

WORKERS' COMPENSATION POLICY REVIEW

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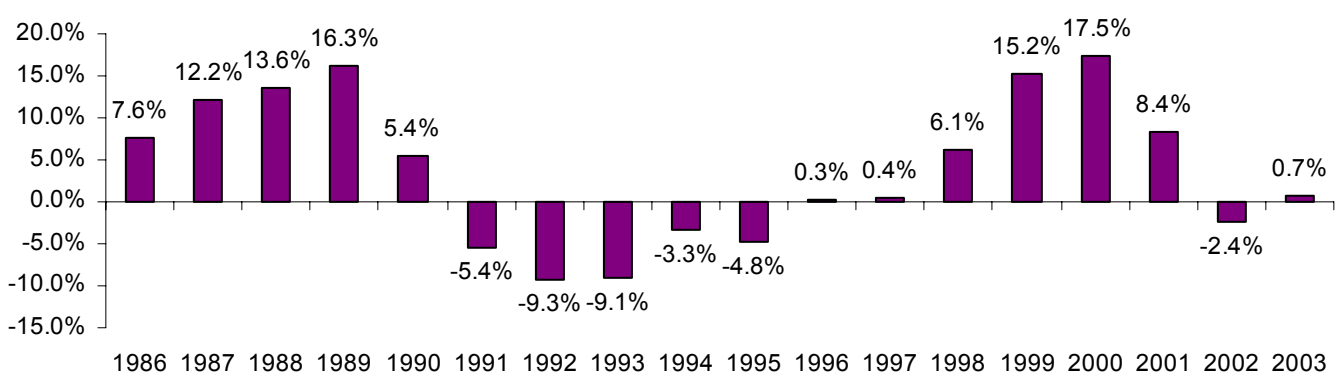
This issue is being distributed in November 2007. The next issue will follow shortly.

Workers' compensation incurred benefits per 100,000 workers vary significantly among jurisdictions in a particular year as well as nationally over time. This issue provides information on cash benefits, medical benefits, and total (cash plus medical) benefits per 100,000 workers for up to 48 jurisdictions for each of the years between 1985 and 2003.

Figures A provides an historical record of changes in the national averages of total benefits per 100,000 workers for the same 42 jurisdictions between 1985 and 2003. The national data exhibit interesting developments over time. Total benefits increased for the five years between 1986 and 1990; declined for the five years between 1991 and 1995; marked time in 1996 and 1997; increased for the four years between 1998 and 2001; and then were essentially unchanged in 2002 and 2003. As indicated in the article, the results in the two most recent years reflect a modest decline in cash benefits per 100,000 workers coupled with a slight increase in medical benefits per 100,000 workers.

The article also examines the changes in cash and medical benefits (as well as total benefits) from 1985 to 2003 for individual states. One interesting finding is that the interstate differences in cash, medical, and total benefits narrowed considerably over these 19 years, although there was a modest increase in the dispersion of medical and total benefits per 100,000 workers among the states between 1998 and 2003.

Figure A
Changes in Total (Cash plus Medical) Benefits per 100,000 Workers
(Percentage Increase from Preceding Year)



Source: Table 2, Panel B.

A Book of Possible Interest to Subscribers

Employment Law: Cases and Materials: Fourth Edition has recently been published by LexisNexis. The volume, written by Steven L. Willborn, Steward J. Schwab, John F. Burton, Jr., and Gillian L. L. Lester, is widely used in courses in law schools and graduate programs in employment relations, and should be valuable for practicing attorneys and others interested in an overview of employment law. John Burton was the lead author on Part VIII of the book, which contains these headings:

Part VIII. Workplace Injuries and Diseases

Chapter 21. The Prestatutory Approaches

- A. The Labor Market
- B. Tort Suits

Chapter 22. Workers' Compensation

- A. The Origins of Workers' Compensation
- B. An Overview of Current Workers' Compensation Programs
- C. The Exclusivity of Workers' Compensation
- D. Which Injuries are Compensable?
- E. Which Diseases are Compensable?
- F. Injuries and Diseases for Which Compensability is Problematic
- G. Cash Benefits
- H. Medical and Rehabilitation Benefits

Chapter 23. The Occupational Safety and Health Act

- A. An Overview of the Act
- B. Substantive Criteria for OSHA Standards
- C. Legal Challenges to Permanent Standards
- D. The General Duty Clause
- E. Enforcement
- F. Employee Rights and Responsibilities
- G. Federal Versus State Authority for Workplace Safety and Health

Chapter 24. Rethinking the Approaches to Workplace Injuries and Diseases

- A. The Labor Market
- B. Tort Suits
- C. Workers' Compensation
- D. The Occupational Safety and Health Act

Employment Law: Cases and Materials: Fourth Edition. 1167 Pages plus Table of Cases and Index. \$94.00 hardcover. ISBN 0-8205-7089-3. Published 2007.

Employment Law: Selected Federal and State Statutes. 2007 Edition. 482 Pages. \$24.00 paperback. ISBN 0-8205-7091-5.

Available from LexisNexis, 1275 Broadway, Albany, NY 12204. Phone: 1-800-223-1940. Online: www.lexisnexis.com

Workers' Compensation Incurred Benefits: 1985-2003

by John F. Burton Jr. and Florence Blum

Workers' compensation incurred benefits increased nationally by 0.7 percent in 2003 from the previous year. The data in Figure A show the annual changes for 19 years in total benefits (cash plus medical benefits) per 100,000 workers. The results are based on information from 42 states.

The results in Figure A document the substantial fluctuations over time in benefits provided by the workers' compensation program. From 1986 until 1990, benefits increased by over five percent in every year and were up by at least twelve percent a year between 1987 and 1989. Then benefits declined in every year between 1991 and 1995, with the sharpest drops in 1992 and 1993 exceeding nine percent. Benefits were relatively tranquil in 1996 and 1997, increasing by less than one percent a year. Total incurred benefits then increased by 6.1 percent in 1998, by 15.2 percent in 1999, by 17.5 percent in 2000, and by 8.4 percent in 2001, before declining by 2.4 percent in 2002. There was a slight increase in benefits in 2003 of 0.7 percent. The increases in 1999 and 2000 were particularly noteworthy because these were the first double-digit increases since 1989. However, the increase of 8.4 percent in 2001 represented only about half the rate of increase in the two previous years, and the decline in incurred benefits in 2002 represented the first negative number since 1995.

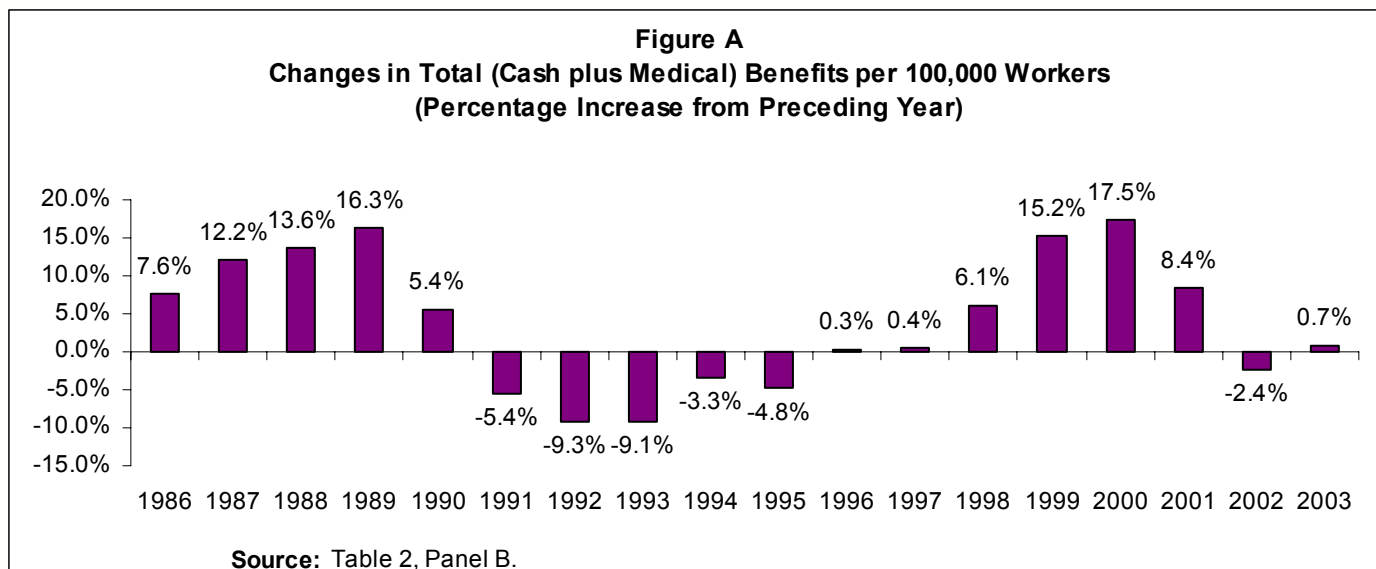
The recent experience in national workers' compensation benefit payments is also interesting when the

data are separated into cash benefits and medical benefits. As shown in Figure B, cash benefits had increased by 13.1 percent in 1999 and 14.1 percent in 2000, and so the modest increase of 3.0 percent in 2001 and the declines of 3.1 percent in 2002 and 3.3 percent in 2003 are striking. The pattern for medical benefits in the last five years is also striking. Medical benefits had increased 17.5 percent in 1999 and 21.0 percent in 2000, but then medical benefits slowed to a 13.5 percent increase in 2001 and experienced a 1.9 percent decline in 2002 before increasing again to 4.1 percent in 2003.

Plan for Article

A previous article (Burton and Blum 2006) presented tables and figures containing information on cash benefits, medical benefits, and total (cash and medical benefits) per 100,000 workers for 1985 to 2002. The present article updates these traditional tables and figures through 2003, the latest year for which data are currently available. This article also contains Appendix A and Appendix B, which provide extended discussions of our methodology and sources of data for these articles.

Another previous article (Blum and Burton 2006) provided three additional types of data on incurred benefits in 2002. First, we included state data on frequency of claims per 100,000 workers for four types of cash benefits, for all cash benefits, and for medical



benefits. Second, we provided state data on average benefits per claim for the four types of cash benefits, for all cash benefits, and for medical benefits. Third, we provided state data on benefits per 100,000 workers for four types of cash benefits, for all cash benefits, and for medical benefits. This previous article (Blum and Burton 2006) will be updated through 2003 in the September/October 2007 issue of the *Workers' Compensation Policy Review*.

National Data

The incurred benefits per 100,000 workers for 2003 in the 47 jurisdictions for which we have data for that year are provided in Table 1.2003. Similar data for 1998 to 2002 are included in Table 1.1998 to Table 1.2002.

Panel A of Table 1.2003 presents information on cash benefits, Panel B provides the data for medical benefits, and Panel C presents data for total (cash plus medical) benefits. As explained in Appendix A, we primarily rely on information published by the National Council on Compensation Insurance (NCCI) to develop our data. The NCCI publishes information on the frequency per 100,000 workers and the average cost per claim for four types of cash benefits: temporary total, permanent partial disability, permanent total, and fatal. We multiply the NCCI frequency and average cost per claim to obtain the cash benefits per 100,000 workers for each of the four types of cash benefits. The sum of these four types of cash benefits is \$15,928,586 per 100,000 Alabama workers in 2003, as shown in column (1) of Table 1.2003.

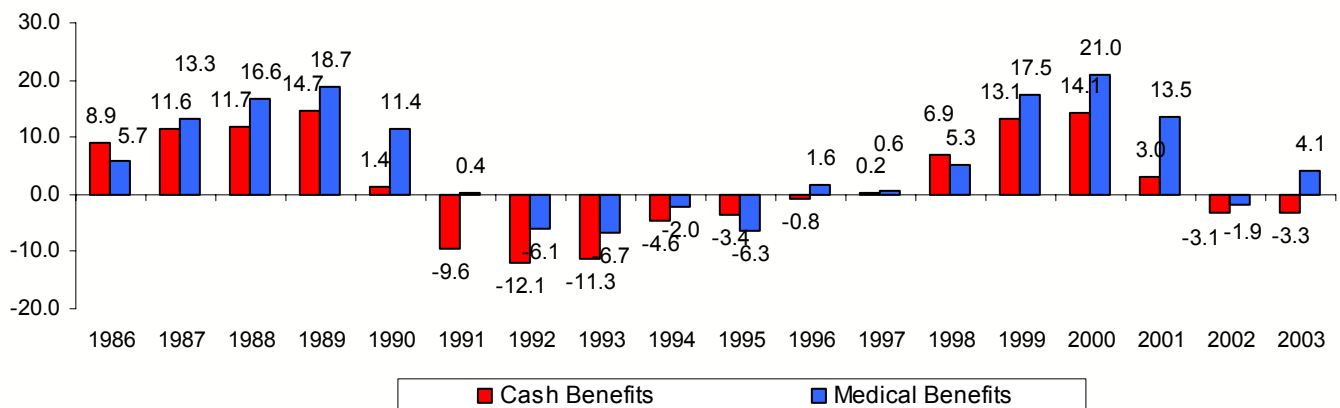
The derivation of the medical benefits per 100,000 workers in Panel B of Table 1.2003 is straightforward.

The NCCI publishes the frequency of medical claims per 100,000 workers and the average medical benefits per claim. The data are for all claims, including the medical benefits in claims with cash benefits and the medical benefits in claims without cash benefits (the "medical only" category). We multiply the NCCI frequency and average cost per claim to obtain the medical benefits per 100,000 workers. The result of this multiplication for Alabama for 2003 is the medical benefits of \$41,947,103 per 100,000 workers in column (4) of Table 1.2003.

The derivation of the total (cash plus medical) benefits per 100,000 workers in Panel C of Table 1.2003 is also straightforward. For example, the 2003 Alabama total benefits of \$57,875,689 per 100,000 workers in column (7) are the sum of the cash benefits of \$15,928,586 in column (1) and the medical benefits of \$41,947,103 in column (4) of Table 1.2003.

The data from Tables 1.1998 through Table 1.2003 and similar tables for earlier years were used to produce the national data in Table 2.¹ Panel A of the table shows the national averages for cash benefits, medical benefits, and total (cash plus medical) per 100,000 workers for all of the states available in each year between 1985 and 2003.² Comparisons among years of the data in Panel A are inappropriate, however, because the number of states used to calculate the national average varies from year to year, depending on the available data. Nevada data, for example, only became available in 1996 after private carriers were permitted to provide workers' compensation insurance in the state. Since Nevada has paid above average benefits in 1996 to 1999 (as shown in Tables 1.1999 and similar tables for earlier years), the national averages for 1996 to 1999 shown in Panel A of Table 2 are not

Figure B
Changes in Benefits per 100,000 Workers
(Percentage Increases from Preceding Year)



Source: Tables 2, Panel B.

Table 1.1998 - Benefits Per 100,000 Workers For Employers Who Purchase Workers' Compensation Insurance for 1998

State	Panel A: Cash Benefits			Panel B: Medical Benefits			Panel C: Total (Cash plus Medical) Benefits		
	Dollar Amount (1)	State's Benefit as a Percentage of US Average (2)	Rank Among 48 Jurisdictions (3)	Dollar Amount (4)	State's Benefit as a Percentage of US Average (5)	Rank Among 48 Jurisdictions (6)	Dollar Amount (7)	State's Benefit as a Percentage of US Average (8)	Rank Among 48 Jurisdictions (9)
Alabama	15,226,695	71.4	34	29,596,060	143.5	6	44,822,755	106.9	15
Alaska	32,041,964	150.3	7	42,083,468	204.0	2	74,125,432	176.7	3
Arizona	12,596,351	59.1	40	22,113,233	107.2	21	34,709,584	82.8	31
Arkansas	7,935,592	37.2	47	13,554,894	65.7	44	21,490,486	51.2	46
California	35,198,318	165.2	4	26,930,227	130.5	8	62,128,545	148.1	4
Colorado	25,786,175	121.0	9	19,543,163	94.7	25	45,329,338	108.1	14
Connecticut	21,515,808	101.0	17	15,542,328	75.3	39	37,058,136	88.4	26
Delaware	17,486,752	82.1	24	28,123,032	136.3	7	45,609,784	108.7	12
Dis. Of Columbia	9,035,521	42.4	44	6,701,778	32.5	48	15,737,299	37.5	48
Florida	21,695,623	101.8	16	34,697,526	168.2	3	56,393,149	134.5	6
Georgia	13,843,820	65.0	36	13,333,632	64.6	45	27,177,452	64.8	42
Hawaii	22,927,904	107.6	12	15,988,405	77.5	34	38,916,309	92.8	22
Idaho	18,303,668	85.9	22	23,274,660	112.8	13	41,578,328	99.1	18
Illinois	20,474,229	96.1	20	16,781,064	81.3	30	37,255,293	88.8	25
Indiana	6,808,609	31.9	48	14,516,074	70.4	42	21,324,683	50.8	47
Iowa	16,689,070	78.3	28	16,454,998	79.8	32	33,144,068	79.0	33
Kansas	13,059,610	61.3	39	17,283,237	83.8	29	30,342,847	72.3	39
Kentucky	10,535,903	49.4	43	22,597,500	109.5	19	33,133,403	79.0	34
Louisiana	21,278,964	99.8	18	23,302,814	112.9	12	44,581,778	106.3	16
Maine	22,528,307	105.7	13	21,561,045	104.5	22	44,089,352	105.1	17
Maryland	17,498,158	82.1	23	17,565,845	85.1	28	35,064,003	83.6	30
Massachusetts	22,261,789	104.5	15	10,888,325	52.8	47	33,150,114	79.0	32
Michigan	16,421,779	77.1	29	15,932,896	77.2	36	32,354,675	77.1	36
Minnesota	14,815,267	69.5	35	15,674,592	76.0	38	30,489,859	72.7	38
Mississippi	13,640,867	64.0	37	17,763,791	86.1	27	31,404,658	74.9	37
Missouri	18,949,912	88.9	21	19,767,328	95.8	24	38,717,240	92.3	23
Montana	23,425,055	109.9	11	30,482,300	147.7	5	53,907,355	128.5	7
Nebraska	15,869,326	74.5	31	21,120,307	102.4	23	36,989,633	88.2	27
Nevada	33,751,347	158.4	5	26,351,731	127.7	9	60,103,078	143.3	5
New Hampshire	16,877,718	79.2	27	24,450,607	118.5	11	41,328,325	98.5	19
New Jersey	15,337,869	72.0	33	11,313,540	54.8	46	26,651,409	63.5	43
New Mexico	12,149,963	57.0	41	17,811,960	86.3	26	29,961,923	71.4	40
New York	36,708,620	172.2	3	16,112,624	78.1	33	52,821,244	125.9	8
North Carolina	21,058,745	98.8	19	14,825,559	71.9	41	35,884,304	85.6	28
Oklahoma	25,500,344	119.7	10	23,105,104	112.0	15	48,605,448	115.9	10
Oregon	15,750,014	73.9	32	22,691,900	110.0	17	38,441,914	91.7	24
Pennsylvania	26,473,154	124.2	8	22,669,524	109.9	18	49,142,678	117.2	9
Rhode Island	33,348,862	156.5	6	15,092,245	73.2	40	48,441,107	115.5	11
South Carolina	17,016,808	79.8	26	15,980,130	77.5	35	32,996,938	78.7	35
South Dakota	8,923,879	41.9	45	15,881,454	77.0	37	24,805,333	59.1	44
Tennessee	17,358,665	81.5	25	22,205,820	107.6	20	39,564,485	94.3	21
Texas	15,938,978	74.8	30	25,234,902	122.3	10	41,173,880	98.2	20
USL&HW	137,951,809	647.3	1	123,542,725	598.8	1	261,494,534	623.5	1
Utah	8,449,098	39.6	46	14,179,420	68.7	43	22,628,518	54.0	45
Vermont	22,467,364	105.4	14	23,141,808	112.2	14	45,609,172	108.7	13
Virginia	11,048,245	51.8	42	16,591,207	80.4	31	27,639,452	65.9	41
West Virginia	43,961,146	206.3	2	32,083,898	155.5	4	76,045,044	181.3	2
Wisconsin	13,120,906	61.6	38	22,714,992	110.1	16	35,835,898	85.4	29
National Average*	21,311,948			20,631,176			41,943,124		

* Weighted averaged based on 47 jurisdictions (including the District of Columbia), using 1998 state employment as weights. Data from USL&HW were not used to calculate national averages.

Sources: NCCI, *Annual Statistical Bulletin*, 1986-2007 editions.

Table 1.1999 - Benefits Per 100,000 Workers For Employers Who Purchase Workers' Compensation Insurance for 1999

State	Panel A: Cash Benefits			Panel B: Medical Benefits			Panel C: Total (Cash plus Medical) Benefits		
	Dollar Amount (1)	State's Benefit as a Percentage of US Average (2)	Rank Among 47 Jurisdictions (3)	Dollar Amount (4)	State's Benefit as a Percentage of US Average (5)	Rank Among 47 Jurisdictions (6)	Dollar Amount (7)	State's Benefit as a Percentage of US Average (8)	Rank Among 47 Jurisdictions (9)
Alabama	15,426,077	65.3	36	33,886,327	140.9	6	49,312,404	103.4	12
Alaska	37,853,055	160.1	4	48,604,268	202.1	3	86,457,323	181.3	3
Arizona	11,962,923	50.6	42	20,681,498	86.0	23	32,644,421	68.5	37
Arkansas	9,466,677	40.1	44	15,518,992	64.5	41	24,985,669	52.4	45
California	49,490,943	209.4	2	40,512,979	168.5	5	90,003,922	188.7	2
Colorado	25,105,994	106.2	11	22,207,256	92.3	21	47,313,250	99.2	14
Connecticut	25,075,959	106.1	12	19,683,772	81.8	28	44,759,731	93.9	20
Delaware	21,951,558	92.9	17	29,575,856	123.0	10	51,527,414	108.1	10
Dis. Of Columbia	8,521,285	36.1	45	4,893,287	20.3	47	13,414,572	28.1	47
Florida	22,481,381	95.1	15	40,888,249	170.0	4	63,369,630	132.9	5
Georgia	16,002,153	67.7	34	16,342,370	68.0	38	32,344,523	67.8	40
Hawaii	26,693,799	112.9	9	19,290,849	80.2	29	45,984,648	96.4	18
Idaho	16,564,598	70.1	32	24,549,634	102.1	16	41,114,232	86.2	24
Illinois	22,347,574	94.5	16	18,641,822	77.5	30	40,989,396	86.0	25
Indiana	7,808,679	33.0	47	16,335,483	67.9	39	24,144,162	50.6	46
Iowa	17,695,405	74.9	27	18,293,515	76.1	32	35,988,920	75.5	32
Kansas	13,894,175	58.8	38	18,450,782	76.7	31	32,344,957	67.8	39
Kentucky	13,707,326	58.0	39	29,097,752	121.0	11	42,805,078	89.8	22
Louisiana	27,208,445	115.1	7	28,756,560	119.6	12	55,965,005	117.4	7
Maine	19,241,275	81.4	24	20,665,311	85.9	24	39,906,586	83.7	26
Maryland	18,300,074	77.4	25	15,253,886	63.4	42	33,553,960	70.4	36
Massachusetts	22,524,333	95.3	14	11,733,878	48.8	46	34,258,211	71.8	34
Michigan	20,038,794	84.8	20	15,879,975	66.0	40	35,918,769	75.3	33
Minnesota	17,924,611	75.8	26	21,685,040	90.2	22	39,609,651	83.1	28
Mississippi	17,214,024	72.8	28	22,410,323	93.2	20	39,624,347	83.1	27
Missouri	21,656,128	91.6	18	20,634,588	85.8	25	42,290,716	88.7	23
Montana	20,882,746	88.4	19	56,432,660	234.7	2	77,315,406	162.1	4
Nebraska	16,464,972	69.7	33	19,784,460	82.3	27	36,249,432	76.0	31
Nevada	30,949,038	130.9	6	25,632,889	106.6	14	56,581,927	118.7	6
New Hampshire	16,792,530	71.0	31	30,810,270	128.1	7	47,602,800	99.8	13
New Jersey	15,824,743	67.0	35	12,144,040	50.5	45	27,968,783	58.7	43
New Mexico	12,470,584	52.8	41	20,043,285	83.3	26	32,513,869	68.2	38
New York	32,302,645	136.7	5	13,504,260	56.2	44	45,806,905	96.1	19
North Carolina	19,652,352	83.1	23	14,408,082	59.9	43	34,060,434	71.4	35
Oklahoma	24,264,982	102.7	13	22,573,901	93.9	19	46,838,883	98.2	17
Oregon	16,985,624	71.9	29	29,952,282	124.5	9	46,937,906	98.4	16
Pennsylvania	26,087,505	110.4	10	24,608,140	102.3	15	50,695,645	106.3	11
Rhode Island	39,429,996	166.8	3	16,381,452	68.1	37	55,811,448	117.0	8
South Carolina	19,944,494	84.4	21	17,251,789	71.7	34	37,196,283	78.0	30
South Dakota	12,895,674	54.6	40	16,680,428	69.4	36	29,576,102	62.0	41
Tennessee	19,894,135	84.2	22	22,976,062	95.5	18	42,870,197	89.9	21
Texas	16,813,869	71.1	30	30,197,496	125.6	8	47,011,365	98.6	15
USL&HW	170,498,753	721.4	1	93,944,781	390.6	1	264,443,534	554.6	1
Utah	8,515,016	36.0	46	16,925,279	70.4	35	25,440,295	53.4	44
Vermont	26,936,867	114.0	8	27,746,395	115.4	13	54,683,262	114.7	9
Virginia	11,914,706	50.4	43	17,366,939	72.2	33	29,281,645	61.4	42
Wisconsin	14,869,191	62.9	37	23,819,910	99.0	17	38,689,101	81.1	29
National Average*	23,636,036			24,049,366			47,685,403		

* Weighted averaged based on 46 jurisdictions (including the District of Columbia), using 1999 state employment as weights. Data from USL&HW were not used to calculate national averages.

Sources: NCCI, Annual Statistical Bulletin, 1986-2007 editions.

Table 1.2000 - Benefits Per 100,000 Workers For Employers Who Purchase Workers' Compensation Insurance for 2000

State	Panel A: Cash Benefits			Panel B: Medical Benefits			Panel C: Total (Cash plus Medical) Benefits		
	Dollar Amount (1)	State's Benefit as a Percentage of US Average (2)	Rank Among 47 Jurisdictions (3)	Dollar Amount (4)	State's Benefit as a Percentage of US Average (5)	Rank Among 47 Jurisdictions (6)	Dollar Amount (7)	State's Benefit as a Percentage of US Average (8)	Rank Among 47 Jurisdictions (9)
Alabama	16,047,766	60.4	37	33,332,167	115.7	8	49,379,933	89.1	14
Alaska	46,866,194	176.3	3	59,585,060	206.7	3	106,451,254	192.1	3
Arizona	11,590,050	43.6	42	26,115,304	90.6	17	37,705,354	68.0	34
Arkansas	10,617,075	39.9	44	18,125,157	62.9	36	28,742,232	51.9	43
California	62,016,464	233.2	2	67,129,485	232.9	2	129,145,949	233.1	2
Colorado	23,931,102	90.0	15	23,708,102	82.3	22	47,639,204	86.0	20
Connecticut	27,494,300	103.4	8	21,826,723	75.7	28	49,321,023	89.0	15
Delaware	23,472,200	88.3	16	30,474,744	105.7	11	53,946,944	97.4	10
Dis. Of Columbia	7,540,475	28.4	47	6,313,742	21.9	47	13,854,217	25.0	47
Florida	22,953,651	86.3	19	35,967,085	124.8	5	58,920,736	106.3	4
Georgia	17,417,263	65.5	33	17,082,719	59.3	38	34,499,982	62.3	40
Hawaii	26,931,837	101.3	10	19,453,945	67.5	33	46,385,782	83.7	22
Idaho	16,309,039	61.3	36	24,233,086	84.1	20	40,542,125	73.2	29
Illinois	24,130,344	90.8	14	19,125,939	66.4	34	43,256,283	78.1	27
Indiana	8,362,893	31.5	46	16,957,937	58.8	39	25,320,830	45.7	46
Iowa	18,875,615	71.0	27	19,533,374	67.8	32	38,408,989	69.3	33
Kansas	15,246,084	57.3	40	20,837,534	72.3	31	36,083,618	65.1	38
Kentucky	18,564,506	69.8	28	36,538,155	126.8	4	55,102,661	99.4	8
Louisiana	27,843,952	104.7	6	28,504,380	98.9	13	56,348,332	101.7	6
Maine	21,151,493	79.5	24	23,984,341	83.2	21	45,135,834	81.5	24
Maryland	18,148,439	68.3	29	14,385,318	49.9	44	32,533,757	58.7	42
Massachusetts	24,572,585	92.4	12	12,113,265	42.0	45	36,685,850	66.2	36
Michigan	23,309,415	87.7	17	18,327,801	63.6	35	41,637,216	75.1	28
Minnesota	19,759,875	74.3	25	24,398,199	84.7	19	44,158,074	79.7	25
Mississippi	16,798,832	63.2	34	23,555,200	81.7	24	40,354,032	72.8	30
Missouri	23,123,721	87.0	18	22,238,219	77.2	26	45,361,940	81.9	23
Montana	22,041,736	82.9	21	33,838,347	117.4	7	55,880,083	100.8	7
Nebraska	17,848,408	67.1	31	22,375,582	77.6	25	40,223,990	72.6	31
Nevada	27,554,825	103.6	7	23,681,295	82.2	23	51,236,120	92.5	13
New Hampshire	19,384,395	72.9	26	29,199,103	101.3	12	48,583,498	87.7	19
New Jersey	17,903,710	67.3	30	14,934,434	51.8	43	32,838,144	59.3	41
New Mexico	15,271,791	57.4	39	21,707,709	75.3	29	36,979,500	66.7	35
New York	40,024,344	150.5	4	16,381,839	56.8	41	56,406,183	101.8	5
North Carolina	21,397,299	80.5	23	15,242,871	52.9	42	36,640,170	66.1	37
Oklahoma	24,269,131	91.3	13	24,411,467	84.7	18	48,680,598	87.9	18
Oregon	17,787,793	66.9	32	31,391,192	108.9	9	49,178,985	88.8	16
Pennsylvania	27,441,113	103.2	9	27,153,442	94.2	14	54,594,555	98.5	9
Rhode Island	28,408,272	106.8	5	11,153,722	38.7	46	39,561,994	71.4	32
South Carolina	22,394,380	84.2	20	20,880,145	72.4	30	43,274,525	78.1	26
South Dakota	12,885,358	48.5	41	22,160,460	76.9	27	35,045,818	63.2	39
Tennessee	21,931,524	82.5	22	26,946,812	93.5	15	48,878,336	88.2	17
Texas	16,647,247	62.6	35	35,535,630	123.3	6	52,182,877	94.2	12
USL&HW	146,272,341	550.1	1	134,587,200	467.0	1	280,859,541	506.9	1
Utah	9,331,625	35.1	45	17,334,254	60.1	37	26,665,879	48.1	45
Vermont	26,777,206	100.7	11	26,731,328	92.7	16	53,508,534	96.6	11
Virginia	10,968,443	41.3	43	16,868,165	58.5	40	27,836,608	50.2	44
Wisconsin	15,723,641	59.1	38	30,854,670	107.1	10	46,578,311	84.1	21
National Average*	26,589,326			28,821,232			55,410,558		

* Weighted averaged based on 46 jurisdictions (including the District of Columbia), using 2000 state employment as weights. Data from USL&HW were not used to calculate national averages.

Sources: NCCI, Annual Statistical Bulletin, 1986-2007 editions.

Table 1.2001 - Benefits Per 100,000 Workers For Employers Who Purchase Workers' Compensation Insurance for 2001

State	Panel A: Cash Benefits			Panel B: Medical Benefits			Panel C: Total (Cash plus Medical) Benefits		
	Dollar Amount (1)	State's Benefit as a Percentage of US Average (2)	Rank Among 47 Jurisdictions (3)	Dollar Amount (4)	State's Benefit as a Percentage of US Average (5)	Rank Among 47 Jurisdictions (6)	Dollar Amount (7)	State's Benefit as a Percentage of US Average (8)	Rank Among 47 Jurisdictions (9)
Alabama	15,255,232	56.1	39	32,991,647	101.2	11	48,246,879	80.7	23
Alaska	49,602,061	182.4	3	70,290,848	215.6	3	119,892,909	200.5	3
Arizona	9,807,417	36.1	45	26,435,025	81.1	23	36,242,442	60.6	42
Arkansas	10,229,573	37.6	44	21,907,219	67.2	32	32,136,792	53.7	43
California	61,782,080	227.2	2	80,693,152	247.5	2	142,475,232	238.2	2
Colorado	22,400,448	82.4	23	25,087,157	76.9	25	47,487,605	79.4	26
Connecticut	31,746,939	116.7	5	24,015,659	73.7	27	55,762,598	93.2	14
Delaware	25,323,886	93.1	16	38,212,544	117.2	7	63,536,430	106.2	6
Dis. Of Columbia	10,908,309	40.1	43	7,151,157	21.9	47	18,059,466	30.2	47
Florida	22,167,311	81.5	24	36,973,347	113.4	8	59,140,658	98.9	9
Georgia	19,360,872	71.2	32	19,429,505	59.6	39	38,790,377	64.9	39
Hawaii	28,446,965	104.6	9	22,909,547	70.3	30	51,356,512	85.9	18
Idaho	20,042,177	73.7	31	27,724,490	85.0	18	47,766,667	79.9	24
Illinois	25,564,909	94.0	15	21,172,997	64.9	36	46,737,906	78.2	27
Indiana	8,606,543	31.6	47	17,235,027	52.9	43	25,841,570	43.2	46
Iowa	20,403,412	75.0	30	20,165,631	61.8	37	40,569,043	67.8	35
Kansas	16,051,837	59.0	37	21,912,546	67.2	31	37,964,383	63.5	41
Kentucky	23,465,360	86.3	20	48,678,463	149.3	5	72,143,823	120.6	5
Louisiana	23,929,508	88.0	19	29,170,106	89.5	15	53,099,614	88.8	17
Maine	30,356,142	111.6	7	30,407,611	93.3	13	60,763,753	101.6	8
Maryland	20,799,624	76.5	29	21,570,389	66.2	34	42,370,013	70.8	32
Massachusetts	26,965,099	99.1	11	13,062,669	40.1	45	40,027,768	66.9	36
Michigan	21,962,984	80.8	25	19,307,466	59.2	40	41,270,450	69.0	34
Minnesota	21,611,380	79.5	27	27,131,220	83.2	22	48,742,600	81.5	20
Mississippi	17,772,141	65.3	34	27,263,174	83.6	21	45,035,315	75.3	28
Missouri	24,209,701	89.0	18	23,320,464	71.5	29	47,530,165	79.5	25
Montana	29,871,319	109.8	8	56,145,304	172.2	4	86,016,623	143.8	4
Nebraska	18,586,651	68.3	33	24,028,857	73.7	26	42,615,508	71.3	31
Nevada	26,674,527	98.1	12	34,308,300	105.2	9	60,982,827	102.0	7
New Hampshire	21,873,764	80.4	26	34,278,910	105.1	10	56,152,674	93.9	12
New Jersey	23,354,341	85.9	21	19,864,295	60.9	38	43,218,636	72.3	29
New Mexico	16,926,398	62.2	36	21,638,851	66.4	33	38,565,249	64.5	40
New York	40,169,542	147.7	4	16,869,020	51.7	44	57,038,562	95.4	10
North Carolina	21,474,631	79.0	28	21,297,053	65.3	35	42,771,684	71.5	30
Oklahoma	25,928,909	95.3	14	29,334,385	90.0	14	55,263,294	92.4	15
Oregon	17,705,634	65.1	35	30,657,780	94.0	12	48,363,414	80.9	22
Pennsylvania	27,371,387	100.6	10	28,430,649	87.2	16	55,802,036	93.3	13
Rhode Island	26,438,489	97.2	13	12,396,672	38.0	46	38,835,161	64.9	38
South Carolina	24,996,298	91.9	17	23,436,827	71.9	28	48,433,125	81.0	21
South Dakota	11,911,686	43.8	42	27,284,120	83.7	20	39,195,806	65.5	37
Tennessee	23,076,989	84.9	22	27,776,015	85.2	17	50,853,004	85.0	19
Texas	15,440,963	56.8	38	39,267,424	120.4	6	54,708,387	91.5	16
USL&HW	132,814,068	488.3	1	84,949,380	260.5	1	217,763,448	364.1	1
Utah	9,245,887	34.0	46	18,249,011	56.0	42	27,494,898	46.0	45
Vermont	30,690,350	112.8	6	25,948,643	79.6	24	56,638,993	94.7	11
Virginia	12,559,811	46.2	41	18,750,600	57.5	41	31,310,411	52.4	44
Wisconsin	14,773,004	54.3	40	27,511,906	84.4	19	42,284,910	70.7	33
National Average*	27,197,152			32,605,979			59,803,130		

* Weighted averaged based on 46 jurisdictions (including the District of Columbia), using 2001 state employment as weights. Data from USL&HW were not used to calculate national averages.

Sources: NCCI, Annual Statistical Bulletin, 1986-2007 editions.

Table 1.2002 - Benefits Per 100,000 Workers For Employers Who Purchase Workers' Compensation Insurance for 2002

State	Panel A: Cash Benefits			Panel B: Medical Benefits			Panel C: Total (Cash plus Medical) Benefits		
	Dollar Amount (1)	State's Benefit as a Percentage of US Average (2)	Rank Among 47 Jurisdictions (3)	Dollar Amount (4)	State's Benefit as a Percentage of US Average (5)	Rank Among 47 Jurisdictions (6)	Dollar Amount (7)	State's Benefit as a Percentage of US Average (8)	Rank Among 47 Jurisdictions (9)
Alabama	16,738,752	63.3	38	40,995,327	128.1	9	57,734,079	98.8	15
Alaska	42,828,254	162.0	4	70,354,760	219.8	2	113,183,014	193.6	2
Arizona	9,657,836	36.5	45	30,442,608	95.1	16	40,100,444	68.6	36
Arkansas	10,902,276	41.2	43	21,894,560	68.4	40	32,796,836	56.1	44
California	50,938,387	192.7	2	59,805,200	186.8	5	110,743,587	189.5	3
Colorado	21,732,830	82.2	25	23,535,040	73.5	32	45,267,870	77.4	32
Connecticut	31,602,362	119.5	7	24,829,071	77.6	27	56,431,433	96.5	18
Delaware	27,569,896	104.3	15	67,065,888	209.5	3	94,635,784	161.9	5
Dis. Of Columbia	9,658,196	36.5	44	7,550,808	23.6	47	17,209,004	29.4	47
Florida	21,018,703	79.5	28	38,399,655	120.0	10	59,418,358	101.7	11
Georgia	21,000,609	79.4	30	22,303,884	69.7	38	43,304,493	74.1	35
Hawaii	30,872,090	116.8	8	26,610,788	83.1	24	57,482,878	98.3	16
Idaho	18,975,398	71.8	35	25,021,365	78.2	26	43,996,763	75.3	34
Illinois	27,623,899	104.5	14	23,460,247	73.3	34	51,084,146	87.4	24
Indiana	8,689,398	32.9	47	18,923,053	59.1	43	27,612,451	47.2	46
Iowa	21,016,462	79.5	29	23,330,605	72.9	35	44,347,067	75.9	33
Kansas	15,559,997	58.9	39	22,813,008	71.3	37	38,373,005	65.7	38
Kentucky	24,112,215	91.2	19	52,039,304	162.6	6	76,151,519	130.3	7
Louisiana	23,279,521	88.1	22	30,332,654	94.8	17	53,612,175	91.7	20
Maine	35,648,600	134.8	5	42,835,457	133.8	7	78,484,057	134.3	6
Maryland	22,934,114	86.7	23	23,925,950	74.7	30	46,860,064	80.2	30
Massachusetts	23,800,386	90.0	21	13,184,707	41.2	45	36,985,093	63.3	40
Michigan	19,128,540	72.4	34	18,857,123	58.9	44	37,985,663	65.0	39
Minnesota	21,149,371	80.0	27	28,433,988	88.8	21	49,583,359	84.8	27
Mississippi	19,159,376	72.5	33	28,754,057	89.8	20	47,913,433	82.0	28
Missouri	25,668,953	97.1	17	26,241,393	82.0	25	51,910,346	88.8	22
Montana	34,047,991	128.8	6	65,363,032	204.2	4	99,411,023	170.1	4
Nebraska	19,743,419	74.7	32	27,626,929	86.3	23	47,370,348	81.0	29
Nevada	30,699,399	116.1	9	22,891,732	71.5	36	53,591,131	91.7	21
New Hampshire	21,340,969	80.7	26	42,474,534	132.7	8	63,815,503	109.2	9
New Jersey	24,106,056	91.2	20	21,829,392	68.2	41	45,935,448	78.6	31
New Mexico	17,183,320	65.0	37	22,025,843	68.8	39	39,209,163	67.1	37
New York	43,202,811	163.4	3	23,552,640	73.6	31	66,755,451	114.2	8
North Carolina	25,680,280	97.1	16	24,098,690	75.3	28	49,778,970	85.2	25
Oklahoma	30,304,270	114.6	10	33,440,329	104.5	13	63,744,599	109.1	10
Oregon	20,618,526	78.0	31	38,121,080	119.1	11	58,739,606	100.5	14
Pennsylvania	28,917,215	109.4	12	29,899,728	93.4	18	58,816,943	100.6	13
Rhode Island	22,036,850	83.4	24	12,259,632	38.3	46	34,296,482	58.7	43
South Carolina	28,840,576	109.1	13	27,726,702	86.6	22	56,567,278	96.8	17
South Dakota	11,783,043	44.6	42	24,009,920	75.0	29	35,792,963	61.2	42
Tennessee	24,509,161	92.7	18	31,043,151	97.0	15	55,552,312	95.0	19
Texas	13,788,694	52.2	40	37,407,384	116.9	12	51,196,078	87.6	23
USL&HW	93,869,581	355.1	1	107,272,300	335.1	1	201,141,881	344.1	1
Utah	9,194,318	34.8	46	19,647,052	61.4	42	28,841,370	49.3	45
Vermont	30,194,321	114.2	11	29,018,019	90.7	19	59,212,340	101.3	12
Virginia	13,269,013	50.2	41	23,473,106	73.3	33	36,742,119	62.9	41
Wisconsin	17,633,350	66.7	36	32,064,550	100.2	14	49,697,900	85.0	26
National Average*	26,438,377			32,010,903			58,449,281		

* Weighted averaged based on 46 jurisdictions (including the District of Columbia), using 2002 state employment as weights. Data from USL&HW were not used to calculate national averages.

Sources: NCCI, Annual Statistical Bulletin, 1986-2007 editions.

Table 1.2003 - Benefits Per 100,000 Workers For Employers Who Purchase Workers' Compensation Insurance for 2003

State	Panel A: Cash Benefits			Panel B: Medical Benefits			Panel C: Total (Cash plus Medical) Benefits		
	Dollar Amount (1)	State's Benefit as a Percentage of US Average (2)	Rank Among 47 Jurisdictions (3)	Dollar Amount (4)	State's Benefit as a Percentage of US Average (5)	Rank Among 47 Jurisdictions (6)	Dollar Amount (7)	State's Benefit as a Percentage of US Average (8)	Rank Among 47 Jurisdictions (9)
Alabama	15,928,586	62.1	40	41,947,103	128.5	9	57,875,689	99.3	19
Alaska	40,250,819	156.9	3	88,479,217	271.1	1	128,730,036	220.9	2
Arizona	10,141,591	39.5	44	25,799,663	79.0	33	35,941,254	61.7	44
Arkansas	9,993,655	39.0	45	27,836,725	85.3	26	37,830,380	64.9	41
California	44,617,707	174.0	2	56,944,516	174.5	6	101,562,223	174.2	4
Colorado	20,234,149	78.9	32	24,438,367	74.9	38	44,672,516	76.6	34
Connecticut	28,621,443	111.6	13	23,654,431	72.5	41	52,275,874	89.7	27
Delaware	30,556,249	119.1	12	67,911,430	208.1	3	98,467,679	168.9	5
Dis. Of Columbia	18,369,270	71.6	37	11,256,455	34.5	47	29,625,725	50.8	46
Florida	20,308,897	79.2	30	42,995,464	131.7	8	63,304,361	108.6	10
Georgia	22,292,704	86.9	26	25,289,660	77.5	36	47,582,364	81.6	33
Hawaii	28,573,409	111.4	14	24,493,943	75.0	37	53,067,352	91.0	24
Idaho	17,875,755	69.7	38	25,436,700	77.9	34	43,312,455	74.3	36
Illinois	28,247,642	110.1	15	26,254,325	80.4	30	54,501,967	93.5	22
Indiana	9,155,375	35.7	47	20,168,108	61.8	42	29,323,483	50.3	47
Iowa	23,515,332	91.7	23	28,561,548	87.5	25	52,076,880	89.3	28
Kansas	16,292,922	63.5	39	26,091,655	79.9	31	42,384,577	72.7	37
Kentucky	22,583,891	88.1	25	60,133,298	184.2	5	82,717,189	141.9	6
Louisiana	24,277,572	94.7	20	31,766,085	97.3	18	56,043,657	96.2	21
Maine	31,812,718	124.0	9	37,481,059	114.8	12	69,293,777	118.9	9
Maryland	22,838,306	89.1	24	27,355,892	83.8	28	50,194,198	86.1	30
Massachusetts	24,464,880	95.4	18	14,675,764	45.0	45	39,140,644	67.2	39
Michigan	19,187,006	74.8	34	18,529,642	56.8	44	37,716,648	64.7	42
Minnesota	21,771,597	84.9	27	36,196,902	110.9	13	57,968,499	99.5	17
Mississippi	20,967,012	81.8	29	31,549,654	96.7	19	52,516,666	90.1	26
Missouri	26,381,435	102.9	17	27,695,556	84.9	27	54,076,991	92.8	23
Montana	33,121,709	129.1	6	71,295,601	218.4	2	104,417,310	179.1	3
Nebraska	20,244,942	78.9	31	31,024,095	95.1	20	51,269,037	88.0	29
Nevada	31,845,185	124.2	8	30,833,750	94.5	21	62,678,935	107.5	11
New Hampshire	20,064,904	78.2	33	49,613,170	152.0	7	69,678,074	119.5	8
New Jersey	23,746,786	92.6	22	24,140,116	74.0	39	47,886,902	82.2	32
New Mexico	18,456,175	72.0	36	25,956,976	79.5	32	44,413,151	76.2	35
New York	37,448,513	146.0	4	19,838,220	60.8	43	57,286,733	98.3	20
North Carolina	33,025,229	128.8	7	26,593,608	81.5	29	59,618,837	102.3	16
Oklahoma	36,352,541	141.7	5	38,372,331	117.6	10	74,724,872	128.2	7
Oregon	21,654,291	84.4	28	38,065,560	116.6	11	59,719,851	102.5	15
Pennsylvania	30,848,642	120.3	10	30,099,870	92.2	23	60,948,512	104.6	13
Rhode Island	23,798,920	92.8	21	13,340,544	40.9	46	37,139,464	63.7	43
South Carolina	30,659,839	119.5	11	30,437,279	93.3	22	61,097,118	104.8	12
South Dakota	13,080,964	51.0	42	34,905,420	106.9	14	47,986,384	82.3	31
Tennessee	24,320,520	94.8	19	33,582,328	102.9	16	57,902,848	99.3	18
Texas	11,925,695	46.5	43	29,743,560	91.1	24	41,669,255	71.5	38
USL&HW	98,561,264	384.3	1	64,006,010	196.1	4	162,567,274	278.9	1
Utah	9,883,961	38.5	46	24,125,447	73.9	40	34,009,408	58.3	45
Vermont	28,042,822	109.3	16	32,359,863	99.1	17	60,402,685	103.6	14
Virginia	13,538,320	52.8	41	25,384,145	77.8	35	38,922,465	66.8	40
Wisconsin	18,638,829	72.7	35	33,931,440	104.0	15	52,570,269	90.2	25
National Average*	25,646,442			32,639,059			58,285,501		

* Weighted averaged based on 46 jurisdictions (including the District of Columbia), using 2003 state employment as weights. Data from USL&HW were not used to calculate national averages.

Sources: NCCI, Annual Statistical Bulletin, 1986-2007 editions.

Table 2: National Averages of Benefits Per 100,000 Workers By Policy Year

Panel A: All States with Data for the Particular Policy Year

Policy Year	No. of States Used To Construct Avg.*	Cash Benefits		Medical Benefits		Total Benefits	
		Dollar Amounts	Increase from Previous Year	Dollar Amounts	Increase from Previous Year	Dollar Amounts	Increase from Previous Year
1985	44 (DE, NV, PA)	20,225,223	--	12,834,744	--	33,059,967	--
1986	45 (DE, NV)	22,303,418	10.3%	13,791,840	7.5%	36,095,257	9.2%
1987	44 (NV, PA, TX)	24,060,662	7.9%	14,932,437	8.3%	38,993,098	8.0%
1988	45 (NV, PA)	27,336,755	13.6%	18,052,779	20.9%	45,389,534	16.4%
1989	45 (NV, TX)	31,425,071	15.0%	21,316,011	18.1%	52,741,082	16.2%
1990	46 (NV)	31,506,766	0.3%	23,794,856	11.6%	55,301,622	4.9%
1991	46 (NV)	28,344,969	-10.0%	24,522,926	3.1%	52,867,895	-4.4%
1992	46 (NV)	25,108,442	-11.4%	22,543,962	-8.1%	47,652,404	-9.9%
1993	46 (NV)	22,165,182	-11.7%	20,756,541	-7.9%	42,921,723	-9.9%
1994	46 (NV)	21,154,903	-4.6%	20,523,482	-1.1%	41,678,385	-2.9%
1995	46 (NV)	20,290,105	-4.1%	19,394,209	-5.5%	39,684,315	-4.8%
1996	47	20,068,618	-1.1%	19,429,245	0.2%	39,497,863	-0.5%
1997	47	20,170,219	0.5%	19,720,439	1.5%	39,890,658	1.0%
1998	47	21,311,948	5.7%	20,631,176	4.6%	41,943,124	5.1%
1999	46 (WV)	23,636,036	10.9%	24,049,366	16.6%	47,685,403	13.7%
2000	46 (WV)	26,589,326	12.5%	28,821,232	19.8%	55,410,558	16.2%
2001	46 (WV)	27,197,152	2.3%	32,605,979	13.1%	59,803,130	7.9%
2002	46 (WV)	26,438,377	-2.8%	32,010,903	-1.8%	58,449,281	-2.3%
2003	46 (WV)	25,646,442	-3.0%	32,639,059	2.0%	58,285,501	-0.3%

Panel B: Forty-two States with Data for Policy Years 1985 - 2003

Policy Year	No. of States Used To Construct Avg.**	Cash Benefits		Medical Benefits		Total Benefits	
		Dollar Amounts	Increase from Previous Year	Dollar Amounts	Increase from Previous Year	Dollar Amounts	Increase from Previous Year
1985	42	19,509,134	--	12,434,554	--	31,943,688	--
1986	42	21,235,986	8.9%	13,145,594	5.7%	34,381,580	7.6%
1987	42	23,694,755	11.6%	14,894,040	13.3%	38,588,795	12.2%
1988	42	26,464,578	11.7%	17,370,930	16.6%	43,835,508	13.6%
1989	42	30,352,318	14.7%	20,627,490	18.7%	50,979,808	16.3%
1990	42	30,769,794	1.4%	22,980,033	11.4%	53,749,827	5.4%
1991	42	27,809,731	-9.6%	23,064,202	0.4%	50,873,933	-5.4%
1992	42	24,455,599	-12.1%	21,661,965	-6.1%	46,117,564	-9.3%
1993	42	21,686,480	-11.3%	20,218,576	-6.7%	41,905,056	-9.1%
1994	42	20,695,300	-4.6%	19,812,086	-2.0%	40,507,386	-3.3%
1995	42	19,995,816	-3.4%	18,562,269	-6.3%	38,558,084	-4.8%
1996	42	19,832,910	-0.8%	18,854,715	1.6%	38,687,625	0.3%
1997	42	19,871,430	0.2%	18,960,692	0.6%	38,832,122	0.4%
1998	42	21,240,948	6.9%	19,956,537	5.3%	41,197,485	6.1%
1999	42	24,027,792	13.1%	23,444,836	17.5%	47,472,629	15.2%
2000	42	27,418,872	14.1%	28,368,961	21.0%	55,787,834	17.5%
2001	42	28,246,834	3.0%	32,203,928	13.5%	60,450,762	8.4%
2002	42	27,375,617	-3.1%	31,604,006	-1.9%	58,979,623	-2.4%
2003	42	26,483,423	-3.3%	32,913,024	4.1%	59,396,448	0.7%

* Maximum number of states is 47, including the District of Columbia. States missing from all years are four states with exclusive state funds, namely, North Dakota, Ohio, Washington, and Wyoming. States missing for a particular year in Panel A are shown in parentheses. In addition, the USL&HW is excluded from all calculations of National Averages.

**The states excluded from Panel B are the same states missing in Panel A plus Delaware, Nevada, Pennsylvania, Texas and West Virginia.

comparable to the national average for earlier years.³ There are also some years when data from Delaware, Pennsylvania, Texas, and/or West Virginia are unavailable, which again limits the comparability of the data from different years in Panel A of Table 2.⁴

Panel B of Table 2 presents national averages for cash, medical and total benefits per 100,000 workers for the same 42 states for 1985 to 2003. The data in Panel B of Table 2 are more comparable among years than the Panel A data, and were therefore used to produce Figures A and B.

The data in Panel B of Table 2, and the results in Figures A and B, document the dramatic fluctuations in incurred workers' compensation benefits in recent decades. For the four years from 1986 through 1989, total benefits per 100,000 workers increased at least 7 percent a year. The fastest growth year was 1989, when total benefits were up 16.3 percent from the previous year. Then a sudden deceleration occurred, with total benefits per 100,000 workers up only 5.4 percent in 1990 from the previous year. Deceleration was followed by decline: total benefits were down 5.4 percent in 1991 from the previous year, and 1991 was followed by another four years of decline. Then total benefits were relatively stable in 1996 and 1997, followed by a 6.1 percent increase in 1998, a 15.2 percent increase in 1999, a 17.5 percent increase in 2000, and an 8.4 percent increase in 2001, before declining 2.4 percent in 2002, and then increasing again by 0.7 percent in 2003, which is the most recent year for which we have data.

The data on total benefits per 100,000 workers are the combined total of cash benefits per 100,000 workers and medical benefits per 100,000 workers. Panel B of Table 2 and Figure B provide information on the development of cash and medical benefits since 1985. The movements of cash and medical benefits through time have been similar to the movements for total benefits: initially several years when benefits were generally accelerating, followed by decelerating benefits in 1990, followed (with a minor exception) by a period of decline in benefits until 1995, then relative stability in 1996 and 1997, followed by an increase in both types of benefits from 1998 through 2001 before another decline in 2002. However, in 2003 the movement of cash and medical behaved differently. Cash benefits decreased by 3.3 percent while medical benefits increased by 4.1 percent.

The data in Table 2 are for benefits in current dollars unadjusted for inflation. The benefits adjusted for changes in the CPI are shown in Table 3. The decline in benefits during the 1990s is even more dramatic when measured in constant (1982-84) dollars. Meas-

ured in current dollars, total benefits per 100,000 workers declined by 27.8 percent in the 43 jurisdictions between 1990 and 1997 (Table 3, Column (9)). Measured in constant dollars, total benefits per 100,000 workers declined by 45.3 percent from 1990 to 1997 (Table 3, Column (10)). Moreover, in constant dollars, the decline in total benefits began in 1990 and continued through 1997; this eight-year stretch of declining total benefits in constant dollars is three years longer than the decline in total benefits measured in current dollars between 1991 and 1995. Of particular interest is that in constant dollars, cash, medical, and total benefits each increased by more than 13 percent between 1998 and 1999, but each declined by more than 6 percent between 2001 and 2003.

Explanations of the National Developments

The latest national data on incurred benefits per 100,000 workers indicate that both cash and medical benefits declined substantially during most of the 1990s. Between 1990 and 1997, as previously noted, the cumulative decline in total benefits per 100,000 workers in current dollars was 27.8 percent in the 43 jurisdictions with data available for all years. The components of total benefits also experienced decline over this period, albeit at different rates, with cash benefits down 35.4 percent and medical benefits down 17.5 percent measured in current dollars.

Why did incurred benefits decline so rapidly during these years? One partial explanation is that the workplace appears to have become safer during the 1990s. The annual number of lost workday cases per 100 full-time workers in the private sector dropped from 4.1 in 1990, to 3.8 in 1994, to 3.3 in 1997.⁵ These declines in the occupational injury and injury rate translated into lower cash and medical benefits per 100,000 workers.

Another factor that explains at least a part of the decline in cash benefits paid to workers during most of the 1990s is that the statutory level of cash benefits provided by workers' compensation statutes were scaled back during several years in the period, as shown in Figure C. Benefits were scaled back in four of the eight years between 1990 and 1997, and the net effect of the statutory changes during the eight years was to reduce benefits, which is a record that probably cannot be matched since at least the 1930s.

A possible explanation of the decline in incurred medical benefits during the period from 1990 to 1997 was the rapid emergence of managed care and the general increase in employer control over provision of medical care for injured workers. While we are skeptical that large reductions in medical expenditures due to

Table 3 - National Averages of Benefits Per 100,000 Workers By Year in Current and Constant Dollars

Panel A: Forty-two States with Data for Policy Years 1985 - 2003

Total Benefits

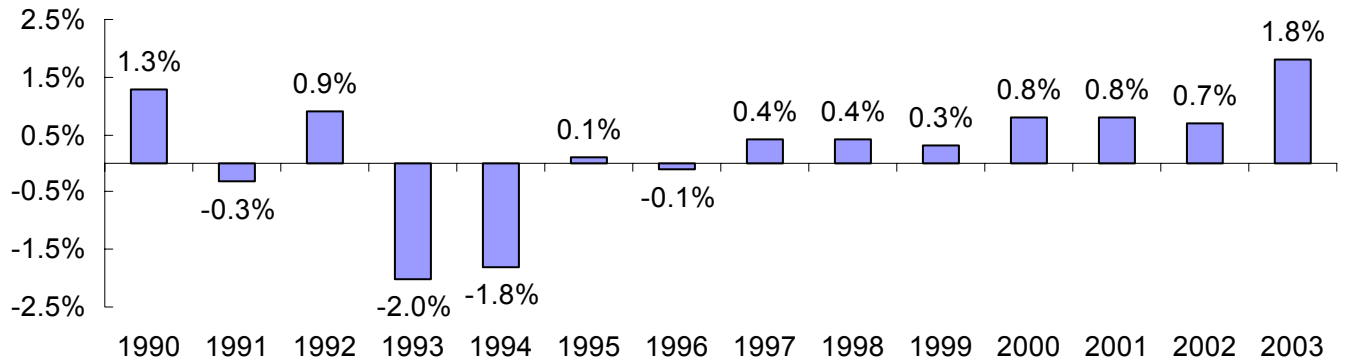
Medical Benefits

Cash Benefits

Policy Year	No. of States Used To Construct Avg.*	Cash Benefits			Medical Benefits			Total Benefits		
		Benefits in Current \$ (1)	CPI (2)	Increase from Previous Year (4)	Benefits in Current \$ (5)	CPI (6)	Increase from Previous Year (8)	Benefits in Current \$ (9)	Benefits in 82-84 \$ (10)	Increase from Previous Year (11)
1985	42	19,509,134	107.2	18,198,819	12,434,554	113.5	10,955,554	31,943,688	29,154,373	--
1986	42	21,235,986	108.8	19,518,369	13,145,594	122.0	10,775,077	34,381,580	30,293,447	3.9%
1987	42	23,694,755	112.6	21,043,299	14,894,040	130.1	11,448,148	38,588,795	32,491,447	7.3%
1988	42	26,464,578	117.0	22,619,297	17,370,930	138.6	12,533,139	43,835,508	35,152,436	8.2%
1989	42	30,352,318	122.4	24,797,645	20,627,490	149.3	13,816,135	50,979,808	38,613,781	9.8%
1990	42	30,769,794	128.8	23,889,592	22,980,033	162.8	14,115,499	53,749,827	38,005,091	-1.6%
1991	42	27,809,731	133.8	20,784,552	23,064,202	177.0	13,030,623	50,873,933	33,815,175	-11.0%
1992	42	24,455,599	137.5	17,785,890	21,661,965	190.1	11,395,037	46,117,564	29,180,927	-13.7%
1993	42	21,686,480	141.2	15,358,697	20,218,576	201.4	10,039,015	41,905,056	25,397,712	-13.0%
1994	42	20,695,300	144.7	14,302,211	19,812,086	211.0	9,389,614	40,507,386	23,691,826	-6.7%
1995	42	19,995,816	148.6	13,456,135	18,562,269	220.5	8,418,263	38,558,084	21,874,397	-7.7%
1996	42	19,832,910	152.8	12,979,653	18,854,715	228.2	8,262,364	38,687,625	21,242,017	-2.9%
1997	42	19,871,430	156.3	12,713,647	18,960,692	234.6	8,082,136	38,832,122	20,795,783	-2.1%
1998	42	21,240,948	158.6	13,392,779	19,956,537	242.1	8,243,097	41,197,485	21,635,876	4.0%
1999	42	24,027,792	162.0	14,831,970	23,444,836	250.6	9,355,481	47,472,629	24,187,452	11.8%
2000	42	27,418,872	167.3	16,389,045	28,368,961	260.8	10,877,669	55,787,834	27,266,714	12.7%
2001	42	28,246,834	171.9	16,432,131	32,203,928	272.8	11,804,959	60,450,762	28,237,090	3.6%
2002	42	27,375,617	174.3	15,706,034	31,604,006	285.6	11,065,828	58,979,623	26,771,862	-5.2%
2003	42	26,483,423	178.1	14,869,974	32,913,024	297.1	11,078,096	59,396,448	25,948,070	-3.1%

Notes: CPI in column (2) is the Consumer Price Index for all items less medical care with 1982-84 = 100 from Table B-62 of Council of Economic Advisers (2007: 302).
 CPI in column (6) is the Consumer Price Index for medical care with 1982-84 = 100 from Table B-60 of Council of Economic Advisers (2007: 299).

Figure C
Countrywide Changes in Statutory Benefits,
1990-2002



Source: 1990-1993: NCCI, *Annual Statistical Bulletin*, 2003 Edition, Exhibit I, p.6.
 1994-2003: NCCI, *Annual Statistical Bulletin*, 2007 Edition, Exhibit I, p.6.

managed care can be sustained over an extended period, it is possible that the rapid spread of HMOs, PPOs, et al. in workers' compensation programs in the early 1990s drove down incurred medical benefits between 1990 and 1997.

Another possible explanation for the decline in both cash and medical benefits per 100,000 workers between 1990 and 1997 that may be of major significance is the tightening of the eligibility standards for workers' compensation benefits that occurred in a number of jurisdictions during the 1990s. The trend to limit compensability of workers' compensation claims nationally was documented by Spieler and Burton (1998). In Oregon, Thomason and Burton (2001) estimated that the effect of a series of statutory changes in the late 1980s and early 1990s was to reduce benefit payments by 20 to 25 percent below the amounts workers would have received in the absence of these statutory changes. Thus, the reductions in benefits paid to disabled workers through 1997 may not have reflected just the beneficial consequences of safer workplaces and the reductions of unnecessary medical treatment resulting from managed care, but may also have reflected the shifting of costs of workplace disability to other public and private sources of cash and medical benefits or to the workers and their families.

The cumulative increase in total incurred benefits by more than fifty percent between 1997 and 2003 is more difficult to explain, since benefits accelerated in 1998 and 1999, increased at almost the same rate in 2000 as in 1999, then rapidly decelerated in 2001, and

averaged less than a one percent decline in 2002 and 2003 (Figure A). The story is even more confusing when we separate cash and medical benefits (Figure B). The increase in incurred medical benefits from 1998 to 2003 does not appear to reflect an increase in health care prices in the U.S. The annual rates of increase in the consumer price index (CPI) for medical care shown in Column (6) of Table 3 indicate that the price of medical care was increasing at less than five percent a year from 1998 to 2003. For example, in 2000, the medical CPI was up only 4.1 percent from the previous year ($1.041 = 260.8/250.6$) and in 2001, the medical CPI was only up 4.6 percent ($1.046 = 272.8/260.8$). The 17.5 percent surge in health care costs in the workers' compensation in 1999, the 21.0 percent increase in 2000, and the 13.6 percent increase in 2001 (Table 2, Panel B) are products of changes in the price per unit of health care service times the changes in the number of health care units used in workers' compensation. Since the price per unit of health care does not appear to have increased rapidly between 1998 and 2001, the implication is that the quantity of health care provided to injured workers increased rapidly during 1999 to 2001. This may suggest that the various health-care cost containment policies introduced into workers' compensation in the early and mid-1990s were not working. This explanation must be qualified, however, by the experience in 2002 and 2003. The medical CPI was up 4.7 percent ($1.047 = 285.6/272.8$) in 2002, but incurred medical benefits declined in 2002, suggesting that the quantity of health care provided to injured workers declined. In 2003, the medical CPI increased 4.0 percent ($1.040 = 297.1/285.6$), while incurred medical benefits

increased by 4.1 percent, a result consistent with essentially no increase in the quantity of health care provided to injured workers in 2003.

The explanations of the annual changes in incurred cash benefits from 1998 to 2003 are also not obvious. The rapid increases in cash benefits per 100,000 workers in 1999 and 2000 were surprisingly large. The economic expansion that began in 1992 continued in those years, there were only modest increases of less than 1.0 percent in the statutory level of benefits in 1999 and 2000 (as shown in Figure C), and the injury rate dropped from 3.1 lost time injuries per 100 workers in 1998 to 3.0 in both 1999 and 2000. These factors could have been expected to produce relatively modest increases in incurred cash benefits. The 13.1 percent increase in incurred cash benefits in 1999 and the 14.1 percent increase in 2000 (Table 2, Panel B) suggests that injuries were becoming more severe or that the amount of cash benefits per claim were rapidly accelerating in those years, but it is unclear why these developments occurred.

The explanations for the sudden slow down in cash benefits to a 3.0 percent increase in 2001 and the declines of 3.1 percent in 2002 and 3.3 percent in 2003 are also not evident. The injury rate dropped to 2.8 lost time injuries per 100 workers in 2001 and 2002, and then to 2.6 lost time injuries per 100 worker in 2003 which could help explain part of the decline, but in part this was offset by the 0.8 percent, 0.7 percent, and 1.8 percent increases in 2001, 2002, and 2003 in the workers' compensation benefits prescribed by statute (Figure C). One important development affecting the labor market was the beginning of the recession in March 2001, which was associated with a decline in the number of workers covered by workers' compensation nationally (Sengupta, Reno, and Burton 2007, Table 2). However, since we are examining incurred benefits per 100,000 workers, any reduction in benefits due to a decline in employment is captured by our measure.

These catalogues of the possible causes and consequences of the rapid decline in cash and medical benefits from 1991 to 1997, the increase of these incurred benefits in 1998 to 2001, the decline in benefits in 2002, and the slight increase in 2003 are meant to be suggestive, rather than conclusive. For the sake of workers, employers, and other participants in the workers' compensation program, we need careful studies that will help us better understand these recent developments in benefit payments.

Comparisons of Individual States for 2003

The 2003 data in Table 1.2003 allow comparisons among 47 jurisdictions for that year. The cash benefits

per 100,000 workers in 2003 ranged from \$98,561,264 in the USL&HW program to \$9,155,375 in Indiana. Medical benefits per 100,000 workers varied from \$88,479,217 in Alaska to \$11,256,455 in the District of Columbia. Total benefits (cash plus medical) per 100,000 workers were highest in the USL&HW program at \$162,567,274 and were lowest in Indiana at \$29,323,483. These data were used to construct Figures D through F.

Cash Benefits. Each of the state's cash benefits per 100,000 workers as a percentage of the U.S. average payment in 2003 is shown in column (2) of Panel A of Table 1.2003. (The averages were calculated excluding the USL&HW program because that program is obviously an outlier.) States were ranked in Figure D in terms of how their cash benefits compared to the national average.

Two states plus the USL&HW program had cash benefits that were "well above average" – the benefits were more than 50 percent above the national average. The states were California (where benefits were 74 percent above the national average), and Alaska (where benefits were almost 57 percent above the national average). In addition, the USL&HW program had cash benefits that were almost four times the national average. Four states, New York, Oklahoma, Montana and North Carolina, had cash benefits that were "above average" – where cash benefits were more than 25 percent, but less than 50 percent above the national average (New York's cash benefits were 46 percent and North Carolina's were almost 29 percent above the national average).

Other states had much lower cash benefits relative to the national average in 2003. Five states had cash benefits that were "well below average" – benefits were at least 50 percent below the national average. These states ranged from Texas (where benefits were 53.5 percent below the national average) to Indiana (where cash benefits were over 64 percent below the national average). In addition, nine states had cash benefits that were "below average" – benefits were at least 25 percent, but no more than 50 percent, below the national average. These states ranged from Michigan (where benefits were more than 25 percent below the national average) to South Dakota (where benefits were 49 percent below the national average).

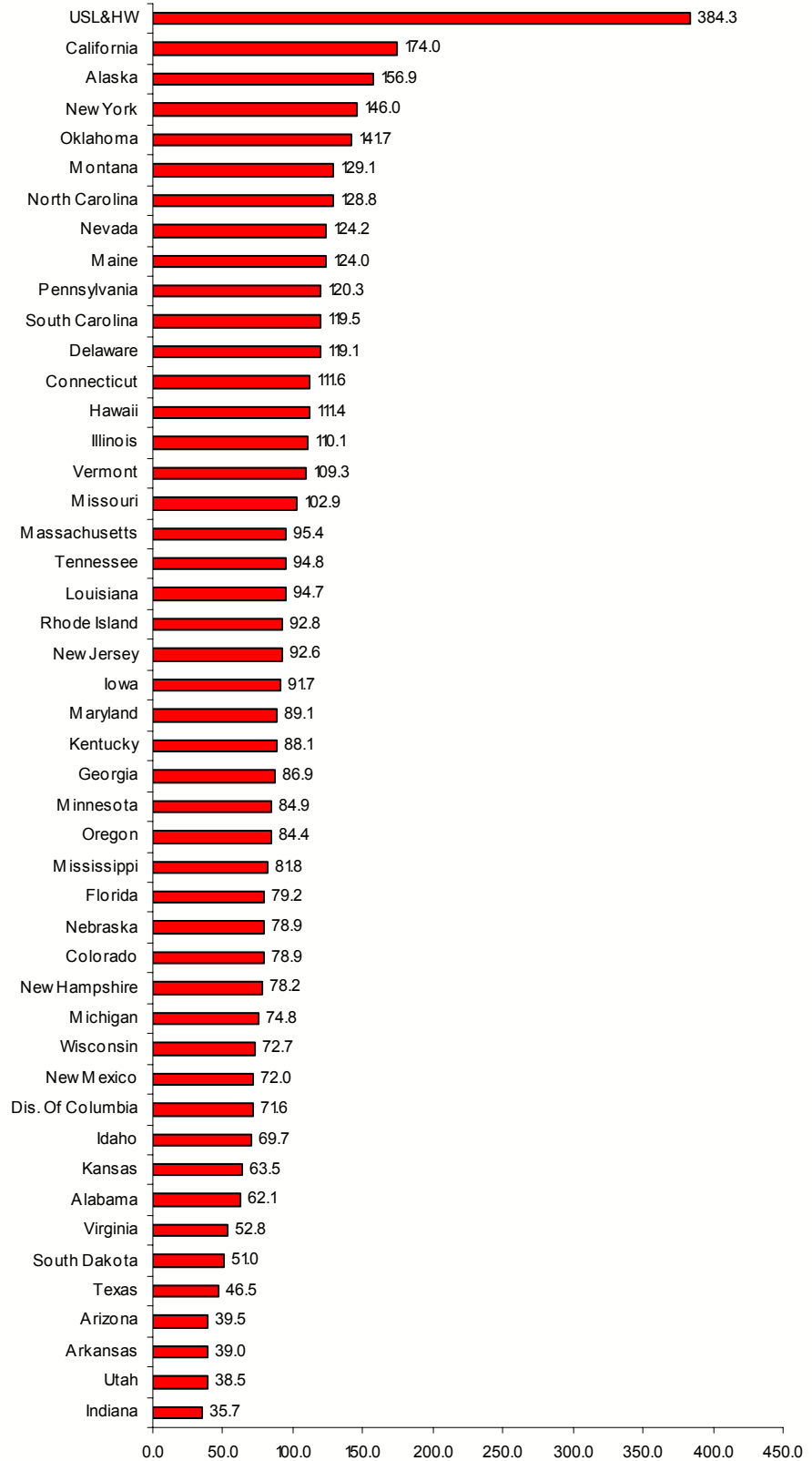
There were also 26 states with "average" cash benefits – the cash benefits were within 25 percent of the national average. These states ranged from New Hampshire (where benefits were almost 22 percent below the national average) to Nevada (where benefits were 24.2 percent above the national average).

Medical Benefits. Each of the state's incurred medical benefits per 100,000 workers as a percentage of the U.S. average in 2003 is shown in column (5) of Panel B of Table 1.2003. States were ranked in Figure E in terms of how their medical benefits compared to the national average.

Six states plus the USL&HW program had medical benefits that were "well above average" – the benefits were more than 50 percent above the national average. The states ranged from Alaska (where benefits were over 170 percent above the national average) to New Hampshire (where benefits were 52 percent above the national average). In addition, the USL&HW program had medical benefits that were almost double the national average. Two states had medical benefits that were "above average" – cash benefits were more than 25 percent, but less than 50 percent above the national average. Florida had medical benefits that were almost 32 percent above the national average while Alabama's benefits were 28.5 percent above the national average.

Other states had much lower medical benefits relative to the national average in 2003. Three states had medical benefits that were "well below average" – benefits were at least 50 percent below the national average. These states ranged from Massachusetts (where benefits were 55 percent below the national average) to the District of Columbia (where medical benefits were 65.5 percent below the national average). In addition, eight states had medical benefits that were "below average" – benefits were at least 25 percent, but no more than 50 percent, below the national average. These states ranged from Hawaii (where benefits were 25 percent below the national average) to Michigan (where medical benefits were more than 43 percent below the national average).

Figure D - Cash Benefits Per 100,000 Covered Workers, State's Benefits as a Percentage of U.S. Average Payments for 2003



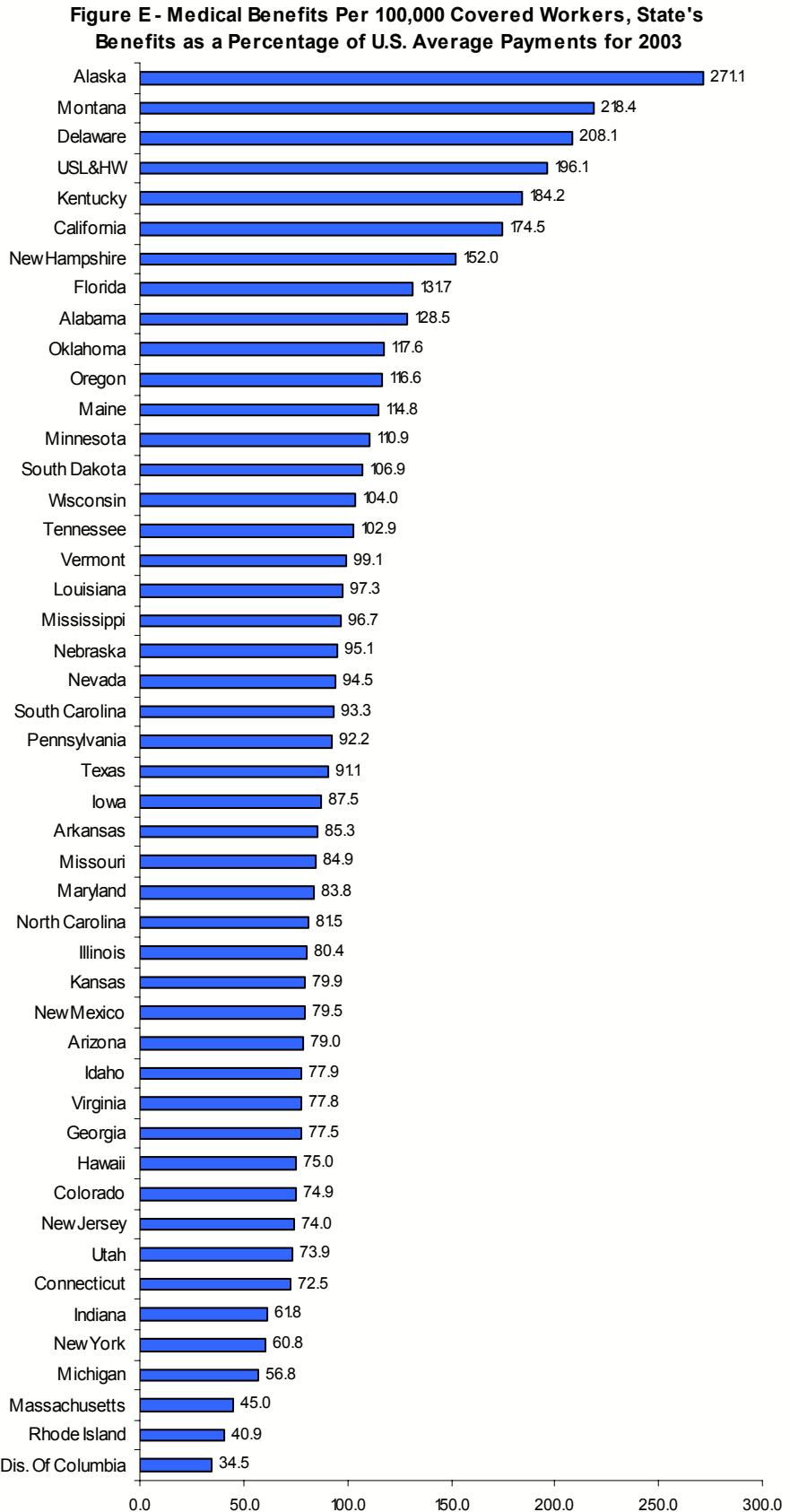
Source: Table 1.2003, Panel A

There were also 27 states with “average” medical benefits – the medical benefits were within 25 percent of the national average. These states ranged from Georgia (where benefits were 22.5 percent below the national average) to Oklahoma (where benefits were 17.6 percent above the national average).

Total Benefits. Each of the state’s incurred total (cash plus medical) benefits per 100,000 workers as a percentage of the U.S. average in 2003 is shown in column (8) of Panel C of Table 1.2003. States were ranked in Figure F in terms of how their total benefits compared to the national average.

Four states plus the USL&HW program had total benefits that were “well above average” – the benefits were more than 50 percent above the national average. They ranged from Alaska (where benefits were almost 121 percent above the national average) to Delaware (where benefits were 68.9 percent above the national average). In addition, the USL&HW program had total benefits that were almost three times the national average. Only two states had total benefits that were “above average” – where total benefits were more than 25 percent, but less than 50 percent above the national average. Kentucky’s total benefits were 41.9 percent above the national average and Maine’s total benefits were 28.2 percent above the national average.

Other states had much lower total benefits relative to the national average in 2003. There were no states that had total benefits that were “well below average” – benefits at least 50 percent below the national average. However, 12 states had total benefits that were “below average” – benefits were at least 25 percent, but no more than 50 percent, below the national average. These states ranged from Idaho (where benefits were almost 26 per-



Source: Table 1.2003, Panel B

cent below the national average) to Indiana (where benefits were almost 50 percent below the national average).

There were also 28 states with “average” cash benefits – the cash benefits were within 25 percent of the national average. These states ranged from New Mexico (where benefits were almost 24 percent below the national average) to New Hampshire (where benefits were almost 20 percent above the national average).

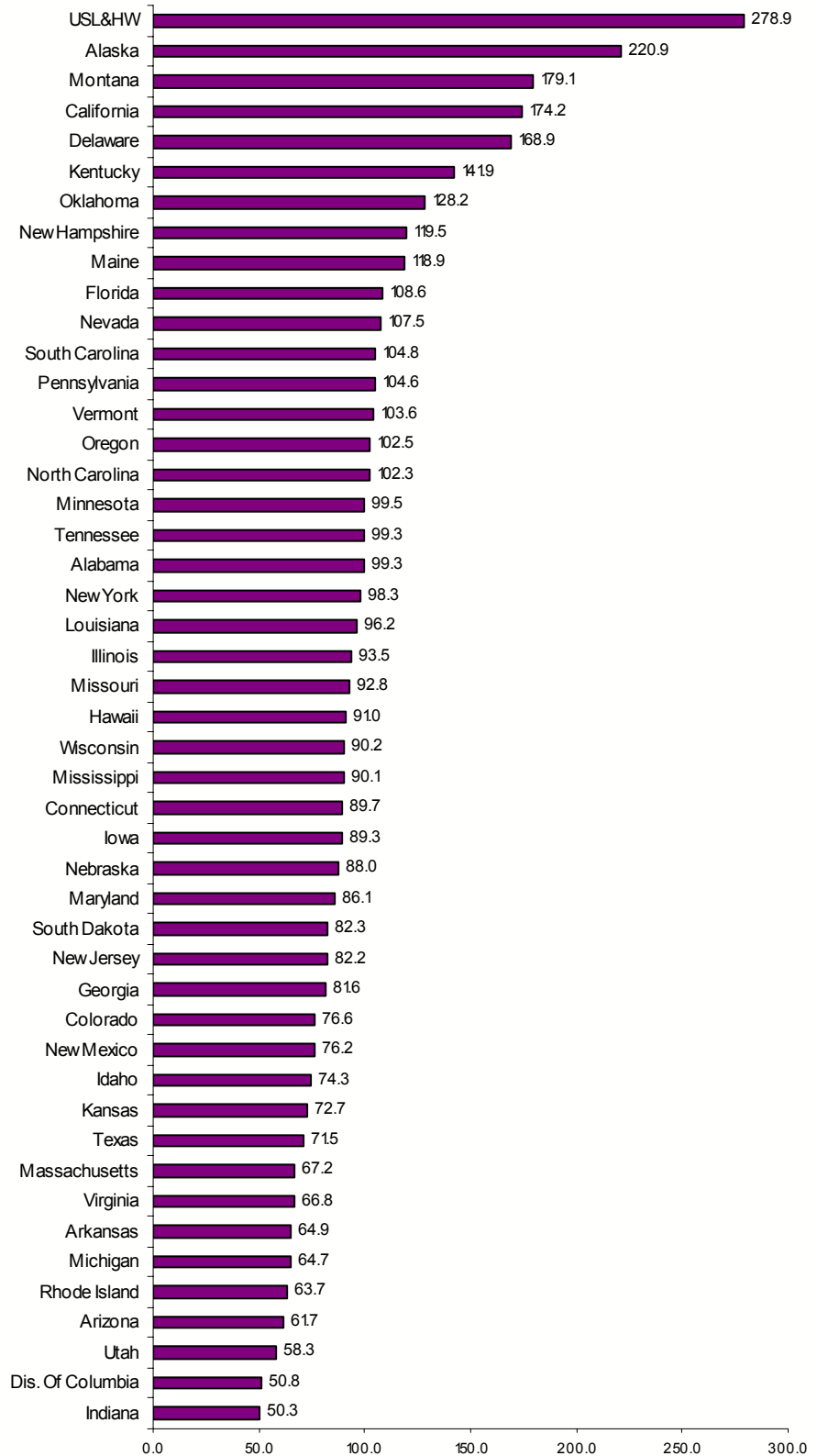
Historical Comparisons of Individual States

Tables 1.1999 through 1.2003, plus comparable unpublished tables for earlier years, present a formidable amount of data on incurred cash, medical and total benefits per 100,000 workers for each state for each year between 1985 and 2003. Some readers (and surely the authors) are likely to find that much data hard to assimilate. Tables 4 to 6 are designed to facilitate that assimilation.

Cash Benefits. Table 4 provides summary information on the relative amount of cash benefits for each of the 46 states plus the District of Columbia and the USL&HW for the 19 years included in this study. The coding scheme relies on the classifications previously introduced: a state receives a “++” in a particular year if its cash benefits are well above average; a “+” if the benefits are above average; a “- -” if the benefits are well below average; a “-” if benefits are below average; a “0” if benefits are average; and a “N/A” if data are not available for that year. (The ranges for the various categories are shown in the notes to Tables 4 to 6.)

The entries in Table 4 permit a quick assessment of how the cash benefits in each jurisdiction have compared to the national averages during the 19 years. Some jurisdic-

Figure F - Total (Cash plus Medical) Benefits per 100,000 Covered Workers, State's Benefits as a Percentage of U.S. Average Payments for 2003



Source: Table 1.2003, Panel C

tions demonstrate a consistent record through the years. The USL&HW program and West Virginia had cash benefits that were well above the national average (benefits were at least 50 percent above the national average) in all years with data. Illinois was the only state that had average benefits (benefits were within 25 percent of the national average) in all 19 years. Kansas had below average cash benefits (benefits were from 25 to 50 percent below the national average) in every year. Indiana had well below average cash benefits (benefits were at least 50 percent below the national average) in all years. There was no state that always had above average cash benefits.

Other states showed somewhat less stability in terms of their benefits relative to the national average over the 19 year period and moved among adjacent categories. Connecticut had average or above average cash benefits in every year. Five states (Arkansas, the District of Columbia, Utah, Virginia, and Wisconsin) had below average or well below average cash benefits in every year. Nine states (Alabama, Delaware, Georgia, Idaho, Maryland, Michigan, New Jersey, South Carolina, and Vermont) had cash benefits that moved between average and below average over the 19-year period.

More interesting are the states that moved among three categories in terms of their cash benefits relative to the national averages over the 19 years. Twelve states (Alaska, California, Colorado, Florida, Hawaii, Louisiana, Massachusetts, Montana, Nevada, New York, Oklahoma, and Pennsylvania) varied between average and well above average cash benefits during all the years with data. Of these states, only Alaska and California had well above average benefits in 2003, Montana, New York and Oklahoma had above average benefits in 2003, and seven states had average cash benefits in 2003, obviously well below their relatively high benefits in earlier years. Eight states (Arizona, Iowa, Kentucky, Mississippi, Missouri, Nebraska, South Dakota, and Tennessee) varied between average and well below average cash benefits between 1985 and 2003. New Hampshire varied between above average and below average cash benefits during these years.

Six states had cash benefits relative to the national averages that varied among four categories during the 19 years. Two states (North Carolina and Texas) varied between well below average and above average and four states (Maine, Minnesota, Oregon and Rhode Island) varied between below average and well above average. Maine was well above average for seven years, and then dropped to below average in 1994, and moved to average cash benefits for 1995 to 2003 (with one exception in 2002). Minnesota was well above av-

erage in 1985, dropped to average for most of the early 1990s, dropped further to below average cash benefits from 1995 to 2000 (with one exception in 1999), and then increased to average benefits from 2001 to 2003. Oregon had a similar pattern: cash benefits were well above average from 1985 to 1988, dropped to average cash benefits for most of the 1990s, had below average benefits from 1998 to 2001, and increased again to average benefits in 2002 and 2003. Rhode Island had a unique pattern, beginning with cash benefits well above the national average for seven years, dropped to below average or average cash benefits from 1992 to 1996, increased to above average or well above average benefits from 1997 through 1999, and then dropped again to average from 2000 through 2003.

The most volatile state was New Mexico, which varied between well above average in 1985 and 1987 and well below average in 1996, thus spanning all five categories in Table 4. The experiences in Maine, Minnesota, and New Mexico clearly demonstrate that significant reductions in cash benefits are possible. There are also several states whose experience over the 19 years indicates that substantial increases in cash benefits are possible. The most notable example is New York, which provided average cash benefits from 1985 to 1990, increased to well above average cash benefits from 1992 to 1998, and then alternated between above average and well above average between 1989 and 2003.

Medical Benefits. Table 5 provides summary information on the relative generosity of medical benefits for each of the 46 states plus the District of Columbia and the USL&HW for the 19 years included in this study. The entries in Table 5 permit a quick assessment of how generous the medical benefits have been in each jurisdiction during the 19 years.

Some states demonstrate a consistent record in terms of generosity of medical benefits through the years. There were five programs that were in the same category of generosity of medical benefits for all 19 years: two (Idaho and Mississippi) were in the average category every year; one state (New Jersey) was in the below average category every year; one jurisdiction (the District of Columbia) was in the well below average category every year for which data are available; and one jurisdiction (the USL&HW) was in the well above average category every year for which data are available. There was no state in the above average category all 19 years.

There were a number of states that had relatively stable medical costs over the 19 years, with only movements among adjacent categories of relative generos-

Table 4 - Cash Benefits per 100,000 Workers Relative to National Average

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
AL	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	-	-
AK	++	++	++	+	+	+	+	0	0	0	+	+	+	++	++	++	++	++	++
AZ	-	-	0	-	-	0	0	0	0	0	0	-	-	-	-	--	--	--	--
AR	-	-	-	-	-	-	-	-	-	--	--	--	--	--	--	--	--	--	--
CA	+	+	+	0	0	0	+	0	0	0	+	+	++	++	++	++	++	++	++
CO	0	++	0	0	++	+	0	0	0	0	0	+	+	0	0	0	0	0	0
CT	0	0	+	+	+	+	+	0	0	0	0	0	0	0	0	0	0	0	0
DE	0	0	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0
DC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-
FL	0	+	++	++	++	+	0	0	0	0	0	0	0	0	0	0	0	0	0
GA	-	-	0	0	-	0	-	0	0	0	0	0	-	-	-	-	-	0	0
HI	0	0	0	0	0	+	++	++	++	++	0	0	0	0	0	0	0	0	0
ID	0	0	-	-	-	-	0	0	0	0	0	0	0	0	-	-	-	-	-
IL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IN	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
IA	-	-	-	-	--	-	-	-	-	-	-	-	-	0	-	-	0	0	0
KS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KY	-	-	-	-	0	0	0	0	0	0	-	-	-	--	-	-	0	0	0
LA	+	+	++	++	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ME	++	++	++	++	++	++	++	+	0	-	0	0	0	0	0	0	0	+	0
MD	0	-	-	-	-	-	-	-	-	0	0	0	0	0	0	-	0	0	0
MA	+	+	++	++	++	++	+	0	0	0	0	0	0	0	0	0	0	0	0
MI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
MN	++	+	+	+	0	+	0	0	0	0	-	-	-	-	0	-	0	0	0
MS	--	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
MO	--	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0
MT	++	++	++	+	++	++	++	+	+	++	+	+	0	0	0	0	0	+	+
NE	--	--	--	--	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
NV	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	++	++	++	+	0	0	0	0
NH	0	0	0	+	+	+	+	+	0	0	0	0	0	0	-	-	0	0	0
NJ	-	-	-	-	-	-	-	0	0	-	0	0	0	-	-	-	0	0	0
NM	++	+	++	+	0	0	0	-	-	-	-	--	-	-	-	-	-	-	-
NY	0	0	0	0	0	0	+	++	++	++	++	++	++	++	+	++	+	++	+
NC	--	--	--	--	--	-	-	-	-	-	-	-	0	0	0	0	0	0	+
OK	0	0	0	0	0	0	+	++	++	++	++	+	+	0	0	0	0	0	+
OR	++	++	++	++	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0
PA	0	+	+	+	+	++	+	++	++	++	+	+	+	0	0	0	0	0	0
RI	++	++	++	++	++	++	++	-	-	0	0	0	+	++	++	0	0	0	0
SC	-	-	-	-	-	-	-	-	-	0	-	-	-	0	0	0	0	0	0
SD	-	-	-	-	-	-	-	0	-	-	0	0	--	--	-	--	--	--	-
TN	--	--	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0
TX	0	0	N/A	+	N/A	0	0	-	-	-	0	-	0	-	-	-	-	-	--
USL&HW	N/A	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
UT	--	--	--	--	--	--	--	-	-	-	--	--	--	--	--	--	--	--	--
VT	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VA	--	-	-	-	-	-	-	--	--	--	-	-	-	-	-	--	--	-	-
WV	++	++	++	++	++	++	++	++	++	++	++	++	++	++	N/A	N/A	N/A	N/A	N/A
WI	-	-	-	--	--	--	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: ++ 150.1% or more of National Average Well Above Average
+ 125.1 - 150.0% of National Average Above Average
0 75.0 - 125.0% of National Average Average
- 50.0 - 74.9% of National Average Below Average
-- 49.9% or less of National Average Well Below Average
N/A Data Not Available

Source: Tables 1.1985 - 1.2003

ity. For example, only one state, Alaska, moved between above average and well above average medical benefits between 1985 and 2003. Arizona, Oklahoma and Texas moved between average and above average medical benefits during the 19 years. There were 13 states that varied between below average and average benefits from 1985 to 1996 (Connecticut, Georgia, Illinois, Kansas, Michigan, Missouri, Nebraska, South Dakota, Tennessee, Utah, Vermont, Virginia and Wisconsin). Indiana and Massachusetts moved between well below average and below average during the 19 year period between 1987 and 2003. Indiana began with well below average medical benefits in 1985 and 1986 before increasing to below average benefits during the period between 1987 and 2003. Massachusetts had below average medical benefits for 13 years before dropping to well below average benefits for the last five years of our study.

As Table 5 also illustrates, there were 20 states that moved among non-adjacent categories during the 19 years. Eleven states (Alabama, California, Delaware, Florida, Kentucky, Louisiana, Montana, New Hampshire, Oregon, Pennsylvania, and West Virginia) varied among the average, above average, and well above average categories between 1985 and 2003. Six states (Iowa, Maryland, New York, North Carolina, Rhode Island and South Carolina) paid medical benefits that varied among the average, below average, and well below average categories between 1985 and 2003. Only three states (Arkansas, Colorado, and Nevada) varied among below average, average and above average during all the years with data. Four states (Hawaii, Maine, Minnesota, and New Mexico) had medical benefits relative to the national averages that varied among four categories during the 19 years, from below average to well above average.

The experiences in Louisiana, New Mexico, and Pennsylvania clearly demonstrate that significant reductions in medical benefits paid to workers are possible. There were also two states – Iowa and New York – that had well below average medical benefits in 1986, but that paid average medical benefits in 1997, 1998 or 1999. These states demonstrate that states can also substantially increase the medical benefits paid to workers. Of particular interest are two states (Montana and Oregon) that had well above average medical benefits in at least two years between 1985 to 1988, reduced the relative generosity of their medical benefits to the average category for at least one year in the late 1980s or early 1990s, but had well above average medical benefits again in at least two years between 1994 to 2003. The “solutions” to high medical costs in these states are worth further examination.

Total Benefits. Table 6 provides summary information on the relative generosity of total (cash plus medical) benefits for each of the 46 states plus the District of Columbia and the USL&HW program for the 19 years included in this study. The entries in Table 6 permit a quick assessment of how generous the total benefits have been in each jurisdiction during these 19 years

Some states demonstrate a consistent record in terms of generosity of total benefits through the years. There were four programs that have been in the same category of generosity of total benefits for all 19 years. Two programs (USL&HW and West Virginia) had well above average total benefits in every year. One state (Alabama) was in the average category every year; and one state (Virginia) was in the below average category every year. There were no states that paid above average total benefits or well below average benefits in all 19 years.

A number of states had relatively constant total benefits throughout the 19 years and only moved between adjacent categories of relative generosity. Connecticut had average benefits for 17 years and moved to above average benefits for two years. Three states (Idaho, Michigan, and New Jersey) had average benefits for at least 14 years and moved to below average benefits for two to five years. One state (Indiana) had well below average benefits in 14 years, but paid only well below average benefits in five years. Two states (the District of Columbia and Indianan) had well below average benefits for at least 14 years and moved to below average benefits for 1 to 5 years.

As shown in Table 6, there were 18 states that moved among non-adjacent categories during the 19 years shown. Ten states (California, Florida, Hawaii, Louisiana, Maine, Montana, Nevada, Oklahoma, Oregon, and Pennsylvania) had total benefits that varied between average and well above average during the 19 years. Five states (Arizona, Kentucky, Massachusetts, New York and Texas) had total benefits that varied among the above average, average, and below average categories of generosity during the 19 years, while three states (Nebraska, North Carolina and Utah) varied among the average, below average, and well below average categories over the years included in Table 6.

Finally, Delaware, Minnesota, New Mexico and Rhode Island experienced an exhilarating ride over the 19 years that ranged among four categories of generosity of total benefits. Of particular interest are New Mexico and Rhode Island which had well above average total benefits in at least three years between 1985 and 1990, reduced the relative generosity of their total benefits to the average category for at least five years

Table 5 - Medical Benefits per 100,000 Workers Relative to National Average

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
AL	0	0	0	+	+	+	+	+	+	+	+	++	++	+	+	0	0	+	+
AK	++	++	++	++	++	++	+	+	++	++	++	++	++	++	++	++	++	++	++
AZ	0	0	+	0	0	0	0	0	+	0	0	0	0	0	0	0	0	0	0
AR	0	0	0	0	+	0	0	0	0	0	0	-	-	-	-	-	-	-	0
CA	++	++	++	++	+	++	++	+	0	0	0	0	0	+	++	++	++	++	++
CO	0	0	0	0	0	0	0	0	0	+	+	+	0	0	0	0	0	-	-
CT	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	-
DE	N/A	N/A	0	0	0	0	0	0	++	+	++	++	+	+	0	0	0	++	++
DC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FL	+	+	++	++	++	++	+	++	++	++	++	++	++	++	++	0	0	0	+
GA	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	0
HI	+	0	0	0	0	+	+	++	++	++	0	0	0	0	0	-	-	0	0
ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IL	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	-	-	-	0
IN	--	--	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IA	-	--	-	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-	0
KS	-	-	-	-	0	0	0	0	0	-	0	-	0	0	0	-	-	-	0
KY	0	0	0	0	0	0	+	+	+	+	+	0	0	0	0	+	+	++	++
LA	++	++	++	++	++	+	0	0	0	0	0	0	0	0	0	0	0	0	0
ME	+	0	+	++	+	0	0	0	0	0	-	0	0	0	0	0	0	+	0
MD	0	-	-	-	-	-	-	-	0	0	-	-	-	0	-	--	-	-	0
MA	-	-	-	-	-	-	-	-	-	--	-	-	-	-	-	--	--	--	--
MI	0	0	0	0	0	0	-	-	-	0	0	0	0	0	-	-	-	-	-
MN	++	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0
MS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MO	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	-	0	0
MT	+	++	++	+	0	+	+	+	+	++	++	+	+	+	++	0	++	++	++
NE	-	-	-	-	-	-	-	0	-	-	0	0	0	0	0	0	-	0	0
NV	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	+	0	+	0	0	0	-	0
NH	0	0	0	0	0	0	0	0	0	0	+	0	+	0	+	0	0	+	++
NJ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NM	+	+	++	++	+	++	+	+	0	0	0	0	0	0	0	0	-	-	0
NY	-	--	--	--	--	-	-	-	-	-	-	-	0	0	-	-	-	-	-
NC	--	--	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	0
OK	0	0	0	0	0	0	0	+	+	+	0	0	0	0	0	0	0	0	0
OR	++	++	++	++	0	0	0	+	+	0	+	++	++	0	0	0	0	0	0
PA	N/A	0	N/A	N/A	++	++	+	+	0	0	0	0	0	0	0	0	0	0	0
RI	0	0	-	0	0	0	-	--	--	--	0	-	-	-	-	--	--	--	--
SC	-	-	-	--	-	-	-	-	-	0	-	-	-	0	-	-	-	0	0
SD	-	-	-	-	-	-	0	0	0	0	0	0	0	0	-	0	0	0	0
TN	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TX	+	+	N/A	+	N/A	0	+	0	0	+	+	0	+	0	+	0	0	0	0
USL&HW	N/A	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
UT	0	-	-	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
VT	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0
VA	-	0	-	-	0	0	-	0	0	-	0	0	0	0	-	-	-	-	0
WV	+	+	+	0	0	0	0	+	+	+	++	+	++	++	N/A	N/A	N/A	N/A	N/A
WI	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: ++ 150.1% or more of National Average Well Above Average
+ 125.1 - 150.0% of National Average Above Average
0 75.0 - 125.0% of National Average Average
- 50.0 - 74.9% of National Average Below Average
-- 49.9% or less of National Average Well Below Average
N/A Data Not Available

Source: Tables 1.1985 - 1.2003

in the late 1980s and 1990s, and reduced their benefits even further to below average in at least three of the most recent years in Table 6.

The experiences in eight jurisdictions (Hawaii, Louisiana, Maine, Minnesota, Nevada, New Mexico, Oregon and Pennsylvania) that had average benefits in 2003 following well above average benefits in at least one earlier year make clear that significant reductions in total benefits (cash plus medical) provided to injured workers are possible. The fleeting nature of “reform” in Florida is also evident in the data in Table 6. The state began with average total benefits in 1985, achieved well above average total benefits in 1987-1989, cut total benefits to the average category again in 1991, and then re-achieved well above average total benefits in 1994 and 1996 before dropping to the average category again from 2000 through 2003.

Are the States Converging or Diverging?

A casual perusal of the information in Tables 4 to 6 suggests that the differences among states in workers' compensation benefits have narrowed over the 19 years for which we have data. For example, in terms of the data on total benefits (cash plus medical) shown in Table 6, there were eight states with well above average benefits and four jurisdictions with well below average benefits in 1985, while in 2003 there were only four states (Alaska, California, Delaware, and Montana) with well above average benefits and no jurisdictions with well below average benefits.

A more rigorous examination of whether the differences among states in the amounts of incurred benefits are narrowing over the 19 years for which we have data is presented in Table 7. For each of the years between 1985 and 2003, Table 7 shows the dispersion among the same 42 states in each state's benefits as a percentage of the national average for cash benefits, for medical benefits, and for total (cash plus medical) benefits. The dispersion is measured by the standard deviation, which is a commonly used statistical measure of the variability of the values of individual observations around the average value (mean) for all observations.

Several patterns revealed in Table 7 are worth mentioning. First, there was a pronounced tendency for the dispersion among states in incurred benefits to narrow over the 19 years, although some measures of the dispersion have been widening since 1998. Second, this narrowing has occurred for cash benefits, for medical benefits, and for total benefits, although all of the narrowing for medical benefits occurred between 1985 and 1991, and the differences among states in medical

benefits increased between 1998 and 2003. Third, there was a greater dispersion among states for cash benefits than for medical benefits in every year from 1985 to 1995, but the reverse has been true for 1996 through 2003 (with the exception of 1998). Fourth, between 1985 and 2003, the dispersion for cash benefits declined much more substantially than the dispersion for medical benefits.

Conclusions

Four conclusions seem warranted for the data on workers' compensation benefits presented in this article. First, as shown in Table 2 and Figures A and B, the national averages of incurred benefits per 100,000 workers have experienced dramatic swings in the last 19 years with available data. For example, cash benefits per 100,000 workers averaged increases of almost 12 percent annually for the four years from 1986 to 1989, but then average annual decreases of more than eight percent occurred from 1991 to 1995. The most recent data show a rapid increase of benefits from 1998 to 2000, and then a sudden slowdown in 2001 followed by a drop in the most recent years, with incurred cash benefits decreasing by 3.1 percent in 2002 and 3.3 percent in 2003. Similar turnarounds occurred in the averages of medical benefits and total benefits per 100,000 workers over these 19 years.

Second, data are available for up to 48 jurisdictions for 1985 to 2003 for the averages of cash benefits, medical benefits, and total benefits per 100,000 workers. Again, the experience of individual states varies widely, including the changes in the amounts of benefits in a state relative to the national averages over the 19 years. Some states, such as Alabama, Indiana, Iowa, Michigan, and New Jersey, have shown little variation over the 19 years in their total benefits (cash plus medical) compared to the national averages in those years. But a couple of other states, such as New Mexico, and Rhode Island, have seen their benefits plummet. Other states, such as New York and Oklahoma, experienced significant increases in total benefits relative to national averages during the 1990s, although these states had total benefits that were much closer to the national averages in recent years. As these examples indicate, for better or worse, the amount of incurred benefits in a state is not an immutable condition.

Third, the dispersion in benefits among states has narrowed considerably over the 19 years encompassed in this study. The explanation of this phenomenon apparent from the data in this article is that the narrowing of the dispersion is due both to the substantial reductions in the amounts of benefits in well above average

Table 6 - Total (Cash plus Medical) Benefits per 100,000 Workers Relative to National Average

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
AL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AK	++	++	++	+	+	+	+	+	+	+	++	++	++	++	++	++	++	++	++
AZ	0	0	0	0	0	0	0	0	+	0	0	0	0	0	-	-	-	-	-
AR	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-
CA	++	+	+	+	0	+	+	0	0	0	0	+	+	+	++	++	++	++	++
CO	0	+	0	0	+	+	0	0	0	+	0	+	0	0	0	0	0	0	0
CT	0	0	0	+	+	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DE	N/A	N/A	0	0	0	-	0	0	0	0	+	+	0	0	0	0	0	++	++
DC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-
FL	0	+	++	++	++	+	0	+	+	++	+	++	+	+	+	0	0	0	0
GA	0	0	0	0	0	0	-	0	0	0	0	0	-	-	-	-	-	-	0
HI	0	0	0	0	0	+	++	++	++	++	0	0	0	0	0	0	0	0	0
ID	0	0	0	-	-	0	0	0	0	0	0	0	0	0	0	0	-	0	-
IL	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IN	--	--	--	--	--	--	--	--	--	-	--	--	-	-	-	--	--	--	-
IA	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	-	0	0
KS	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-
KY	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	+	+
LA	+	+	++	++	+	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ME	++	++	++	++	++	++	++	0	0	0	0	0	0	0	0	0	0	+	0
MD	0	-	-	-	-	-	-	-	0	0	0	-	-	0	-	-	-	0	0
MA	0	0	+	+	+	0	0	0	0	0	0	-	-	0	-	-	-	-	-
MI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-
MN	++	0	+	0	0	0	0	0	0	0	-	0	-	-	0	0	0	0	0
MS	-	-	0	0	0	0	0	0	-	0	0	0	0	-	0	-	0	0	0
MO	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0
MT	++	++	++	+	++	++	++	+	+	++	++	+	+	+	++	0	+	++	++
NE	--	-	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	0	0
NV	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	++	++	+	0	0	0	0	0
NH	0	0	0	+	0	+	+	+	0	0	0	0	0	0	0	0	0	0	0
NJ	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	0
NM	++	+	++	++	0	+	0	0	0	-	0	-	0	-	-	-	-	-	0
NY	0	-	-	-	0	0	0	+	+	+	+	+	0	+	0	0	0	0	0
NC	--	--	--	--	-	-	-	-	-	-	-	-	-	0	-	-	-	0	0
OK	0	0	0	0	0	0	0	+	++	++	+	+	+	0	0	0	0	0	+
OR	++	++	++	++	0	0	0	+	0	0	0	+	0	0	0	0	0	0	0
PA	N/A	0	N/A	N/A	+	++	+	+	+	+	+	0	0	0	0	0	0	0	0
RI	+	++	++	++	++	++	0	-	-	-	0	-	0	0	0	-	-	-	-
SC	-	-	-	-	-	-	-	-	0	0	-	-	-	0	0	0	0	0	0
SD	-	-	-	-	-	-	0	0	0	0	0	0	-	-	-	-	-	-	0
TN	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TX	0	0	N/A	+	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0	-
USL&HW	N/A	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
UT	-	--	--	--	-	-	-	0	-	-	0	-	-	-	-	--	--	--	-
VT	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WV	++	++	++	++	++	++	++	++	++	++	++	++	++	++	N/A	N/A	N/A	N/A	N/A
WI	-	-	-	-	-	-	-	-	0	0	0	-	-	0	0	0	-	0	0

Note: ++ 150.1% or more of National Average Well Above Average
+ 125.1 - 150.0% of National Average Above Average
0 75.0 - 125.0% of National Average Average
- 50.0 - 74.9% of National Average Below Average
-- 49.9% or less of National Average Well Below Average
N/A Data Not Available

Source: Tables 1.1985 - 1.2003

states as well as some increases in benefits in well below average states.

Fourth, the changes in the national averages of benefits per 100,000 workers for the most recent six years (1998 to 2003) are perplexing.

The reasons for the acceleration in incurred benefits in 1999 and 2000 are not clear. As we discussed earlier in this article, between 1998 and 2000, the injury rate continued to decline, the CPI for medical care increased less than five percent a year, the economy continued to grow, and statutory changes in cash benefits were modest. One possible explanation for higher medical benefits is that managed care may have lost the ability to constrain the use of medical services.

The rapid deceleration of incurred cash benefits and the significant slow down in the rate of increase of incurred medical benefits in 2001 followed by a decrease in benefits in 2002 and a modest increase in 2003 are also hard to explain. The factors previously discussed that may explain these 2001 and 2002 developments were the beginning of the recession and the reduction of employment, although it is not evident why our measure of benefits (incurred benefits per 100,000 workers) should have been affected by these labor market developments. Our perusal of the developments since 1998 suggests that the explanations of the causes and consequences of the increases in incurred benefits documented in this article are incomplete. We will continue to monitor these perplexing developments in subsequent issues of the *Workers' Compensation Policy Review*.

APPENDIX A: Data Sources, Terminology, and Methodology

This appendix provides additional information on the data sources and methodology used to prepare this article, as well as a discussion of some of the terminology used for workers' compensation data.

Data Sources

The primary source of the data used in this article is the National Council on Compensation Insurance (NCCI). The *2007 Edition* of the *Annual Statistical Bulletin* published by the NCCI (the *NCCI Bulletin*) provides data for the 46 jurisdictions (including the District of Columbia) in which private insurance carriers sold workers' compensation insurance policies in 2003. For 1985 to 1998, we also obtained information from one

state (West Virginia) with an exclusive state fund. (We appreciate the assistance of Judith Greenwood, formerly of the Research, Information and Analysis Division of the West Virginia Bureau of Employment Programs for providing the West Virginia data used in this study.) Comparable data are not available from four states that had exclusive state workers' compensation funds in 2003 (North Dakota, Ohio, Washington, and Wyoming). Several previous editions of the *NCCI Bulletin* did not contain data on some states with private carriers. For example, the 2001 *NCCI Bulletin* did not contain information on two states (Delaware and Pennsylvania), and we obtained information directly from the rating bureaus for those states.

Exclusion of the four states with exclusive state funds for which we do not have data means that 47 is the maximum number of jurisdictions we use in any year to calculate national averages. However, data are lacking for Nevada prior to 1996 and for Delaware, Pennsylvania, Texas, and/or West Virginia in certain years, and the averages in Panel A of Table 2 pertain only to the number of jurisdictions for which data are available in the designated year. (The jurisdictions missing in any year are shown in parentheses.) We also have calculated a national average for those 42 states with data available for all years between 1985 and 2003, and the results are shown in Panel B of Table 2.

In addition to the maximum of 47 jurisdictions used to calculate the national averages, the *NCCI Bulletin* also contains information on the federal Longshore and Harbor Workers' Compensation Act (USL&HW). However, the costs for the USL&HW are considerably higher than those in any other workers' compensation program, and so we do not include USL&HW data in calculating the national averages. We do include information on the USL&HW benefit payments in some of our tables, including Table 1.2003, where we show the USL&HW program's benefits relative to the national average in the other jurisdictions.

Data on the annual frequencies per 100,000 workers and the average costs for five types of injuries are presented in Exhibits XI and XII of the *NCCI Bulletin*. The five types are fatalities, permanent total disabilities, permanent partial disabilities, temporary total disabilities, and "medical-only" cases, in which medical benefits but no cash benefits were paid. We used these data to calculate three variants of benefits incurred annually per 100,000 workers: (1) the cash (or "indemnity") benefits (which are the sum of the cash benefits for the four types of cases paying cash benefits); (2) the medical benefits; and (3) the total (cash plus medical) benefits.

Insurance Terminology

The benefits are the incurred benefits for the injuries that occurred during the policy periods indicated in Exhibits XI and XII in the 2007 and earlier editions of the *NCCI Bulletin*. The following definitions of terms, such as “policy period” and “incurred,” are based on the more definitive descriptions in Appendix B of Thomason, Schmidle, and Burton (2001).

Policy Period. Data for a policy period include reports on all the financial transactions for all the insurance policies with coverage beginning during the policy period. The policy period typically is a 12-month period. In some states, the policy period begins on January 1, and thus the policy period and the calendar year correspond. (For example, the 2003 policy period for South Dakota began on January 1, 2003 and ended on December 31, 2003.) However, the policy period in many states begins on a date other than January 1. (For example, the 2003-04 policy period for Alabama began on May 1, 2003 and ended on April 30, 2004.) The experience in a single policy period occurs over a 24-month time span because a policy may be effective on any date during the policy period and does not expire until 12 months later. Thus the 2003-04 policy-period experience for Alabama includes those accidents that occurred between May 1, 2003 and April 30, 2005, and that were covered by policies sold during the 2003-2004 policy period.

One of the challenges we faced in preparing this and previous versions of this article is that the policy period sometimes changes between successive issues of the *NCCI Bulletin*. For example, the policy period changed in Florida between the 2003 and 2004 editions of the *NCCI Bulletins*. The policy period for Florida reported in the 2003 *NCCI Bulletin* was for the twelve months between October 1, 1998 and September 30 of 1999, while the policy period for Florida reported in the 2004 *NCCI Bulletin* was for the twelve months between January 1, 2000 and December 31, 2000. This meant that the successive issues of the *NCCI Bulletins* did not include information on the three months from October 1, 1999 to December 31, 1999. The NCCI provided us unpublished data for these three missing months for Florida, which we used to prepare the tables in this article. (We appreciate the assistance of Derek Schaff of the NCCI, who provided us the missing data.)

First Reports. The data included in the *NCCI Bulletins* we use in this article are based on the first reports for the each of the policies that are sold in the policy period. These first reports are based on an evaluation of the claims as of 18 months after the inception of each of the policies. Thus, the 2003-04 policy-period

Table 7
Standard Deviations for State's Benefits
as a Percentage of U.S. Average

Dispersion Among 42 States in Benefits
Per 100,000 Workers for Years 1985-2003

Year	Cash Benefits	Medical Benefits	Total Benefits
1985	90.2	51.2	71.1
1986	89.6	48.0	68.2
1987	68.3	43.8	53.4
1988	64.0	42.2	50.3
1989	63.3	34.0	45.5
1990	59.9	32.7	41.6
1991	43.9	33.0	32.9
1992	39.4	34.6	32.3
1993	36.8	35.7	32.2
1994	38.6	38.1	34.4
1995	34.2	33.3	27.9
1996	34.0	37.0	29.5
1997	33.9	35.0	28.4
1998	34.0	32.8	27.8
1999	35.2	42.2	32.3
2000	36.2	39.2	34.2
2001	36.3	43.5	36.8
2002	33.9	41.4	33.8
2003	30.9	45.1	33.4

Note: The 42 states are those included in Panel B of Table 2.

experience for Alabama is based on evaluations made between November 1, 2004 (for policies effective May 1, 2003) and October 31, 2005 (for policies effective April 30, 2004). All editions of the *NCCI Bulletin* prior to 2005 only contained information based on first reports. The *Revised 2005 Edition and the 2006 Edition* of the *NCCI Bulletin* also contains information in Exhibit XI on average cost per case for second reports and third reports of earlier policy periods, and information in Exhibit XII on frequency by injury type for second and third reports. The *2007 Edition* of the *NCCI Bulletin* contains information on the first through fifth reports of average cost per case and frequency by injury type. In order to make the 2003 results in Table 1.2003 of this article comparable to the results for earlier years, we have only used the data based on the first reports.

Paid Benefits and Incurred Benefits. The first reports contain information on the paid benefits (paid losses) that the insurance company has paid as of the valuation date for all the accidents occurring during the policy period. The first reports also contain information on the incurred benefits for these claims. Incurred benefits are the carrier's estimates of the benefits that will ultimately be paid for all of these claims. These incurred benefits include the benefits actually paid to the

date of the first report, plus case reserves (anticipated payments for the claims that are known as of the evaluation date), bulk reserves, and IBNR reserves (incurred but not reported reserves) that are reserves for claims that have not yet been reported as of the valuation date even though the claims occurred in the specified period (e.g., during the policy period).

Loss Development. The incurred loss development factor is the ratio between (1) incurred losses for a particular policy period (or policy year or accident year) at a particular evaluation date and (2) comparable estimates at a later evaluation date. Incurred loss development factors are available for each state based on historical experience in the state. An incurred loss development factor of 1.200 for first to second means that a 20 percent growth is expected between the first report and the second report. Incurred loss development factors are available from first to second, second to third, etc. through eighth to ultimate. Chain multiplication of the loss development factors means that once a first report is received on actual experience for a policy year, the incurred benefit estimated as of the evaluation date for the first report can be multiplied by the subsequent loss development factors to produce an estimate of the ultimate benefits that will be paid for the injuries and diseases that occurred during that policy period.

The frequency data in Exhibit XII of the 2007 *NCCI Bulletin* are based on actual data from the first reports developed to the fifth reporting basis. The average cost per case (benefits per case) data we use from Exhibit XI of the 2007 *NCCI Bulletin* are based on actual data from the first reports developed to the ultimate reporting basis in most states. (The losses are only developed to the fifth reporting basis in California, Massachusetts, New Jersey, and New York.)

Methodology

There are some limitations of the data on average benefits (losses) per case and frequency per 100,000 workers included in Exhibits XI and XII of the *NCCI Bulletins*. Some are inherent, such as the absence of data from most of the states with exclusive state workers' compensation funds for which the NCCI does not collect data. Another inherent limitation is that the data pertain only to the experience of employers who purchase insurance from private carriers and from some of the competitive and exclusive state workers' compensation funds. The most significant problem is that the experience of self-insuring employers is not included.

Other drawbacks of the data included in Exhibits XI and XII of the *NCCI Bulletins* can be overcome, however. We are able to add two states (Delaware and

Pennsylvania) with data we obtained directly from these states for some earlier years. Another problem with the information in the *NCCI Bulletins* used to generate the data for this article is that in some editions of the *NCCI Bulletin*, the age of the first report for policy years varies considerably. In the 2007 *NCCI Bulletin*, the policy years ranged from the oldest results for California and several other states (January 2003 to December 2003) to the most recent results for Louisiana and Mississippi (September 2003 to August 2004). There is also considerable variation among policy years in earlier editions of the *NCCI Bulletin*. In the 1997 edition, for example, the policy years ranged from Georgia and Mississippi (January to December 1992) to Montana and South Dakota (January to December 1994). Given the volatility in workers' compensation costs, it is questionable whether, for example, the Georgia and Montana data in the 1997 *NCCI Bulletin* were comparable, since the Montana data were two years more current. Finally, the fact that different states often do not correspond in terms of the months included in their policy years complicates comparisons. For example, as noted, the Alabama policy period in the 2007 *NCCI Bulletin* covered May 2003 to April 2004, while the South Dakota data covered January to December 2003.

We have dealt with the problem of data with different vintages in a particular issue of the *NCCI Bulletin* and with different months of inclusion in the policy periods by creating a series of tables that reallocate – by calendar year – data from the 1988 to 2007 issues of the *NCCI Bulletin*. Thus three months of data from the Michigan policy period from April 1999 to March 2000 that were published in the 2003 *NCCI Bulletin* were combined with nine months of data from the Michigan policy period from April 2000 to March 2001 that were published in the 2004 *NCCI Bulletin* to calculate a twelve-month average for calendar year 2000 for Michigan.

Table 1.2003 and Tables 2 to 6 present information for those jurisdictions for which data for at least six months in 2003 are found in any of the 19 issues of the *NCCI Bulletin*, or for which unpublished data were provided to us by the NCCI, or for which we were able to obtain data directly from state workers' compensation agencies. In similar fashion, Table 1.2002 and Tables 2 to 6 present information on those jurisdictions for which data for at least six months in 2002 are available from any of these sources.

The data included in this and the previous issues of the *Workers' Compensation Policy Review* are largely derived from data published in various editions of the *NCCI Bulletin*. There are several ways in which our tables and analysis are unique, however. First, we have

added data from several states not included in the *NCCI Bulletin*. Second, the NCCI has provided us some unpublished data, such as data for policy periods or months skipped in successive issues of the *NCCI Bulletin*. Third, we have corrected some of the NCCI data based on error checks of the data and correspondence with the NCCI or independent state rating agencies. (Examples of the second and third types of supplemental data are included in Appendix B). Fourth, we have calculated incurred benefits per 100,000 workers, which are results not included in the *NCCI Bulletin*. Finally, we have reallocated policy period data as published in the *NCCI Bulletin* to calendar years.

The meaning of our data can be illustrated by reference to Table 1.2003. The data pertain to the incurred cash, medical, and total (cash plus medical) benefits for the policies that were first effective in the twelve months between January and December 2003. For a policy effective on January 1, 2003, the experience thus includes all injuries that occurred between January 1 and December 31, 2003. For a policy effective on December 31, 2003, the experience thus includes all injuries that occurred between December 31, 2003 and December 30, 2004. Thus our calendar year data encompass experience for injuries that occurred over a 24-month period. Ideally, we would like “calendar-accident” year data, which would pertain strictly to those injuries that occurred during a calendar year. That is, 2003 calendar-accident year data would pertain to the experience of all injuries that occurred between January 1 and December 31, 2003. Unfortunately, as far as we know, there are no published frequency and average benefits per case data on a calendar-accident year basis.

APPENDIX B

Revised and Supplemental Data

As described in Appendix A, the primary source of our data is the *Annual Statistical Bulletin* published by the National Council on Compensation Insurance (the *NCCI Bulletin*). In some instances, the data from the *NCCI Bulletin* are supplemented by additional data obtained from the National Council on Compensation Insurance or from independent state rating organizations. The data used in the preparation of the 2007 version of our study of incurred benefits relied on such supplemental information from South Carolina and New York.

South Carolina

The *NCCI Bulletin* contains information on the Average Cost per Case by Injury Type in Exhibit XI and on Frequency by Injury Type in Exhibit XII. The 2007 Edition contained information in these exhibits for South Carolina based on first reports from policy years 05/02

to 04/03. These data were identical to the South Carolina data contained in the 2006 Edition of the *NCCI Bulletin*. This policy year was so old that we would have had to omit South Carolina from Table 1.2003 in this issue of the *Workers' Compensation Policy Review* because our rule is that at least six months of data from a calendar year must be available in order to be included in the table for a particular year. We would have also been unable to produce versions of Tables 2 and 3 with data for 2003 that were comparable to the data for earlier years.

We have had similar situations in previous years when the data in the *NCCI Bulletin* were too old or incomplete (by skipping months, for example). We again were able to obtain unpublished data from the National Council on Compensation Insurance that allowed us to include South Carolina in our examination of incurred benefits in 2003. The data based on the first report of data for policy year 05/03 to 04/04 are shown in Table B.1. The table also contains data on the second report for policy year 05/02 to 04/03 and similar data for the third through fifth reports for the three preceding policy years. We only use data from the first report for 05/03 to 03/04 in our article because we only have first report data available for all the years in our study (1985 to 2003).

We want to express our appreciation to Casey Stevens, Lou Brown, and Barry Llewellyn at the National Council on Compensation Insurance for providing this additional information. Without their cooperation and assistance, the current article would have been impossible to produce.

New York

We apply several statistical tests to the data published in the *NCCI Bulletin* to determine if the data are internally consistent. For example, the weighted average of the average benefits for the five types of cash benefits should be equal to the average benefit for the combined total of cash benefits. Likewise, the average total benefit (cash plus medical benefits) should be equal to the weighted average of the average benefit for cash benefits plus the average benefit for medical benefits.

When we applied these statistical tests to the New York data for policy year 2001 included in the 2005 Edition of the *NCCI Bulletin*, we found some inconsistencies. We contacted the NCCI about these disparities, which referred us to the New York Compensation Insurance Rating Board (NYCIRB). We contacted the NYCIRB, and Martin G. Heagen, Vice President and Actuary of the NYCIRB, wrote to John Burton on December

**Table B.1
SUPPLEMENTAL SOUTH CAROLINA DATA
ANNUAL STATISTICAL BULLETIN, 2007 EDITION**

Supplemental Data for Exhibit XI - Average Cost per Case by Injury Type

INDEMNITY

Policy Period	Valued as of Report	Fatal (\$)	Permanent Total (\$)	Permanent Partial (\$)	Temporary Total (\$)	All Cases with Indemnity Benefits (\$)
05/03-04/04	1	129,961	215,243	40,590	8,134	26,030
05/02-04/03	2	110,045	228,666	42,111	8,086	25,398
05/01-04/02	3	130,415	172,692	36,622	8,087	21,444
05/00-04/01	4	124,835	167,257	35,507	7,997	20,863
05/99-04/00	5	103,364	150,009	28,871	6,858	17,524

MEDICAL

Policy Period	Valued as of Report	Fatal (\$)	Permanent Total (\$)	Permanent Partial (\$)	Temporary Total (\$)	All Cases with Indemnity Benefits (\$)	Medical Only (\$)	All Cases Medical (\$)
05/03-04/04	1	11,148	393,346	33,535	7,448	24,251	753	7,225
05/02-04/03	2	14,338	391,129	33,433	6,951	22,671	659	6,362
05/01-04/02	3	11,545	257,820	26,085	6,421	16,722	673	4,604
05/00-04/01	4	89,312	292,404	24,567	6,170	16,654	534	4,375
05/99-04/00	5	30,490	189,033	19,861	5,367	13,020	492	3,375

TOTAL

Policy Period	Valued as of Report	Fatal (\$)	Permanent Total (\$)	Permanent Partial (\$)	Temporary Total (\$)	All Cases with Indemnity Benefits (\$)	Medical Only (\$)	All Cases (\$)
05/03-04/04	1	141,109	608,589	74,125	15,582	50,281	753	14,394
05/02-04/03	2	124,383	619,795	75,544	15,037	48,069	659	12,942
05/01-04/02	3	141,960	430,512	62,707	14,508	38,166	673	9,856
05/00-04/01	4	214,147	459,661	60,074	14,167	37,517	534	9,345
05/99-04/00	5	133,854	339,042	48,732	12,225	30,544	492	7,407

Supplemental Data for Exhibit XII

FREQUENCY BY INJURY TYPE

Policy Period	Valued as of Report	Fatal	Permanent Total	Permanent Partial	Temporary Total	Medical Only	Total
05/03-04/04	1	4	15	543	618	3,101	4,279
05/02-04/03	2	5	14	487	661	3,340	4,507
05/01-04/02	3	3	11	475	697	3,659	4,846
05/00-04/01	4	4	12	474	710	3,836	5,035
05/99-04/00	5	6	12	531	760	4,381	5,690

Source: Correspondence with Barry L. Llewellyn, Senior Divisional Executive, Regulatory Services, National Council on Compensation Insurance, September 24, 2007. © National Council on Compensation Insurance.

Table B.2
CORRECTED NEW YORK DATA
ANNUAL STATISTICAL BULLETIN, 2004 AND 2005 EDITIONS

First Report Data for Exhibit XI - Average Cost per Case by Injury Type

INDEMNITY

Policy Period	Annual Statistical Bulletin Edition	Fatal (\$)	Permanent Total (\$)	Permanent Partial (\$)	Temporary Total (\$)	All Cases with Indemnity Benefits (\$)
01/00-12/00	2004 2004 C	158,156	171,189	64,396	4,637	30,731 29,670
01/01-12/01	2005 2005 C	139,739	130,635	65,204	4,615	30,572 31,755

MEDICAL

Policy Period	Valued as of Report	Fatal (\$)	Permanent Total (\$)	Permanent Partial (\$)	Temporary Total (\$)	All Cases with Indemnity Benefits (\$)	Medical Only (\$)	All Cases Medical (\$)
01/00-12/00	2004 2004 C	41,300	52,183	20,379	4,218	11,010	638	4,379 (no changes)
01/01-12/01	2005 2005 C	11,859	243,496	20,824	4,063	12,114	682	4,875 4,772

TOTAL

Policy Period	Valued as of Report	Fatal (\$)	Permanent Total (\$)	Permanent Partial (\$)	Temporary Total (\$)	All Cases with Indemnity Benefits (\$)	Medical Only (\$)	All Cases (\$)
01/00-12/00	2004 2004 C	199,456	223,372	84,776	8,854	41,741	638	15,076 15,461
01/01-12/01	2005 2005 C	151,598	374,131	86,028	8,678	42,686	682	16,114 15,815

Source: 2004 and 2005: as published in *2004* and *2005 Editions of Annual Statistical Bulletin*.
2004C and 2005C: Averages corrected by Florence Blum and John F. Burton, Jr.

15, 2005 indicating that the “weights used to calculate the total were not the published frequency numbers, which should have been used.” Mr. Heagen included several tables with his letter that included data for policy years 1992 to 2002 on average claim cost by injury type for incurred indemnity, incurred medical, and incurred indemnity and medical. We appreciate the assistance of Martin Heagen in responding to our inquiry.

Unfortunately, we made a mistake in 2005 and assumed that the data provided by Mr. Heagen were based on the first report for each of the policy years

from 1992 to 2002. We therefore used the most recent five years of data (covering policy years 1998 to 2002) to revise the New York entries in the tables included in our articles on incurred benefits published in 2005 and 2006. In the process of preparing the current article, we realized that the data included with Mr. Heagen’s letter were not based on the first report for each of the years. Rather, the letter contained averages based on the first report for policy year 2002, on the second report for 2001, on the third report for 2000, and so on back to the eleventh report for 1992.

In order to correct our previous results for New York, we have revised the entries for New York for policy years 1998 to 2002 shown in our earlier articles and added data for policy year 2003 based on these assumptions: (1) the data provided by the NYCIRB to the NCCI for all policy years are correct for all entries for average cost of indemnity benefits per case and for frequencies for the five injury types; (2) the data provided by the NYCIRB to the NCCI for all policy years are correct for all entries for average cost of medical benefits per case and for frequencies for all indemnity claims and for medical-only claims; and (3) the wrong frequencies were used by the NYCIRB to calculate several averages in policy years 2000 and 2001 that were included in the 2004 and 2005 editions of the *NCCI Bulletin*. The data as published in these editions of the *NCCI Bulletin* and the corrected averages based on our calculations are shown in Table B.2.

An example of the changes we made can be seen in the entry for indemnity benefits for policy period 01/00 to 12/00 in Table B.2. The 2004 Edition of the *NCCI Bulletin* showed that the average indemnity benefit for all cases with indemnity benefits was \$30,731. We have recalculated this average by using the same averages for the individual types of cash benefits (such as \$158,156 for fatal cases) shown in the *NCCI Bulletin* in combination with the frequencies for these five types of cash benefits shown in the *NCCI Bulletin*, and arrived at an average of \$29,670 for the indemnity benefits for all types of cases. Likewise, we have recalculated the average indemnity benefits for all types of cases providing indemnity benefits for policy year 2001 using the data in the 2005 Edition of the *NCCI Bulletin*. Our corrected figure is \$31,755 rather than the \$30,572 shown in the *NCCI Bulletin* for the average indemnity benefit for all cases paying indemnity benefits. In addition, as shown in Table B.2, we have corrected the averages for medical benefits for policy year 2001 and the total (indemnity plus medical) benefits for policy years 2000 and 2001.

These corrected results for New York have been used to prepare Table 1.2000 and Table 1.2001 in this issue of the *Workers' Compensation Policy Review*. In addition, as previously indicated, we have changed the New York entries in Tables 1.1998, Table 1.1999, and Table 1.2002 to use the information contained in the appropriate editions of the *NCCI Bulletin* for those years (rather than the data contained in the December 2005 letter from Mr. Heagen). Finally, we have used the New York data in the 2007 Edition of the *NCCI Bulletin* to prepare the Empire State entries in Table 1.2003.

We now believe we have accurate entries for New York in our tables. We apologize for the length of time it took us to straighten out the problem, which has delayed the publication of this issue of the *Workers' Compensation Policy Review*.

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ENDNOTES

1. Previous versions of Table 2, such as the version contained in Burton and Blum (2006), contained three panels – Panel A contained data for all states with data for the particular policy year. Panel B contained data on forty-three states (including West Virginia) with data for policy years 1985-1998. Panel C contained data for forty-two states (excluding West Virginia) for policy years 1998-2002.

We have not been able to obtain data on West Virginia since policy year 1998, and the shift from forty-three states to forty-two states in Panels B and C of the previous versions of Tables 2 was particularly confusing.

We have therefore calculated a new version of Panel B of Table 2 for the current article. This version is based on data from the forty-two jurisdictions for whom data for every year between 1985 and 2003. The result of this change is that all of the data in Panel B are comparable, which in turn has changed the results in Figures A and B slightly for the years between 1986 and 1998.

2. We exclude the United States Longshore and Harbor Workers Act (USL&HW) from these comparisons because the program's costs are so out of line with other program. We also exclude the USL&HW data when we calculate the national averages shown in Tables 1 and 3.

3. Presumably, if Nevada data were available and used to construct the national averages for 1985 to 1995, the amounts for those years in Panel A of Table 2 would have been higher.

4. West Virginia data are not available for 1999 to 2003. Based on data from previous years, West Virginia probably had total costs that were well above the national average in 1999 to 2003.

5. Data on work-related injury and illness incidence rates from 1972 to 2003 are included in Table 12 of Burton and Blum (2005).

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