage replacement benefits only	14 days	$100	$967	Duration of TTD disability	66 2/3% PIWW	$967	No	None	$967	525 weeks if loss of earning capacity greater than 95%	$967	None[d]
North Carolina	7 days	21 days	$30	$1,102	Duration of TTD disability	66 2/3% PIWW	$1,102	500 weeks[v]	None	$1,102	$20,000	$1,102	500 weeks
North Dakota	5 days	5 days	$620	$1,292	104 weeks or MMI 260 weeks	66 2/3% PIWW	$1,292	Until injured worker qualifies for normal old age Social Security benefit	None	$362	1500 weeks	$1,292	$300,000[d]
Ohio	7 days	14 days	$340	$1019; $679 if getting Social Security Retirement	Duration of TTD disability	72% PIWW for the first 12 weeks; 66 2/3% thereafter	$1019; $679 if getting Social Security Retirement	No	None	$340	225 weeks	$1,1019	None[d]
Oklahoma	3 days, TTD only	None	None	$629	104 weeks, with additional 52 weeks if consequential injury found	70% AWW	$899	15 years or upon reaching Social Security retirement age, whichever is longer	None	$350	350 weeks	Spouse = $629 With Children = $899	None[d]
Oregon	3 days	14 days	Not less than $50 or 90% AWW; whichever is less	$1,454	Duration of TTD disability	66 2/3% PIWW	$1,454[w]	Lifetime plus benefits to surviving spouse and children	None	$ 1,454[w]	None	Spouse = $729 With Children = $1,458	None
Pennsylvania	7 days	14 days	90% AWW if AWW is $628 or less	$1,130	Duration of TDD disability subject to conversion to partial benefits at 104 weeks[x]	66 2/3%	$1,130	Disability up to 500 weeks	None	$1,130	500 weeks	$1,130	None
Rhode Island	3 days	No payment for waiting period days	None	$1,304, up to 80% AWW	Duration of TTD disability	75% (of spendable income)	$1,304	No	None	$1,304	312 weeks, extendable if injury causes material obstacle to employment	$1,304	None, but ceases upon remarriage if no dependent children

Table D continued

Workers' Compensation State Laws as of 2021

	Waiting Period		Temporary Total Disability (TTD)			Permanent Total Disability (PTD)				Permanent Partial Disability (PPD)		Death Benefits (DB)	
State	Waiting Period	Retro-active Period	Min Weekly Benefit	Max Weekly Benefit	Max Duration (Weeks)	Basis of PTD Calculation	Max Weekly Benefit	Max Duration (Weeks)	Limit to Monetary PTD Benefits	Max Weekly Benefit	Max Benefit for "Unscheduled Injuries"	Max Weekly Benefit[a]	Statutory Limit for Dependency Benefits
South Carolina	7 days	14 days	$75 if wages are >$75; otherwise, comp rate is equal to wages	$903	Up to 500 weeks	66 2/3% PIWW	$903	500 weeks[y]	$451,700	$602	340 weeks	$903	500 weeks
South Dakota	7 consecutive days, TTD only	7 days	$415	$829	Duration of TTD disability	66 2/3% PIWW	$829	No	None	$829	312 weeks	Spouse = $829 With Children = $829 + $50 per child	None[d]
Tennessee	7 days	14 days	$149	$1,093	450 weeks	66 2/3% PIWW	$994	Until eligible for Social Security retirement	None	$994	450 weeks	$994	None, but ceases upon remarriage if no dependent children
Texas	7 days	14 days	$151	$1,007	104 weeks	TTD 70% AWW; PTD 75%; PPD 70%	$1,007	No	None	$705	401 weeks	$1,007	None[d]
Utah	3 days	14 days	$45	$954	312 weeks	66 2/3% AWW at time of injury not to exceed 85% of the SAWW	$954	No[z]	None	$636	312 weeks	$954	None; if spouse remarries, receives 52 weeks compensation in lump sum
Vermont	3 days TTD; 8 days PTD; no waiting period for medical benefits	10 days, TTD only	$514	$1,542	Duration of disability; insurer must review after 2 years	66 2/3% PIWW	$1,542	No	None	$1,542	405 weeks for non-spinal; 550 weeks spinal	$1,542	None[aa]
Virginia	7 days	21 days	$284	$1,137	500 weeks	66 2/3% PIWW	$1,137	No	None	$1,137	500 weeks	$1,195	500 weeks
Washington	The 3 days immediately following the DOI	14 calendar days immediately following the DOI	Varies with dependents[ab]	$1,608	Duration of TTD disability	60% to 75% (depending on marital status and number of children)	$1,608	None	None	$1,608	$205,485	$1,608	None[d] (exceptions for duty related law enforcement and fire fighter deaths)

West Virginia	3 days	7 consecutive days	$193	$885	104 weeks	66 2/3% PIWW	$885	Payable until age 70, for all PTD awards granted on or after 07/1/2003	None	$606	None	$885	None, benefits cease upon remarriage of surviving spouse
Wisconsin	3 days	7 non-consecutive days	20	$1,094	Duration of TTD disability	66 2/3% PIWW	$1,094	No	None	$362	1,000 weeks	$1,094	1,000 weeks, not to exceed 4 times the average annual earnings of deceased worker
Wyoming	3 days	9 days	SAMW ($283.80 1/21), or capped at 100% AMW	$946; 1/21 (updated quarterly)	24 months or in extraordinary circumstances may extend beyond to provide a reasonable recooperation period	66 2/3% PIMW or SAMW	$946; 1/21	Paid for 80 months then benefit becomes extended PTD and extended PTD must be renewed annually	None	$641	None	2x the SAMW + $250 per child	100 months can apply for benefits at 1/3rd SAMW each year following end of first 100 months.

a For both "Spouse Only" and "Spouse plus Children" unless otherwise noted.

b Unless claimant is in a reemployment training program, in which case PPI benefits can be paid at the weekly TTD rates.

c Benefit payable to widower ceases 12 years after death date, unless at time of death widow/er is PTD or reaches age 52 before the 12 years expire. Children eligible to receive DB until 18 years old; or if 19 or older and is wholly dependent upon the deceased employee and incapable of self-support by reason of mental or physical disability; and persons of any age while they are attending the first four years of vocational school, trade school, or college; and persons of any age while they are attending high school.

d Two-year lump sum upon remarriage by surviving spouse.

e There are some limited exceptions where benefits can be paid for 240 weeks.

f See California Labor Code Section 4658.

g Amount may be higher based on Labor Code 4703.5.

h Or at 5 years following determination of PTD for an accident date on or after an employee reaches age 70.

i Benefits can extend beyond age 75 if the individual does not qualify for Social Security benefits due to the injury resulting in many missed quarters of work, thus preventing eligibility for Social Security benefits.

j Spouse also entitled to tuition benefit at vocational technical center or community college.

k Illinois—Minimum TTD rate and PPD rate if not amputation of a body member or enucleation of an eye is $220 if unmarried and no dependents, with a maximum of $330 if four or more dependents. In all cases, claimant receives rate based on actual wages if less than statutory maximum.

L After 500 weeks, additional benefits are payable from second injury fund in 150-week incrememnts. TTD benefits subject to child support withholding.

m Does not apply to firefighters.

n 520 weeks under §213. No durational limit under §212.

o 144 months or on the date of what would have been the 70th birthday of the deceased employee, provided that a minimum of 5 years of death benefits has been paid.

p 800 weeks conclusive payment with factual determination therefater.

q 102% of SAWW.

r Any day on which a worker earns less than full wage because of an injury is considered a day of disability for the waiting period, and neither the 5 day period nor the 14-day period have to consist of consecutive calendar days.

s Unless the worker waives the retroactive payment and receives sick leave benefit from the employer instead.

t Consecutive or cumulative days within a 20 day period, TTD only

Table D continued

Workers' Compensation State Laws as of 2021

u If AWW is 30 percent or less of SAWW, employee is compensated at rate equal to their AWW, but not to exceed 90 percent of employee's after-tax earnings.

v And extended by commission if employee has sustained a total loss of wage-earning capacity.

w If the worker returns to work, the workers' wages plus PTD may not exceed the workers' wage at injury.

x Disability under PA laws means loss of earning power. PA law allows employer/insurer to request "Impairment Rating Examination" after employee has received 104 weeks of full benefit payments.
If IRE shows less than 50% impairment based on AMA Guides then benefits are reclassified as partial disability compensation and are subject to a 500-week cap.

y Except for paraplegic, quadrpalegic, or brain damage benefits for life.

z PTD benefits are awarded for life, but PTD status may be reexamined by submitting employee to reasonable medical evaluations, rehabilitation & retraining efforts, disclosure of Federal Income Tax returns.

aa There is no statutory limit but after minimum of 330 weeks spousal benefits end at age 62 when eligible for Social Security, or with remarriage.

ab $43.19 if DOI prior to 7/08. If DOI after 7/08, 15% of the statewide SAMW+$10 for spouse+$10 for each dependent up to 5 dependents, capped at 100% gross wages.

PIWW	Pre-injury Weekly wage
PIMW	Pre-injury Monthly wage
AWW	Average weekly wage
NWW	Net weekly wage
SAWW	State-wide average weekly wage
SAMW	State-wide average monthly wage
AMW	Average Monthly wage

Sources: U.S. Chamber of Commerce (2021); Alaska Department of Labor and Workforce Development; Colorado Division of Workers' Compensation; Delaware Department of Labor; Kentucky Department of Workers' Claims; Louisiana Department of Labor; Massachusetts Labor and Workforce Department; Minnesota Labor and Industry; New York Workers' Compensation Board; North Dakota Workforce Safety & Insurance; Ohio Bureau of Workers' Compensation; South Dakota Department of Labor and Regulation; Washington Department of Labor and Industries; Wyoming Department of Workforce Services

Appendix E: Comparing the NASI and Oregon Workers' Compensation Reports

Information on state workers' compensation costs can be compiled from a variety of sources, using various methods that are tailored to specific uses. There is no single method that is appropriate to all uses. Appendix E compares the sources and methods used to prepare two of the most widely known publications that relate to employer cost across states, done by NASI and the State of Oregon. It is important to note that neither study is designed to evaluate the effectiveness or efficiency of state systems, an analysis that would require a very different approach.

Comparing the NASI and Oregon Workers' Compensation Reports

Title/type of report	National Academy of Social Insurance, ***Workers' Compensation Benefits, Costs, and Coverage***	Oregon Dept. of Consumer and Business Services, ***Oregon Workers' Compensation Premium Rate Ranking***
Purpose of study	Provides information on annual worker's compensation benefits, costs, and coverage that SSA provided until 1995, at both the national and state levels, so that researchers, policymakers, others can assess trends etc.	To compare Oregon's worker's compensation premium rates with those of other states, initially because the state had one of the highest rates in the US. Results are reported to the Oregon legislature as a performance measure on the relative costs of doing business, and are used similarly by other states and business organizations.
Data/ information provided	As per the title, provides data on national- and state-level worker's compensation benefits, costs, and coverage	"Compares average manual rates, rates for expected claim costs plus factors for insurer expense and profit"
Frequency of Publication	Annual since 1997	Biannual (every other year) since 1986
Data source(s)	State agency surveys, A.M. Best, NCCI, estimates based on these and on state public reports	State rate-making data from NCCI and other rating agencies, and state insurance regulators.
50 states and DC	Yes	Yes
In which ways are data comparable across states?	For every state, the report provides benefits, costs, and coverage (and benefits and costs standardized to per $100 of wages)	Comparable based on Oregon's industry mix; uses NCCI classification codes to establish constant set of risk classifications for each state.*
Caveats in interpreting the data	This report aggregates costs to employers and benefits paid to employees and medical care providers. It does not include any adjustment for industrial mix across states, so it is impossible to know whether a state with lower costs is safer due to industrial mix, safer due to better safety practices within industries, more efficient in providing benefits, or poses greater barriers for injured workers to access workers'compensation benefits. With no standardization of differences in injury risk across states, assessing the impact of a state's laws on benefit and cost levels is difficult and not comparable across states.	This report compares base insurance rates between states for the same industries. It is impossible to know whether a state with lower rates has employers with better safety practices, is more efficient in providing benefits, or sets up greater barriers for injured workers to access workers' compensation benefits. Self-insured employers are not included, and benefits are beyond the scope of the study.

* In states that do not use the NCCI classification system, the report uses classes similar to the NCCI classes.

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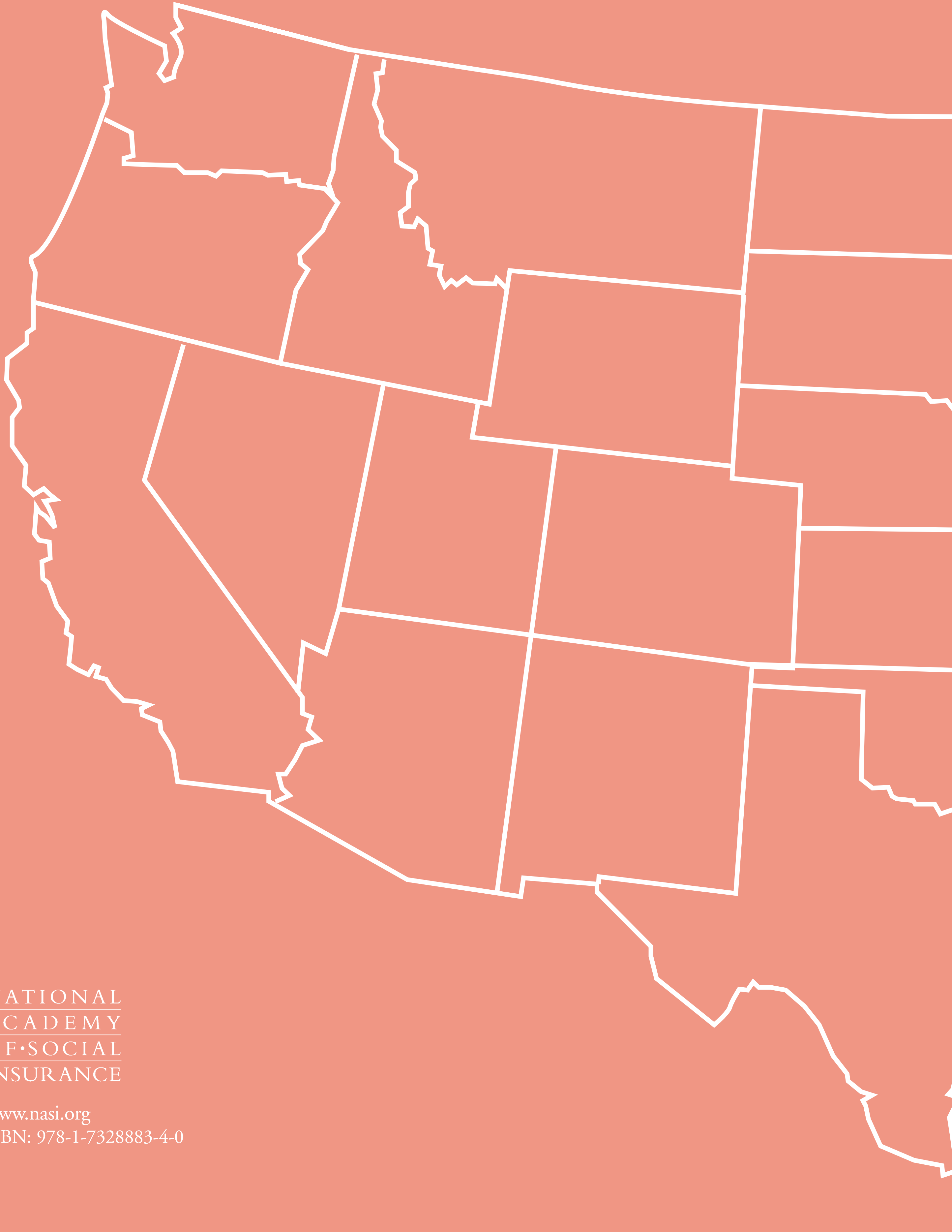

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