NCCI Holdings, Inc.

NCCI RESEARCH BRIEF

September 2010

by Jim Davis and Matt Crotts

Workers Compensation Claim Frequency Continues to Decline in 2009

Overview

The decline in claim frequency for workers compensation injuries continued in 2009, and economic factors suggest further reductions are likely in 2010.

Preliminary results indicate a decline in claim frequency of 4.0% for 2009. This is on the heels of a 3.4% drop in 2008 and extends a downward trend that started in 1991.

Note, however, that NCCI's latest data reveals that, while claim frequency is down, indemnity and medical severities continue to rise, somewhat offsetting the good news.

Key Findings

Key findings in this year's analysis are listed below:

- Preliminary data for Accident Year 2009 reveals a continued overall decline in claim frequency and overall increases in indemnity and medical severities.
- Over the latest five years, the decline in frequency continues to be widespread. Frequency declines were observed for all industries, geographic regions, and employer sizes, as well as for most claim types.
- Claims considered "Likely-to-Develop" exhibited a larger percentage frequency decline than those considered "Not-Likely-to-Develop."
- Some of the more complex claims, such as carpal tunnel and lower back, declined more than average over the latest five years.
- Frequency changes vary considerably by type of injury.
- Injury type differences notwithstanding, frequency changes are relatively consistent by size of loss for claims under $250,000.

Factors Influencing the Long-Term Decline in Frequency

As previously reported, NCCI believes that several factors may have contributed to the decline in frequency since the early 1990s including the following:

- Global competition has fostered advances in automation, technology, and production, such as the following:
  - Increased use of robotics
  - Increased use of modular design and construction techniques
  - Increased use of power-assisted processes
  - Advances in ergonomic designs
  - Proliferation of cordless tools
- The aging of the workplace has put downward pressure on claim frequency because older workers tend to have fewer workplace accidents.
- Emphasis on workplace safety and loss control has continued.
- Benefit reforms of the early 1990s have tightened compensability standards.

2009 Overall Trends

As communicated at NCCI's ***Annual Issues Symposium 2010***, and noted above, preliminary data reveals that workers compensation claim frequency has declined again in 2009. Exhibits 1–3 are based on aggregate workers compensation data submitted by NCCI-affiliated carriers. The results for Accident Year 2009 are preliminary.

Exhibit 1 shows that lost-time claim frequency[1] has fallen in all but two of the most recent 19 years, including an estimated decline of 4.0% in 2009. The reduction in claim frequency continues to be a major bright spot for workers compensation. Injury rates have dropped by nearly 55% since 1990—good news for workers, employers, and their insurers.

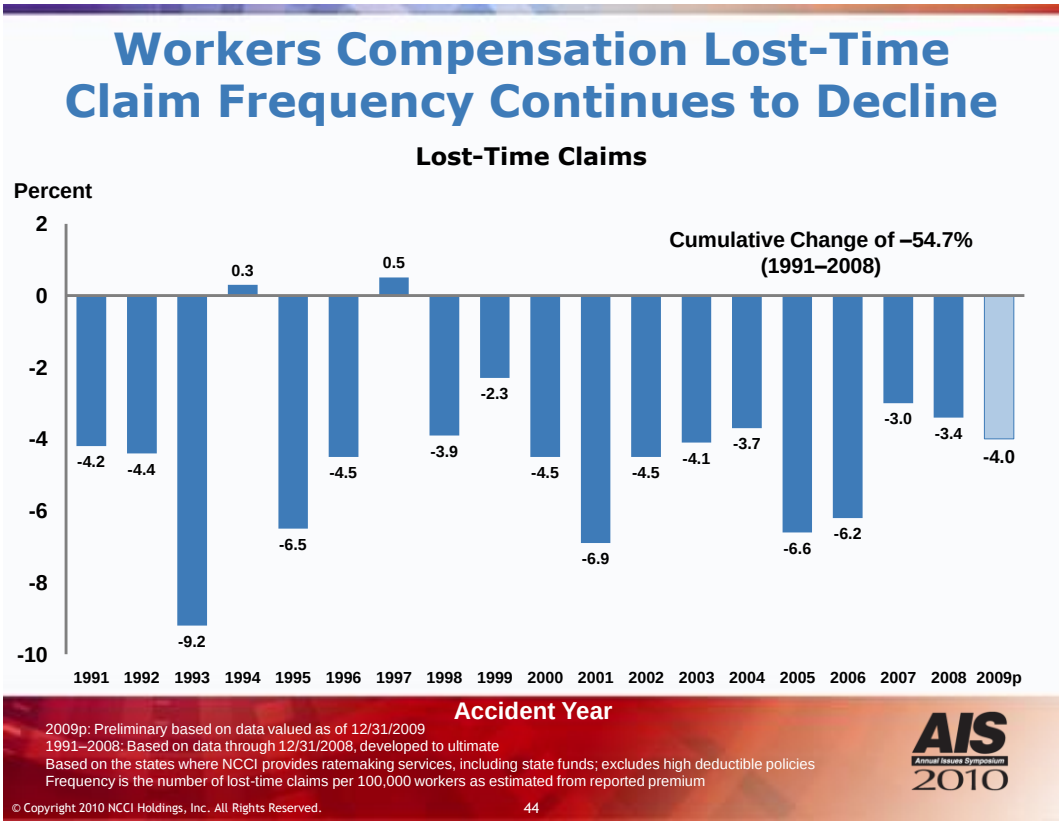


Exhibit 1: Lost-Time Claim Frequency Continues to Decline

[1] In Exhibit 1, the term "frequency" is defined as lost-time claims per 100,000 workers per year.

Increasing claim costs have partly offset the decline in claim frequency. Exhibit 2 reveals that workers compensation indemnity severity continues to increase at a faster pace than wages. Despite a decline in average weekly wages in 2009, average indemnity costs increased an estimated 4.5%. It remains to be seen whether changes in average wage and indemnity cost per claim will begin to converge in 2010 and subsequent.

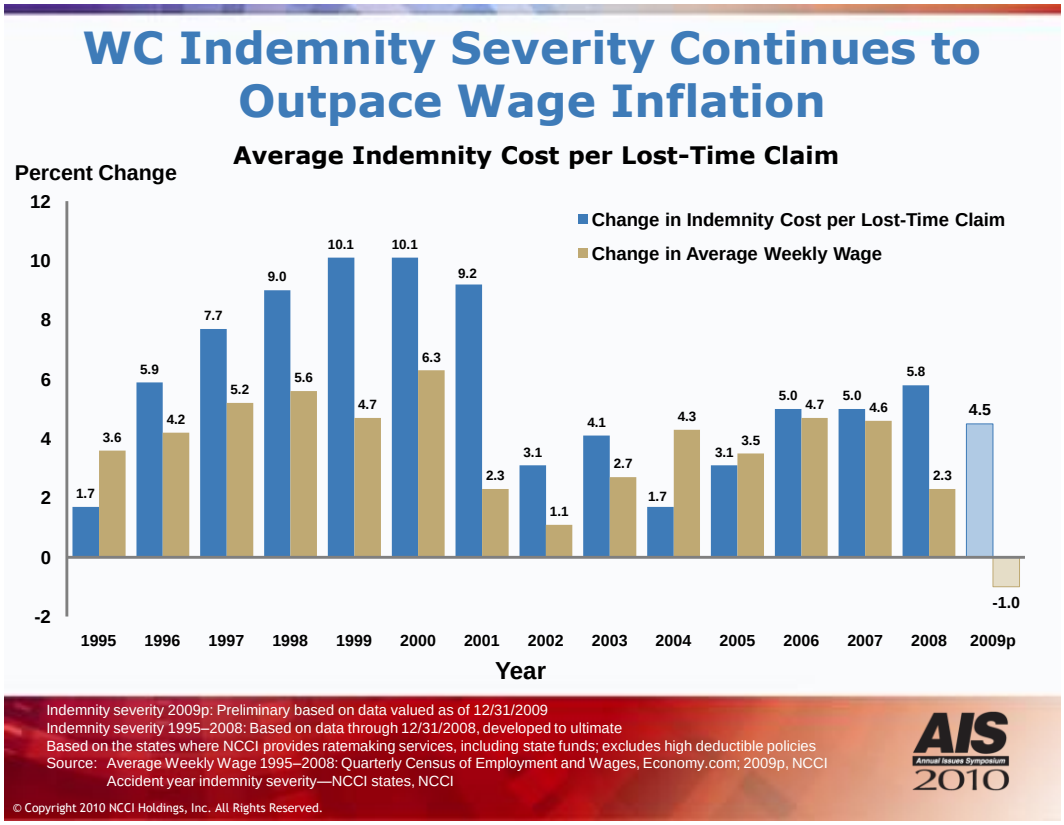


Exhibit 2: Change in Average Indemnity Cost per Lost-Time Claim

Similarly, Exhibit 3 indicates that the growth in workers compensation average medical costs continues to outpace the Medical Consumer Price Index (CPI), although the rate of growth has subsided recently. The estimated increase in medical costs of 5% in 2009 is the lowest increase over the latest 15-year period. The Medical CPI is a measure of "price" inflation for all forms of healthcare and does not capture changes in utilization. Increases in utilization (e.g., changes in number and types of treatments per claim and changes in claim diagnosis) contributed significantly to the differences between changes in medical severity and the Medical CPI through 2001. Subsequent to 2001, the impact of utilization has subsided, primarily because the number of treatments per claim has remained fairly steady.[2]

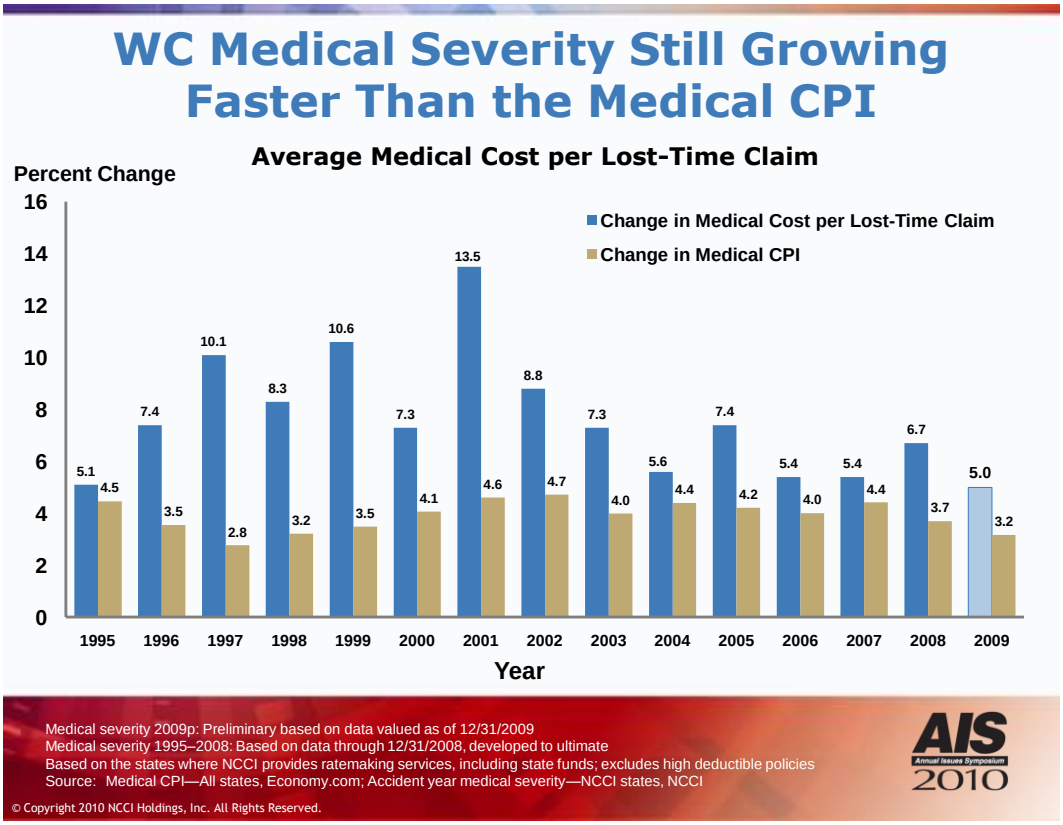


Exhibit 3: Change in Average Medical Cost per Lost-Time Claim

[2] See 2010 NCCI report, *"Significant Changes in the Factors Driving Medical Severity; 1996–2001 vs. 2001–2006"* by Tanya Restrepo and Harry Shuford, NCCI 2010, available on **ncci.com**.

An In-Depth Look at Claim Frequency Changes

In order to analyze the claim frequency results in greater detail, we used the ***Statistical Plan for Workers Compensation and Employers Liability Insurance*** data in states for which NCCI provides ratemaking services (excluding West Virginia).[3] Data for policy years expiring (PYE) in 2004 through 2008 was used for most of the analyses with data from PYE 1999–2008 displayed for selected charts.

For this analysis, unless otherwise noted, frequency is defined as reported lost-time claims as of 1st report[4] per $1 million in wage-adjusted payroll. While it is not uncommon for claims to be reported subsequent to 1st report, this paper is confined to changes in frequency observed at 1st report. For the 2004–2008 period, the overall frequency decline was 17%. The charts that follow examine the frequency change by various claim characteristics.

Claim Frequency by Size of Loss

Exhibit 4 displays changes in lost-time claim frequency by Size of Loss. Each claim cost represents undeveloped paid losses plus case reserves as of 1st report. For this snapshot, we did not account for medical or wage inflation. Hence, a migration from the low to high ranges is evident. For example, a $48,000 claim in 2004 would fall in the $10K to $50K range. A comparable claim in 2008 would likely cost more than $50,000, just due to inflation, and would, therefore, appear in the next higher size of loss range ($50K to $250K).

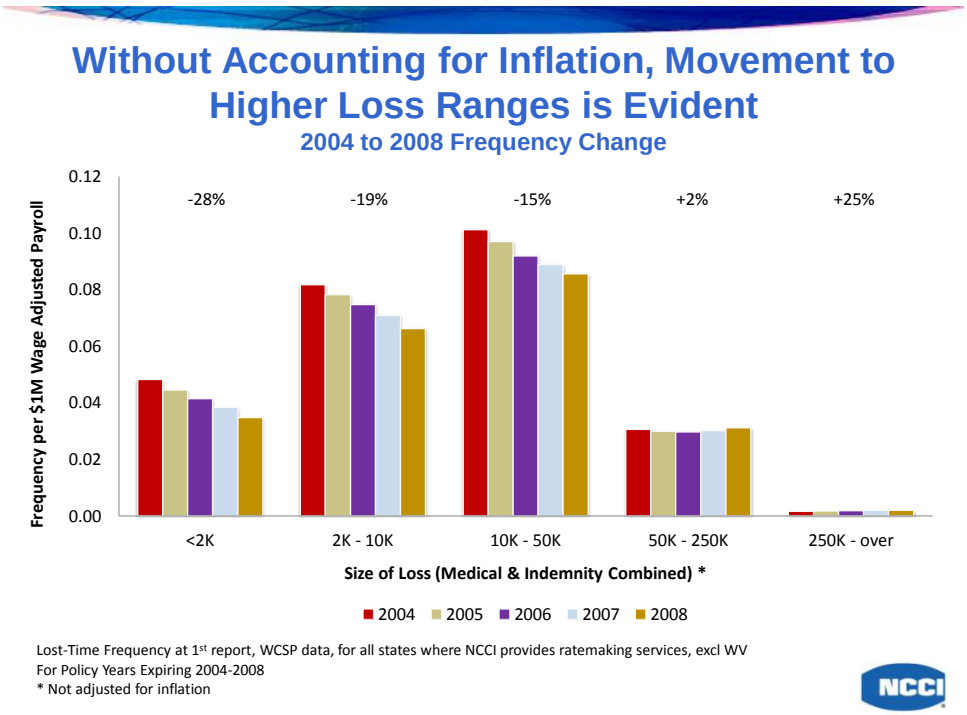


Exhibit 4: Claim Frequency by Size of Loss

[3] West Virginia became an NCCI state effective July 1, 2006.

[4] 1st report is 18 months after policy effective date.

Claim Frequency by Size of Loss After Adjusting for Inflation

Exhibit 5 reveals that, after accounting for wage and medical cost inflation, a fairly consistent decline in frequency can be observed for claims below $250,000. Note that less than 1% of claims reported are in excess of $250,000 as of 1st report. Notwithstanding the varying changes by Injury Type (see Exhibits 10 and 11), we conclude that frequency changes are fairly consistent by size of loss.

For this snapshot, claims in 2004 through 2007 were adjusted to the 2008 inflation level. Specifically, the indemnity portion of each claim was adjusted for changes in average wages by state using Quarterly Census of Employment and Wages data. The medical portion of each claim was adjusted using the Medical CPI.[5] Note that we did not adjust for changes in utilization, which would include the following:

- Changes in the number of treatments per claim
- Changes in the types of treatments per claim
- Changes in the claim diagnoses

Nor did we account for other possible contributing factors such as changes in industry mix.

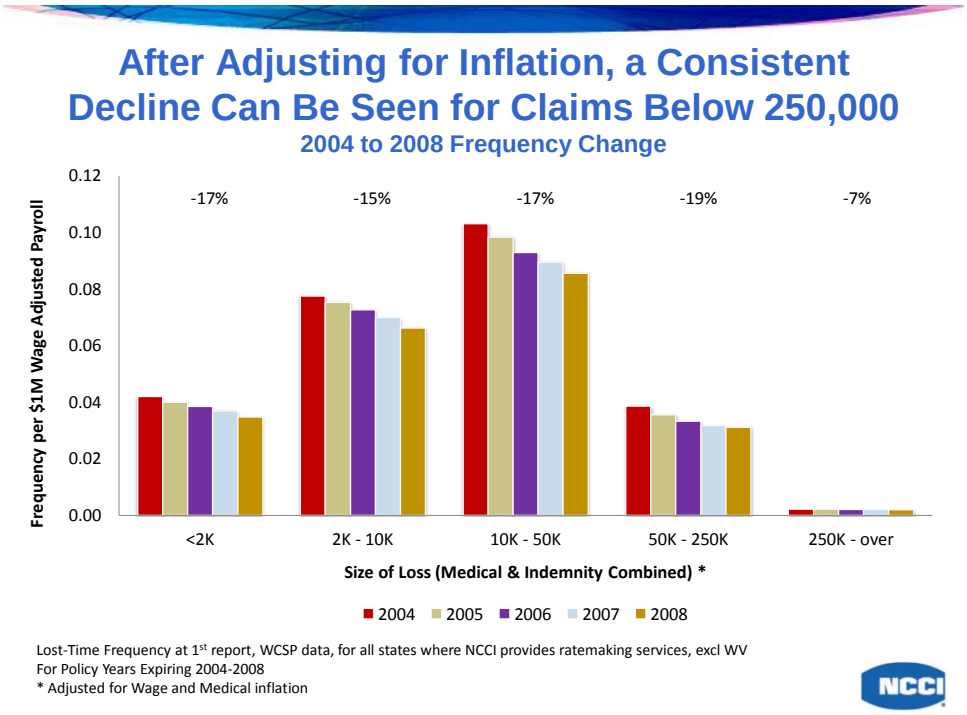


Exhibit 5: Claim Frequency by Size of Loss Adjusted for Inflation

[5] Source of Quarterly Census of Employment and Wages data and Medical CPI is the Bureau of Labor Statistics.

Claim Frequency by Part of Body

Exhibit 6 displays changes in lost-time frequency by Part of Body. Lower Back injuries exhibited the steepest frequency decline over the latest five years, but continue to represent a relatively large share of injuries. Frequency of injuries involving multiple body parts also declined sharply over the period.

Note: For this and a number of subsequent exhibits, the Appendix provides the distribution of claim counts and the distribution of losses (reported paid losses plus case reserve amounts) for each grouping. In addition, the Appendix provides a detailed description of the elements contained in each grouping.

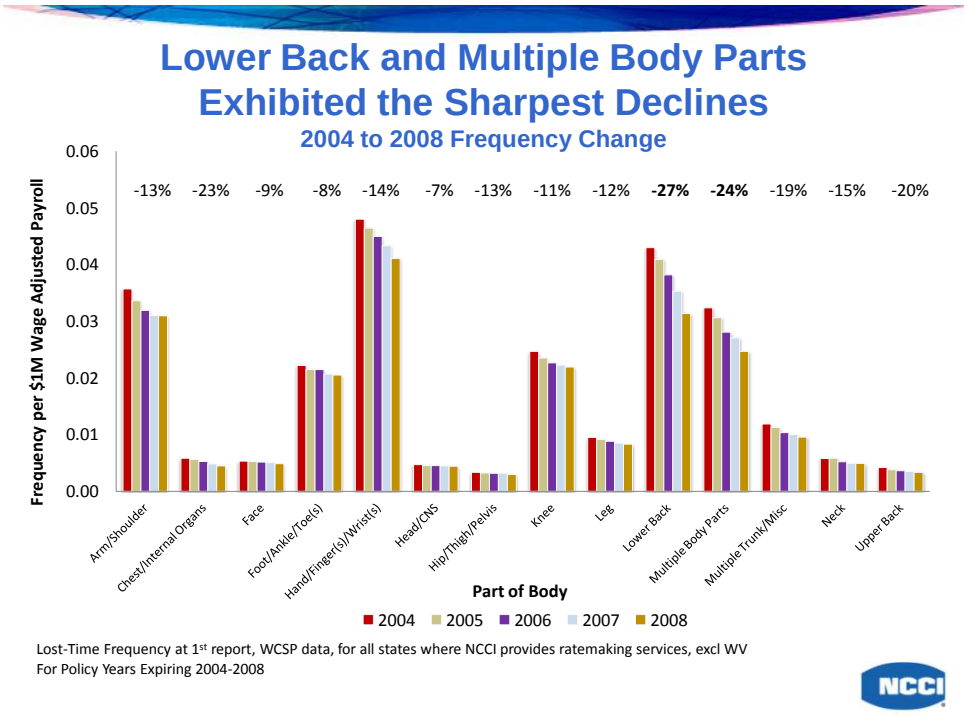


Exhibit 6: Claim Frequency by Part of Body

Claim Frequency by Likely-to-Develop and Not-Likely-to-Develop Parts of Body

In Exhibit 7 we have assigned all lost-time claims into one of two categories (Likely-to-Develop and Not-Likely-to-Develop) based on Part of Body, consistent with NCCI's new class ratemaking methodology. Under the new methodology, Part of Body is one of three claim characteristics (along with injury type and open vs. closed status) used to create homogeneous claim groupings for loss development purposes.[6]

Likely-to-Develop claim frequency displayed the sharper percentage decline. NCCI has identified Likely-to-Develop claims as those with body parts such as head, skull, neck, trunk, spinal cord, upper and lower back, multiple body parts, etc. Not-Likely-to-Develop claims are those involving fingers, hand, arm, wrist, toes, foot, ankle, etc. The Appendix contains the complete list of Parts of Body in each category.

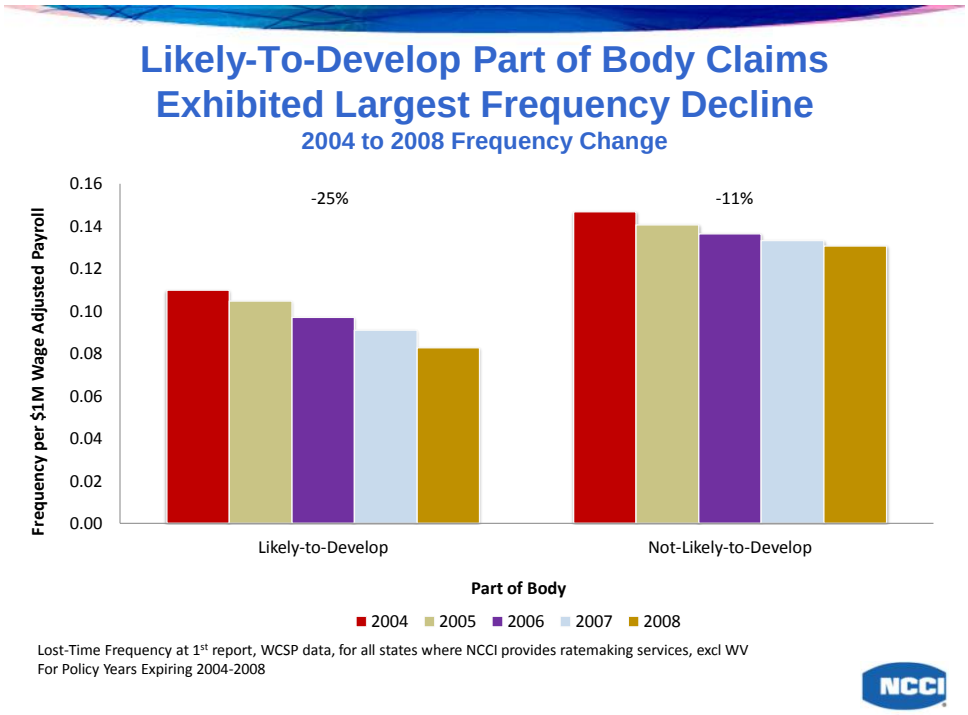


Exhibit 7: Claim Frequency by "Likely" vs. Not-Likely" to Develop Groupings

[6] Refer to the report, *"Class Ratemaking for Workers Compensation: NCCI's New Methodology"* by Tom Daley, available on **ncci.com**.

Claim Frequency by Nature of Injury

Exhibit 8 displays changes in lost-time frequency by Nature of Injury (NOI). As might be expected, Sprain/Strain claims show a significant decline. Also notable is the sharp decline in Carpal Tunnel Syndrome (CTS) claim frequency of 46%. CTS claims involve injuries to the hand, wrist, or both.

Carpal Tunnel Syndrome received national attention during the 1990s personal computer boom. Several factors have contributed to the decline in CTS claim frequency including the following:

- The Occupational Safety and Health Administration (OSHA) proposed a national ergonomics standard in 2000. Though overturned, it focused national attention on the importance of ergonomics in the workplace. As a result, many employers proceeded to implement the recommended improvements and safety precautions.
- A 2001 study conducted by the Mayo Clinic concluded that "the frequency of Carpal Tunnel Syndrome in computer users is similar to that in the general population." [7]
- The United States Supreme Court ruled against the class action consolidation of CTS cases in *"Repetitive Stress Injury Litigation, 1993."* [8]
- The recent recession has resulted in a reduction in assembly line production work, where CTS injuries are common.

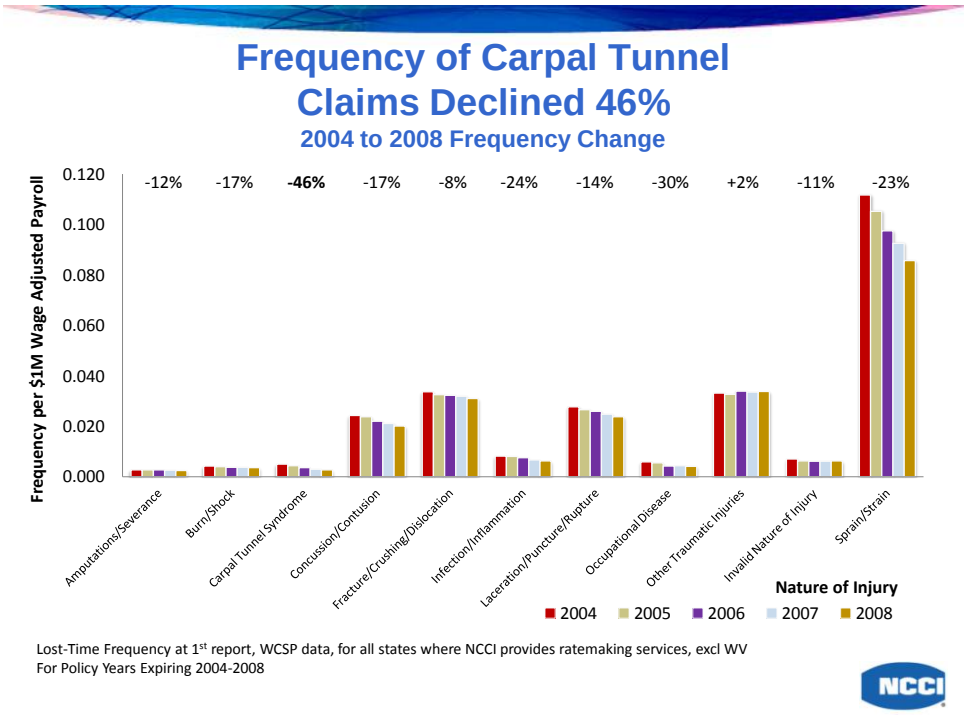


Exhibit 8: Claim Frequency by Nature of Injury

[7] J. Clarke Stevens, MD; John C. Witt, MD; Benn E. Smith, MD; and Amy L. Weaver, MS, The Frequency of Carpal Tunnel Syndrome in Computer Users at a Medical Facility, *Neurology*, Volume **56**(11), June 12, 2001, pp. 1568–1570.

[8] United States Court of Appeals: Repetitive Stress Injury Litigation, 11 F.3d 368 (2d Cir. 1993).

Claim Frequency by Cause of Injury

Exhibit 9 compares changes in lost-time frequency by Cause of Injury (COI). The frequency of claims in the Cumulative Injury category declined sharply, by 40% over the latest 5-year period. The frequency of claims categorized under Miscellaneous Causes declined by 43%. This category includes injuries such as foreign matter in eyes, absorption and inhalation, etc. The Striking Against/Stepping On category experienced a 34% decrease. A possible explanation is that the types of injuries in these two categories may be relatively more preventable through loss control and safety measures.

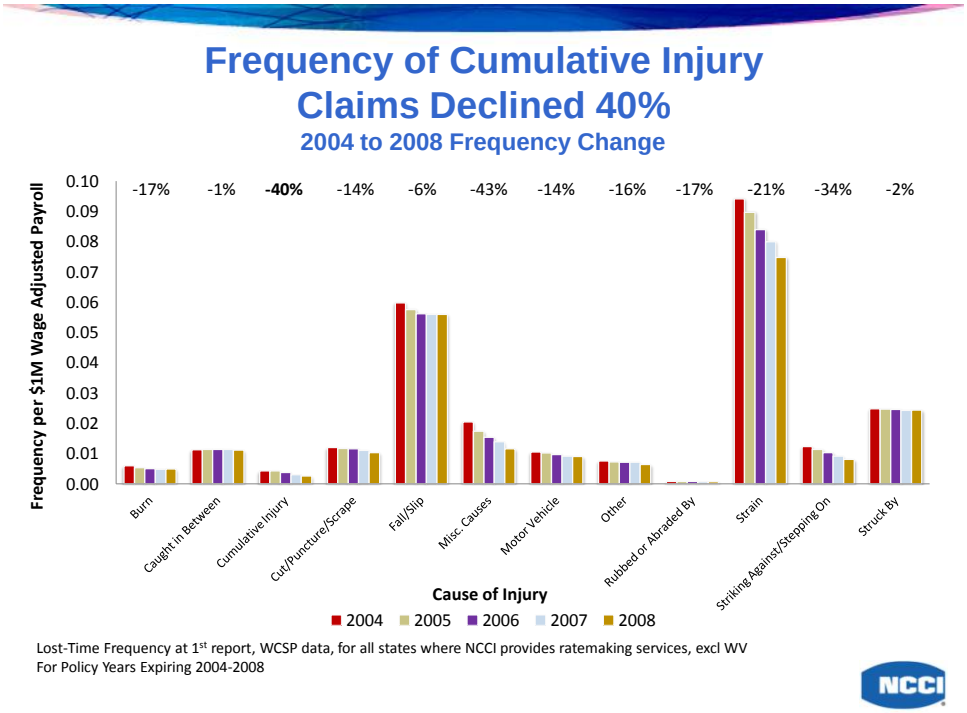


Exhibit 9: Claim Frequency by Cause of Injury

Claim Frequency by Injury Type

Exhibit 10 displays changes in frequency by Injury Type over the latest 5- and 10-year periods. Overall lost-time claim frequency declined by 17% and 36% over the latest 5- and 10-year periods respectively. Temporary total disability claim frequency declined more than permanent partial disability claim frequency.

It is not uncommon for claims to be reclassified under different injury types as they mature. For example, a claim reported as temporary total disability at 1st report may develop adversely into a permanent partial disability claim as of a subsequent report. This exhibit is based on the Injury Type reported as of 1st report.

Fatal and permanent total claims exhibited more year-to-year volatility than other injury types, likely due to the much smaller number of these claims. The decline in frequency for claims involving fatalities has been less than the decline for all lost-time claims. While the permanent total disability claim frequency increased over the latest five years, the growth is concentrated in a few carriers (see next exhibit).

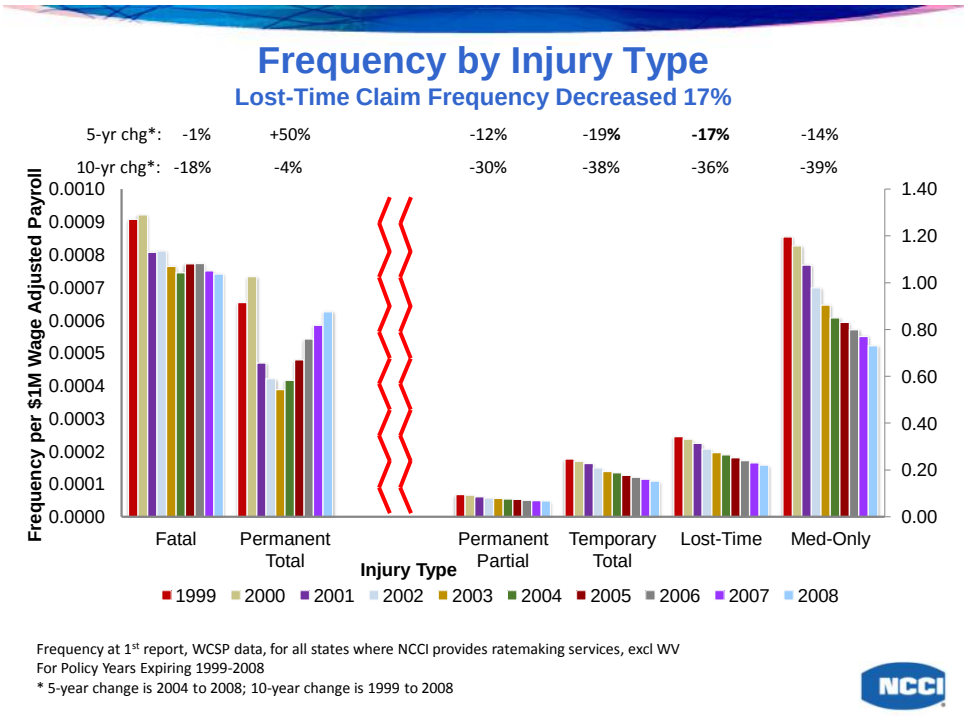


Exhibit 10: Claim Frequency by Injury Type

Exhibit 11 displays frequency by Injury Type for carriers representing 84% of all lost-time claims over the 10-year period displayed. Excluding the selected carriers, the 5-year change in permanent total disability frequency decreases from +50% (in Exhibit 10) to +13%, and the 10-year change decreases from –4% to –55%. For the remaining injury types, the 5- and 10-year changes are essentially unchanged. NCCI believes that this snapshot provides a better picture for the majority of the workers compensation market.

As in the previous chart, temporary total disability frequency declined more than permanent partial disability frequency. However, this is not inconsistent with the finding in Exhibit 7 that "Likely-to-Develop" claim frequency declined by more than "Not-Likely-to-Develop" claims. This is due to the fact that as of 1st report, the majority of claims with Likely-to-Develop body parts are still classified as temporary total disability.

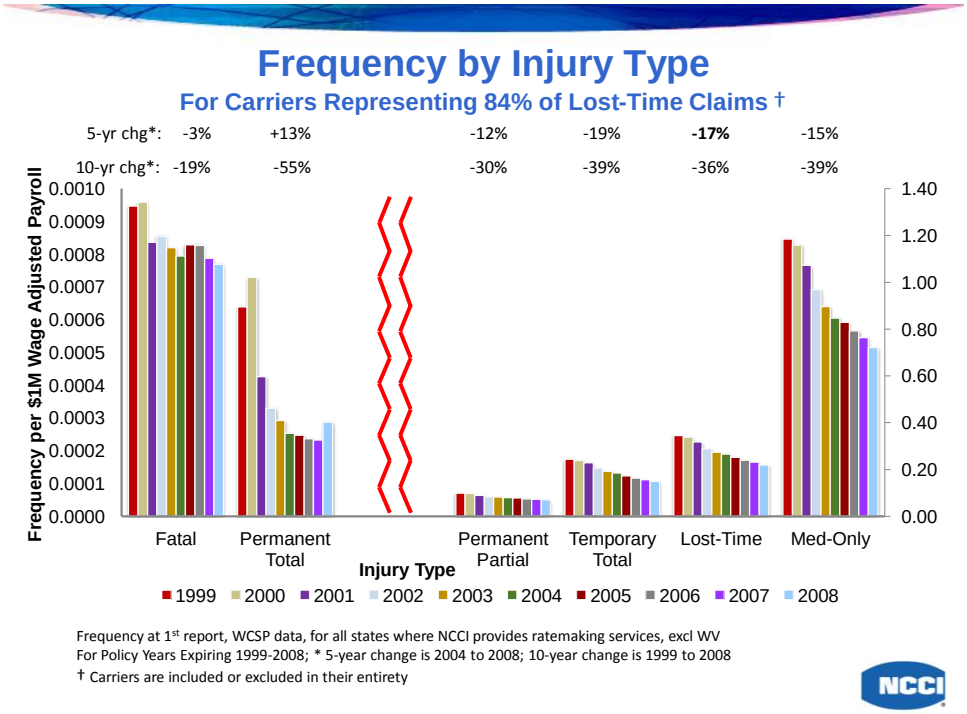


Exhibit 11: Claim Frequency by Injury Type for Majority of Market

Less Notable Changes in Claim Frequency

This year's frequency update included an analysis of the various categories listed below. Changes in frequency were less noteworthy for these categories, but that is news in and of itself:

- By Market Type (Assigned Risk vs. Voluntary)
- By Region
- By State
- By Industry Group
- By Largest Classes Within Each Industry Group
- By Size of Employer Payroll
- By Size of Employer Premium
- By Size of Employer Average Rate

Changes in Claim Frequency by Market Type

Exhibit 12 shows that from 2004 to 2008, both the assigned risk and voluntary markets enjoyed a decline in frequency, with the assigned risk market experiencing a smaller percentage decline. In compiling this exhibit, policies were assigned to the appropriate market type by year. During the period displayed, the assigned risk markets were generally depopulating. With all else being equal, a shift of employers with relatively lower frequency from the assigned risk market into the voluntary market could slow the decline in frequency in both markets.

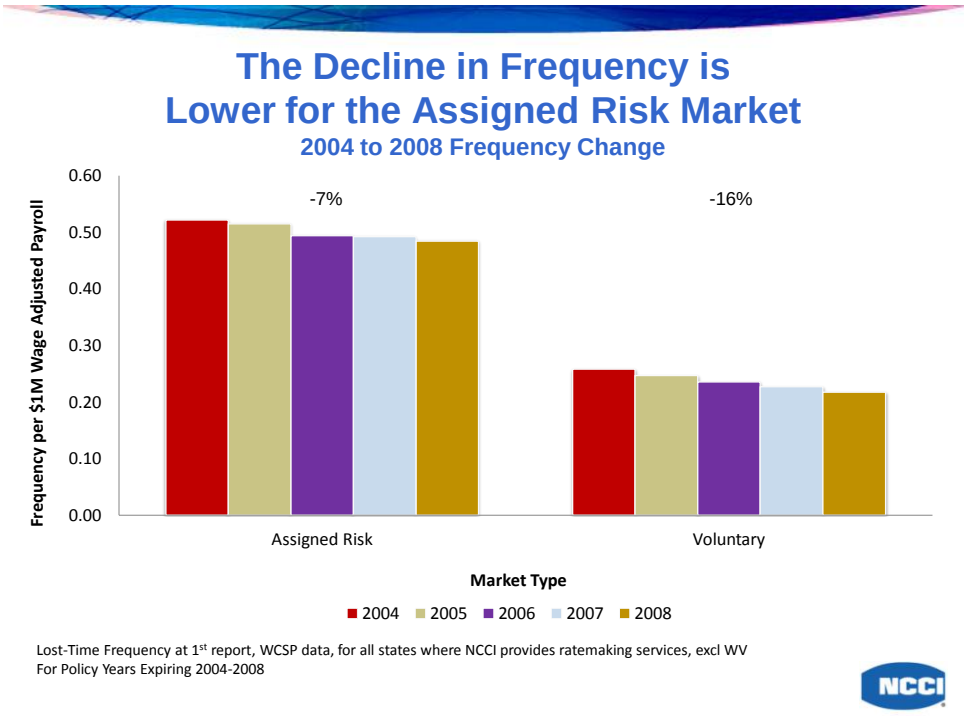


Exhibit 12: Claim Frequency by Market Type

Changes in Claim Frequency by Market Type—Selected Assigned Risk Classes

Exhibit 13 contains the 2004 and 2008 frequencies (per wage-adjusted payroll) and the associated change in frequency for 15 selected classes that are typically found in the assigned risk markets. For the Policy Year Expiring (PYE) in 2008, the assigned risk frequency for each class is consistently higher than that of the voluntary market.

		Assigned Risk			Voluntary			A/R to VOL
	Classification	PYE 2004	PYE 2008	% Change	PYE 2004	PYE 2008	% Change	2008 Relativity
5645	**Carpentry-Detached Dwelling**	2.035	1.980	-3%	1.308	1.095	-16%	**1.81**
5551	**Roofing**	2.462	2.318	-6%	1.472	1.146	-22%	**2.02**
8810	**Clerical**	0.060	0.045	-25%	0.041	0.028	-31%	**1.59**
7229	**Trucking: Long Distance**	1.196	0.933	-22%	0.948	0.852	-10%	**1.10**
7228	**Trucking: Local Hauling**	1.125	1.100	-2%	1.168	0.760	-35%	**1.45**
5403	**Carpentry: NOC**	1.544	1.386	-10%	0.979	0.775	-21%	**1.79**
5022	**Masonry**	1.044	1.108	6%	0.825	0.676	-18%	**1.64**
6217	**Excavation & Drivers**	0.910	0.812	-11%	0.574	0.497	-13%	**1.63**
8380	**Auto Service/Repair**	0.786	0.777	-1%	0.483	0.428	-11%	**1.81**
9015	**Buildings Operation: Owner**	0.683	0.665	-3%	0.574	0.526	-8%	**1.27**
5190	**Electrical Wiring**	0.606	0.636	5%	0.485	0.397	-18%	**1.60**
5183	**Plumbing**	0.688	0.499	-27%	0.571	0.444	-22%	**1.12**
8742	**Salesperson - Outside**	0.082	0.081	-2%	0.056	0.049	-13%	**1.65**
9082	**Caterer/Restaurant**	0.615	0.527	-14%	0.528	0.410	-22%	**1.29**
8829	**Nursing Home**	0.935	0.915	-2%	0.690	0.602	-13%	**1.52**

Exhibit 13: Claim Frequency for Selected Classes

Changes in Claim Frequency by Geographic Region

Exhibit 14 examines changes in frequency by geographic region over the latest 5- and 10-year periods. The Western Region shows the smallest decline, while the changes for the other regions are very similar to each other.

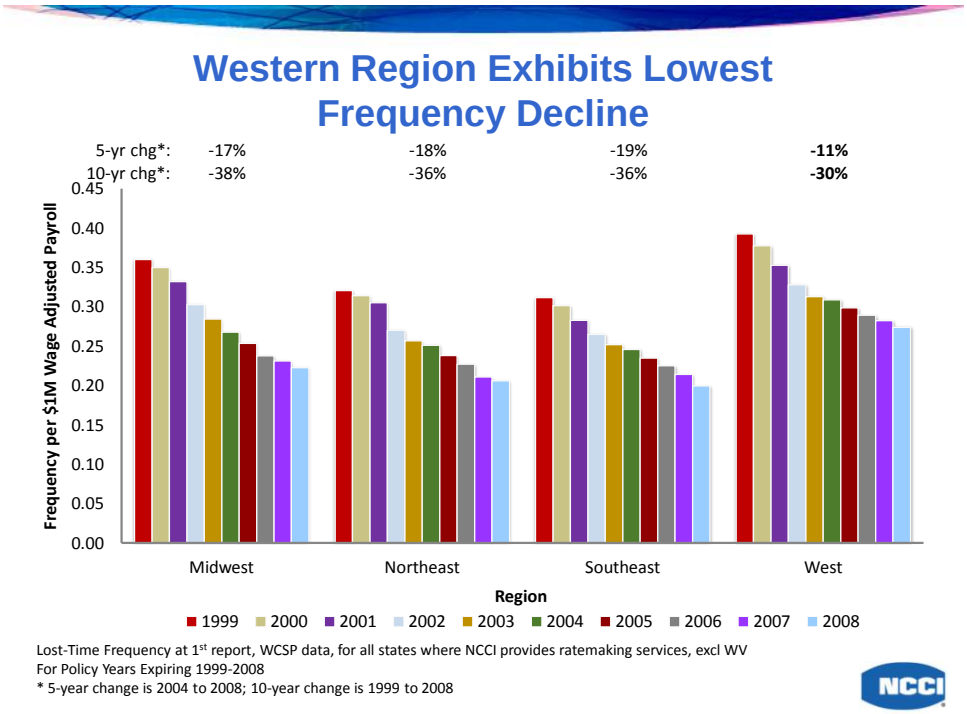


Exhibit 14: Claim Frequency by Geographic Region

Changes in Claim Frequency by State

Exhibit 15 displays annual frequency changes by state for the latest 5-year period. Independent bureau states and monopolistic state fund states are displayed in white.

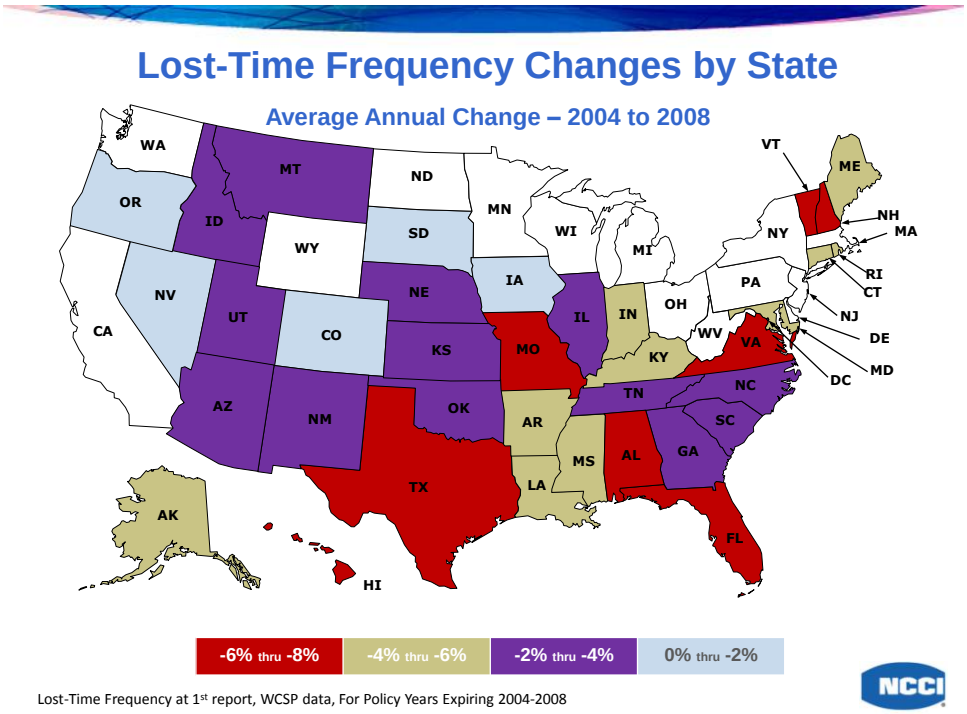


Exhibit 15: Annual Claim Frequency by State—Latest 5 Years

Exhibit 16 displays annual frequency changes by state for the latest 10-year period. Over the latest ten years, only four states have an average annual change in frequency that falls outside of the –2% to –6% range.

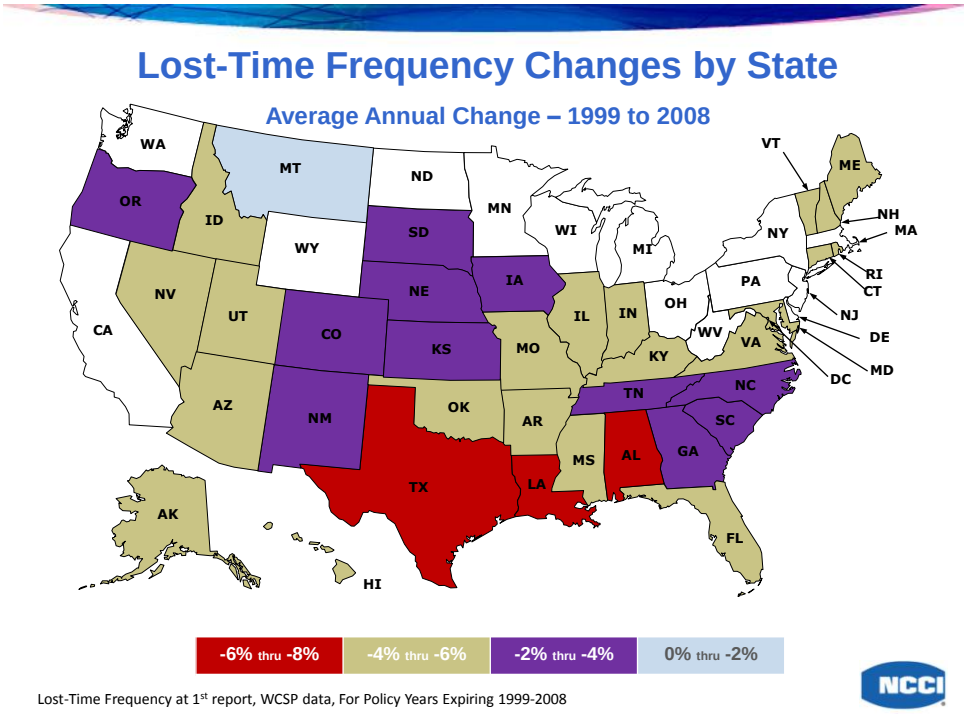
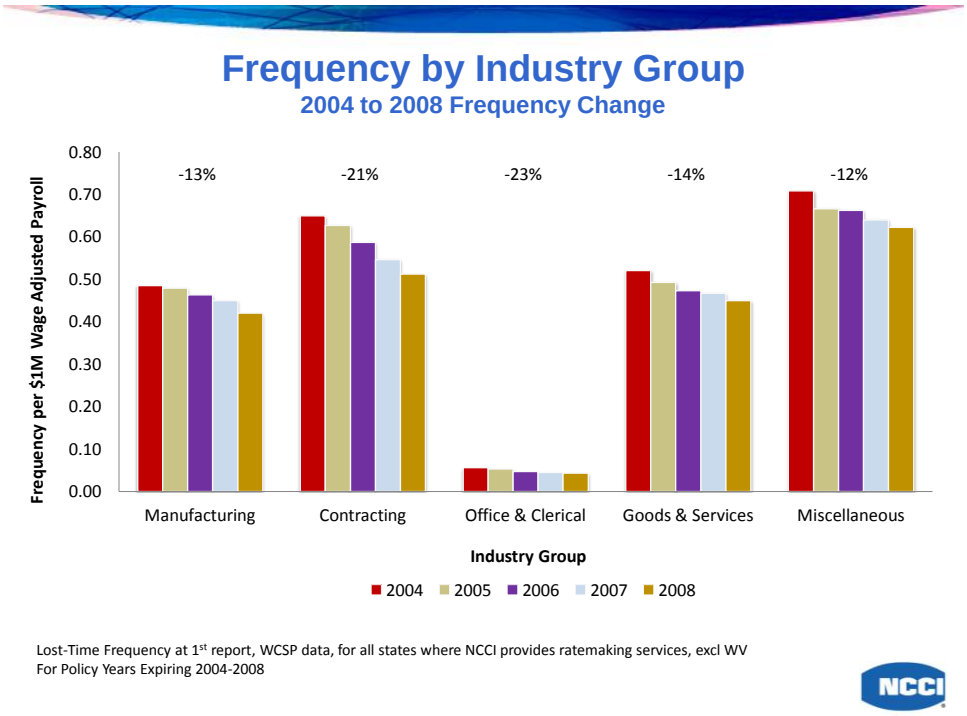


Exhibit 16: Annual Claim Frequency by State—Latest 10 Years

Changes in Claim Frequency by Industry Group

Exhibit 17 shows that the decline in lost-time frequency has varied somewhat by industry group. The Office & Clerical and Contracting groups exhibited the largest percentage declines over the latest 5-year period.



Lost-Time Frequency at 1st report, WCSP data, for all states where NCCI provides ratemaking services, excl WV
For Policy Years Expiring 2004-2008

Exhibit 17: Claim Frequency by Industry Group

Changes in Claim Frequency by Largest Classes Within Each Industry Group

Exhibit 18 displays changes in frequency for the three largest classes within each industry group. The Office & Clerical class (Code 8810) is driving the decline in the broader Office & Clerical industry group. This class, which represents over 50% of the payroll in its industry group, experienced a 31% decline in frequency.

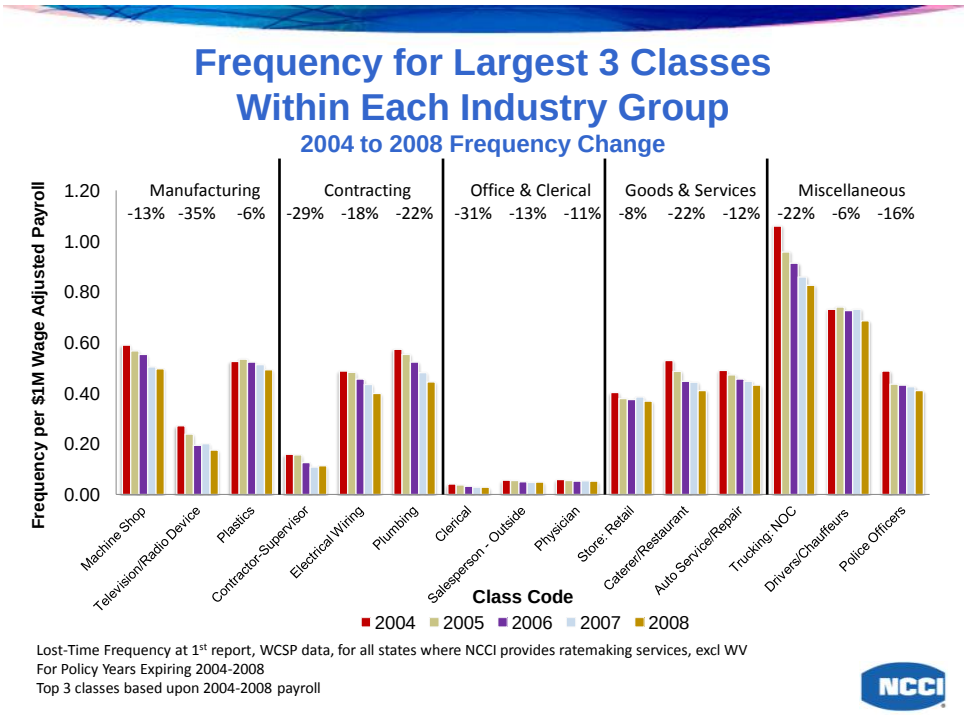


Exhibit 18: Claim Frequency by Largest Classes Within Each Industry Group

Changes in Claim Frequency by Employer Characteristics

In Exhibits 19–21, we have grouped employers by size of payroll, size of premium, and size of average rate, respectively. Note that the assignments to each size range are performed separately for each year. Thus, it is possible for employers to change size range from one year to the next.

Changes in Claim Frequency by Size of Employer Payroll

Exhibit 19 reveals that changes in frequency over the latest five years were very consistent for employers with less than $20 million in payroll. Those with over $20 million in payroll enjoyed larger declines in frequency. Larger employers are typically better equipped to implement loss control and safety programs than smaller employers.

In constructing this exhibit, each employer's payroll by state was adjusted to the 2008 wage level. Employers were then assigned to the appropriate size range based on their wage-adjusted payroll.

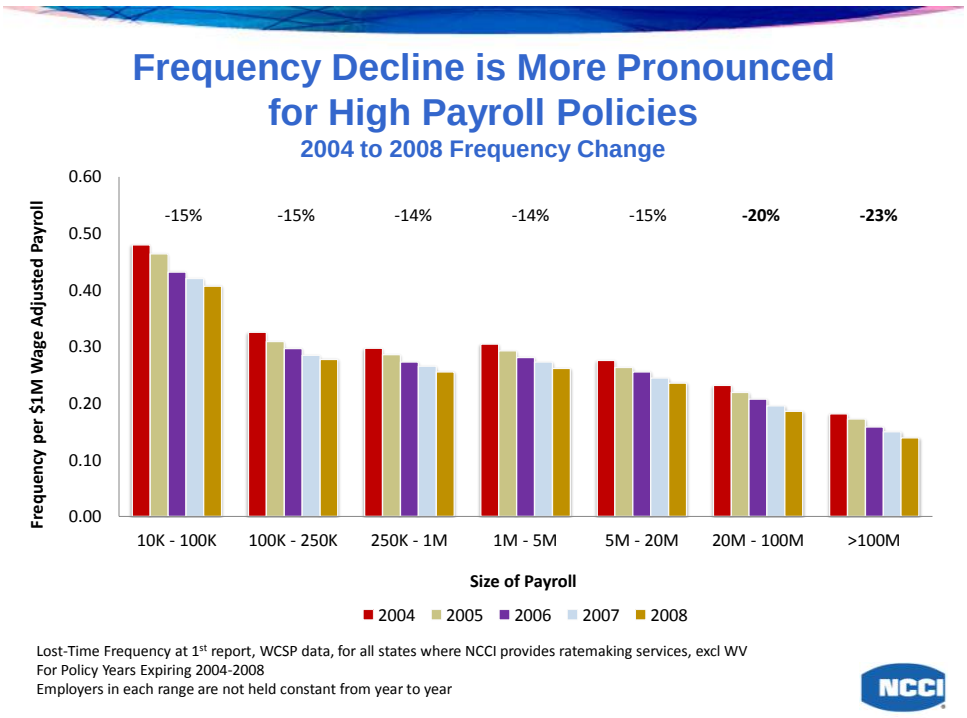


Exhibit 19: Claim Frequency by Size of Employer Payroll

Changes in Claim Frequency by Size of Employer Premium

Exhibit 20 indicates that changes in frequency over the latest five years were fairly consistent for employers with less than $1 million in premium. Those employers with greater than $1 million in premium experienced the largest decline in frequency.

In compiling this exhibit, each employer's premium by state was adjusted or restated based on wage changes through 2008. Employers were then assigned to the appropriate size range based on their wage-adjusted premium.

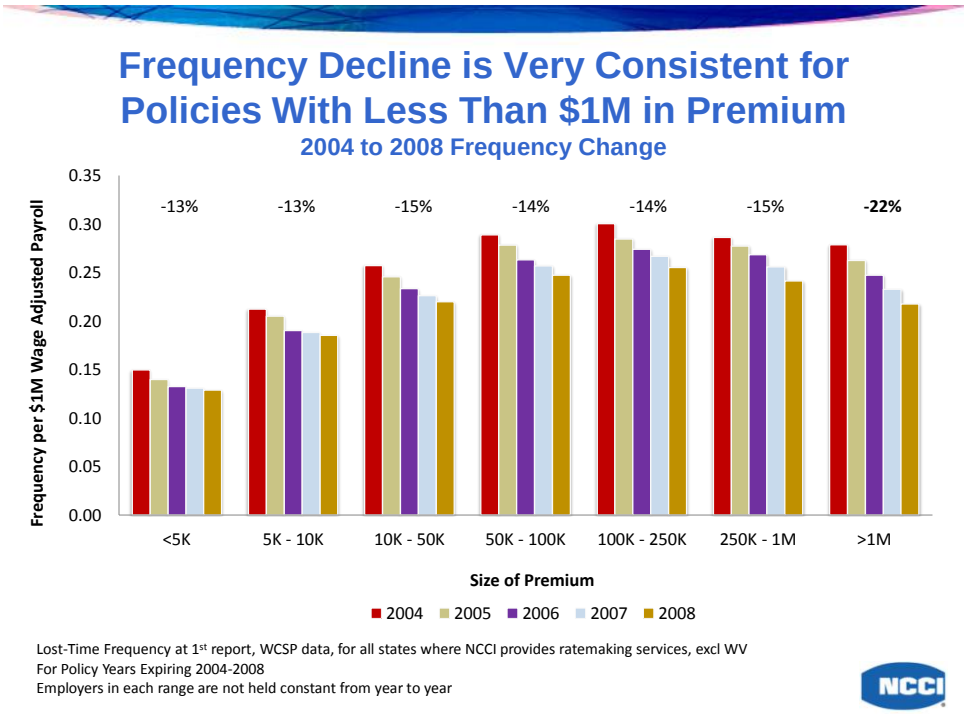


Exhibit 20: Claim Frequency by Size of Employer Premium

Changes in Claim Frequency by Size of Employer Average Rate

Exhibit 21 reveals that employers with average rates below $0.50 experienced the largest declines in frequency. This is consistent with the earlier observation that the Office & Clerical industry group experienced a relatively larger decline in frequency than average. Note that the average rate for each employer was calculated as a payroll-weighted average of all classification rates on the policy.

In comparing Exhibits 19–21, it is important to recognize that the mix of classes represented from the low to high ranges can be quite different. For example, a contractor might have low payroll along with a relatively high rate, whereas the reverse may be true for an office employer.

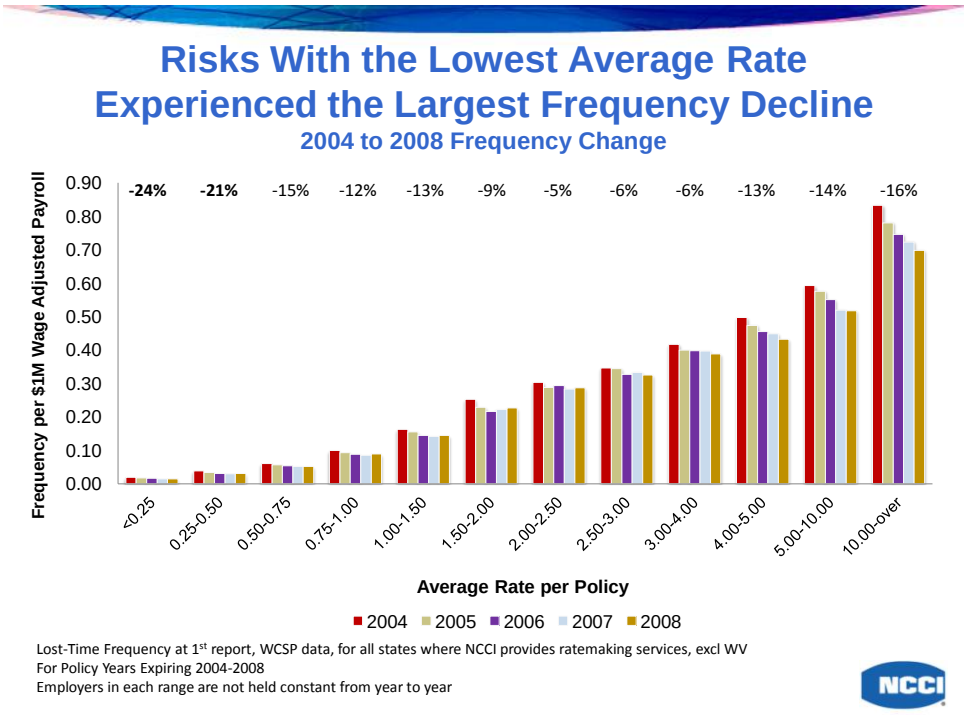


Exhibit 21: Claim Frequency by Size of Employer Average Rate

Comparison to Bureau of Labor Statistics

Whenever possible, NCCI examines external data sources to ensure consistency with its findings. We reviewed Bureau of Labor Statistics (BLS) data from the United States Department of Labor.[9] The BLS defines frequency as non-fatal, occupational injuries and illnesses involving days away from work per 10,000 full-time workers. The chart below displays BLS changes in frequency for the United States for selected categories during the calendar period 2004 to 2008. The changes are very consistent with those observed in our data.

Total Private Sector	–19.8%
Construction Industry	–28.5%
Lower Back (Lumbar) Injuries	–23.4%
Carpal Tunnel Syndrome Injuries	–47.6%

What Does the Future Hold?

The decline in claim frequency for workers compensation injuries continued in 2009, and economic factors suggest further reductions are likely in 2010. Preliminary results indicate a decline in claim frequency of 4.0% for 2009. This is on the heels of a 3.4% drop in 2008 and extends a downward trend that started in 1991. However, while claim frequency is down, indemnity and medical severities continue to rise, somewhat offsetting the good news.

More detailed analysis of data from the ***Statistical Plan for Workers Compensation and Employers Liability Insurance*** over the latest five years shows that the decline in frequency has been widespread. Frequency declines were observed for all industries, geographic regions, and employer sizes, as well as for most claim types. Importantly, some of the more complex claim types showed better-than-average decreases in frequency.

Given the continued weakness of the labor market, it is likely that claim frequency will continue to decline in 2010. NCCI research indicates that economic recessions typically put additional downward pressure on claim frequency.[10] This is because, during recession, there is less "job creation," which translates into a more experienced, and thus less accident-prone, workforce. Additionally, during recessions, heightened "job destruction" puts upward pressure on frequency as laid off workers may look to workers compensation for wage continuation. Taken together, NCCI research concludes that, during recessions, the impact of lessened job creation outweighs the impact of heightened job destruction, thus causing frequency to drop more than it would otherwise. During economic recoveries, as job creation picks up and job destruction abates, the proportion of inexperienced workers increases, thus putting upward pressure on frequency. However, unless the economic recovery is vigorous, this upward pressure is weaker than the general downward trend in frequency.

[9] Source: U.S. Bureau of Labor Statistics, Occupational Injuries and Illnesses.

[10] Refer to the 2009 NCCI report, "*Workplace Injuries and Job Flows*" by Frank A. Schmid available on **ncci.com**.

Appendix

Distribution of Lost-Time Claim Counts and Reported Loss Amounts

The charts below provide the underlying loss distributions for selected categories of data provided in this report. Each chart provides a distribution of lost-time claim counts and loss amounts (medical and indemnity combined). Each distribution represents ***Statistical Plan for Workers Compensation and Employers Liability Insurance*** data for the latest five years combined (for policy years expiring in 2004 through 2008). The data is undeveloped as of 1st report. Thus, the distributions are likely to change as claims counts and loss dollars develop to an ultimate level.

The claim count and loss distributions below can be used to estimate the impact that the change in frequency for a given claim type had on the entire workers compensation market.

Data Corresponding to Exhibit 6

	PYE 2004–2008 Distribution of Lost-Time Claims	
Part of Body	**Claim Counts**	**Loss Amounts**
Ankle/Foot/Toe(s)	8.8%	5.8%
Arm/Shoulder	13.5%	15.0%
Chest/Internal Organs	2.2%	1.7%
Face	2.1%	1.6%
Hand/Finger(s)/Wrist(s)	18.6%	11.9%
Head/Central Nervous System	1.9%	4.0%
Hip/Thigh/Pelvis	1.3%	1.9%
Invalid Body Part	2.7%	2.3%
Knee	9.6%	8.5%
Leg	3.7%	4.7%
Lower Back	15.6%	15.0%
Multiple Body Parts	11.8%	18.4%
Multiple Trunk/Miscellaneous	4.4%	4.2%
Neck	2.2%	3.5%
Upper Back	1.5%	1.4%
Grand Total	100.0%	100.0%

Data Corresponding to Exhibit 7

Part of Body Group	PYE 2004–2008 Distribution of Lost-Time Claims	
	Claim Counts	Loss Amounts
Likely-to-Develop	40.2%	51.4%
Not-Likely-to-Develop	57.1%	46.3%
POB not reported	2.7%	2.3%
Grand Total	100.0%	100.0%

Data Corresponding to Exhibit 8

Nature of Injury	PYE 2004–2008 Distribution of Lost-Time Claims	
	Claim Counts	Loss Amounts
Amputations/Severance	1.1%	2.1%
Burn/Shock	1.6%	2.3%
Carpal Tunnel Syndrome	1.5%	1.4%
Concussion/Contusion	9.2%	7.8%
Fracture/Crushing/Dislocation	13.4%	19.2%
Infection/Inflammation	3.0%	2.4%
Invalid Nature of Injury	2.7%	2.3%
Laceration/Puncture/Rupture	10.7%	7.8%
Occupational Disease/Cumulative Injuries	2.0%	1.8%
Other Traumatic Injuries	13.9%	18.2%
Sprain/Strain	40.8%	34.7%
Grand Total	100.0%	100.0%

Data Corresponding to Exhibit 9

Cause of Injury	PYE 2004–2008 Distribution of Lost-Time Claims	
	Claim Counts	Loss Amounts
Burn	2.2%	2.6%
Caught in Between	4.7%	4.7%
Cumulative Injuries	1.5%	1.3%
Cut/Puncture/Scrape	4.7%	2.8%
Fall/Slip	23.7%	27.9%
Misc Causes	6.5%	5.6%
Motor Vehicle	4.0%	8.0%
Other	2.9%	2.6%
Rubbed or Abraded By	0.3%	0.3%
Strain	35.0%	30.4%
Striking Against/Stepping On	4.2%	3.1%
Struck By	10.2%	10.7%
Grand Total	100.0%	100.0%

Data Corresponding to Exhibit 17

Industry Group	PYE 2004–2008 Distribution of Lost-Time Claims	
	Claim Counts	Loss Amounts
Manufacturing	18.5%	17.6%
Contracting	18.1%	26.2%
Office & Clerical	12.0%	11.2%
Goods & Services	36.9%	29.2%
Miscellaneous	14.5%	15.8%
Grand Total	100.0%	100.0%

Data Corresponding to Exhibit 19

Size of Payroll	PYE 2004–2008 Distribution of Lost-Time Claims	
	Claim Counts	Loss Amounts
≤10K	0.3%	0.6%
>10K to ≤100K	4.2%	5.7%
>100K to ≤250K	5.4%	6.4%
>250K to ≤1M	13.5%	15.1%
>1M to ≤5M	24.0%	24.7%
>5M to ≤20M	21.7%	20.4%
>20M to ≤100M	17.9%	15.9%
>100M	13.2%	11.1%
Grand Total	100.0%	100.0%

Data Corresponding to Exhibit 20

Size of Premium	PYE 2004–2008 Distribution of Lost-Time Claims	
	Claim Counts	Loss Amounts
≤5K	5.7%	6.7%
>5K to ≤10K	4.4%	5.1%
>10K to ≤50K	17.2%	18.7%
>50K to ≤100K	10.6%	10.8%
>100K to ≤250K	15.7%	15.4%
>250K to ≤1M	21.6%	20.6%
>1M	24.9%	22.8%
Grand Total	100.0%	100.0%

Data Corresponding to Exhibit 21

Average Rate on Policy	PYE 2004–2008 Distribution of Lost-Time Claims	
	Claim Counts	Loss Amounts
<0.25	0.3%	0.3%
>0.25 to ≤0.50	2.1%	2.1%
>0.50 to ≤0.75	2.5%	2.4%
>0.75 to ≤1.00	2.7%	2.3%
>1.00 to ≤1.50	6.4%	5.4%
>1.50 to ≤2.00	7.9%	6.5%
>2.00 to ≤2.50	9.1%	7.7%
>2.50 to ≤3.00	8.8%	7.4%
>3.00 to ≤4.00	14.8%	13.2%
>4.00 to ≤5.00	11.2%	10.5%
>5.00 to ≤10.00	24.5%	27.8%
>10.00	9.5%	14.3%
Grand Total	100.0%	100.0%

Detailed Description of the NCCI Groupings

The charts below provide a detailed description of the following groupings:

- Part of Body (POB)
- Likely-to-Develop vs. Not-Likely-to-Develop
- Nature of Injury (NOI)
- Cause of Injury (COI)
- Geographic Region

Exhibit 6—Claim Frequency by Part of Body

"Part of Body" Group	POB Code	"Part of Body" Description
Arm/Shoulder	30	Upper Extremities: Multiple Upper Extremities
	31	Upper Extremities: Upper Arm (Including: Clavicle and Scapula)
	32	Upper Extremities: Elbow
	33	Upper Extremities: Lower Arm
	38	Upper Extremities: Shoulder(s)
Chest/Internal Organs	44	Trunk: Chest (Including: Ribs, Sternum and Soft Tissue)
	48	Trunk: Internal Organs
	49	Trunk: Heart
	60	Trunk: Lung
Face	13	Head: Ear(s)
	14	Head: Eye(s)
	15	Head: Nose
	16	Head: Teeth
	17	Head: Mouth
	18	Head: Other Facial Soft Tissue
	19	Head: Facial Bones
Ankle/Foot/Toe(s)	55	Lower Extremities: Ankle
	56	Lower Extremities: Foot
	57	Lower Extremities: Toe(s)
	58	Lower Extremities: Great Toe
Hand/Finger(s)/Wrist(s)	34	Upper Extremities: Wrist
	35	Upper Extremities: Hand
	36	Upper Extremities: Finger(s)
	37	Upper Extremities: Thumb
	39	Upper Extremities: Wrist(s) and Hand(s)
Head/Central Nervous System	10	Head: Multiple Head Injury
	11	Head: Skull
	12	Head: Brain
Hip/Thigh/Pelvis	46	Trunk: Pelvis
	51	Lower Extremities: Hip

Knee	53	Lower Extremities: Knee
"Part of Body" Group	**POB Code**	**"Part of Body" Description**
Leg	50	Lower Extremities: Multiple Lower Extremities
	52	Lower Extremities: Upper Leg
	54	Lower Extremities: Lower Leg
Lower Back	42	Trunk: Low Back Area (Including: Lumbar and Lumbo-Sacral)
Multiple Body Parts	64	Multiple Body Parts: Artificial Appliance (Braces, etc.)
	65	Multiple Body Parts: Insufficient Information/Unclassified
	66	Multiple Body Parts: No Physical Injury
	90	Multiple Body Parts: Multiple Body Parts
	91	Multiple Body Parts: Body System and Multiple Body System
Multiple Trunk/Miscellaneous	40	Trunk: Multiple Trunk
	61	Trunk: Abdomen Including Groin
	62	Trunk: Buttocks
	43	Trunk: Disc
	45	Trunk: Sacrum and Coccyx
	47	Trunk: Spinal Cord
	63	Trunk: Lumbar and/or Sacral Vertebrae
Neck	20	Neck: Multiple Injury
	21	Neck: Vertebrae
	22	Neck: Disc
	23	Neck: Spinal Cord
	24	Neck: Larynx
	25	Neck: Soft Tissue
	26	Neck: Trachea
Upper Back	41	Trunk: Upper Back Area (Thoracic Area)
Invalid Body Part	N/A	

Exhibit 7—Claim Frequency by "Likely" vs. "Not-Likely" to Develop Groupings

"Part of Body" Group	**POB Code**	**"Part of Body" Description**
Likely-to-Develop Group		
Head/Central Nervous System	10	Head: Multiple Head Injury
	11	Head: Skull
	12	Head: Brain
Lower Back	42	Trunk: Low Back Area (Including: Lumbar and Lumbo-Sacral)
Upper Back	41	Trunk: Upper Back Area (Thoracic Area)
Multiple Upper Extremities	30	Upper Extremities: Multiple Upper Extremities
Internal Organs (Heart, Lung, etc)	48	Trunk: Internal Organs
	49	Trunk: Heart
	60	Trunk: Lung
Hip	51	Lower Extremities: Hip

Multiple Lower Extremities	50	Lower Extremities: Multiple Lower Extremities
"Part of Body" Group	**POB Code**	**"Part of Body" Description**
Multiple Body Parts	65	Multiple Body Parts: Insufficient Information/Unclassified
	90	Multiple Body Parts: Multiple Body Parts
	91	Multiple Body Parts: Body System and Multiple Body System
Multiple Trunk/Miscellaneous	40	Trunk: Multiple Trunk
	62	Trunk: Buttocks
	43	Trunk: Disc
	45	Trunk: Sacrum and Coccyx
	47	Trunk: Spinal Cord
	63	Trunk: Lumbar and/or Sacral Vertebrae
Neck	20	Neck: Multiple Injury
	21	Neck: Vertebrae
	22	Neck: Disc
	23	Neck: Spinal Cord
	24	Neck: Larynx
	25	Neck: Soft Tissue
Not-Likely-to-Develop Group		
Face	13	Head: Ear(s)
	14	Head: Eye(s)
	15	Head: Nose
	16	Head: Teeth
	17	Head: Mouth
	18	Head: Other Facial Soft Tissue
	19	Head: Facial Bones
Ankle/Foot/Toe(s)	55	Lower Extremities: Ankle
	56	Lower Extremities: Foot
	57	Lower Extremities: Toe(s)
	58	Lower Extremities: Great Toe
Hand/Finger(s)/Wrist(s)	34	Upper Extremities: Wrist
	35	Upper Extremities: Hand
	36	Upper Extremities: Finger(s)
	37	Upper Extremities: Thumb
	39	Upper Extremities: Wrist(s) and Hand(s)
Knee	53	Lower Extremities: Knee
Arm/Shoulder	31	Upper Extremities: Upper Arm (Including: Clavicle and Scapula)
	32	Upper Extremities: Elbow
	33	Upper Extremities: Lower Arm
	38	Upper Extremities: Shoulder(s)
Chest (Ribs, Sternum, etc)	44	Trunk: Chest (Including: Ribs, Sternum and Soft Tissue)
Pelvis	46	Trunk: Pelvis
Leg	52	Lower Extremities: Upper Leg
	54	Lower Extremities: Lower Leg
Artificial Appliance/No Physical Injury	64	Multiple Body Parts: Artificial Appliance (Braces, etc.)

	66	Multiple Body Parts: No Physical Injury
Abdomen	61	Trunk: Abdomen Including Groin
Trachea	26	Neck: Trachea

Exhibit 8—Claim Frequency by Nature of Injury

"Nature of Injury" Group	NOI Code	"Nature of Injury" Description
Amputations/Severance	02	Amputation
	47	Severance
Burn/Shock	04	Burn
	19	Electric Shock
Carpal Tunnel Syndrome	78	Carpal Tunnel Syndrome
Concussion/Contusion	07	Concussion
	10	Contusion
Fracture/Crushing/Dislocation	13	Crushing
	16	Dislocation
	28	Fracture
Infection/Inflammation	36	Infection
	37	Inflammation
Laceration/Puncture/Rupture	22	Enucleation
	34	Hernia
	40	Laceration
	43	Puncture
	46	Rupture
Occupational Disease/Cumulative Injuries	60	Dust Disease
	61	Asbestosis
	62	Black Lung
	63	Byssinosis
	64	Silicosis
	65	Respiratory Disorders
	66	Poisoning—Chemical
	67	Poisoning—Metal
	68	Dermatitis
	69	Mental Disorder
	70	Radiation
	71	All Other OD
	72	Loss of Hearing—Occupational Disease or Cumulative Injury
	73	Contagious Disease
	74	Cancer

	75	AIDS
	76	VDT-Related Disease
	77	Mental Stress
	80	All Other Cumulative Injuries
"Nature of Injury" Group	**NOI Code**	**"Nature of Injury" Description**
Other Traumatic Injuries	01	No Physical Injury
	03	Angina Pectoris
	25	Foreign Body
	30	Freezing
	31	Loss of Hearing—Specific Injury
	32	Heat Prostration
	41	Myocardial Infarction
	42	Poisoning—General
	53	Syncope
	54	Asphyxiation
	55	Vascular Loss
	58	Vision Loss
	59	All Other, NOC
	79	Specific Injury: Hepatitis C
	90	Multiple Physical Injuries Only
	91	Multiple Injuries Including Physical and Psychological
Sprain/Strain	49	Sprain
	52	Strain
Invalid Nature of Injury	N/A	

Exhibit 9—Claim Frequency by Cause of Injury

"Cause of Injury" Group	COI Code	"Cause of Injury" Description
Burn	01	Burn or Scald—Heat or Cold Exposure: Chemicals
	02	Burn or Scald—Heat or Cold Exposure: Hot Objects or Substances
	03	Burn or Scald—Heat or Cold Exposure: Temperature Extremes
	04	Burn or Scald—Heat or Cold Exposure: Fire or Flame
	05	Burn or Scald—Heat or Cold Exposure: Steam or Hot Fluids
	06	Burn or Scald—Heat or Cold Exposure: Dust, Gases, Fumes, or Vapors
	07	Burn or Scald—Heat or Cold Exposure: Welding Operations
	08	Burn or Scald—Heat or Cold Exposure: Radiation
	09	Burn or Scald—Heat or Cold Exposure: Contact With, NOC
	11	Burn or Scald—Heat or Cold Exposure: Cold Objects or Substances
	14	Burn or Scald—Heat or Cold Exposure: Abnormal Air Pressure
	84	Burn or Scald—Heat or Cold Exposure: Electrical Current

Caught in Between	10	Caught in or Between: Machine or Machinery
	12	Caught in or Between: Object Handled
	13	Caught in or Between: Caught In, Under or Between, NOC
	20	Caught in or Between: Collapsing Materials (Slides of Earth)
Cumulative Injuries	98	Miscellaneous Causes: Cumulative, NOC
"Cause of Injury" Group	**COI Code**	**"Cause of Injury" Description**
Cut/Puncture/Scrape	15	Cut, Puncture, Scrape Injured By: Broken Glass
	16	Cut, Puncture, Scrape Injured By: Hand Tool, Utensil, Not Powered
	17	Cut, Puncture, Scrape Injured By: Object Being Lifted or Handled
	18	Cut, Puncture, Scrape Injured By: Powered Hand Tool, Appliance
	19	Cut, Puncture, Scrape Injured By: Caught, Puncture, Scrape, NOC
Fall/Slip	25	Fall or Slip Injury: From Different Level (Elevation)
	26	Fall or Slip Injury: From Ladder or Scaffolding
	27	Fall or Slip Injury: From Liquid or Grease Spills
	28	Fall or Slip Injury: Into Openings
	29	Fall or Slip Injury: On Same Level
	30	Fall or Slip Injury: Slipped, Did Not Fall
	31	Fall or Slip Injury: Fall, Slip or Trip, NOC
	32	Fall or Slip Injury: On Ice or Snow
	33	Fall or Slip Injury: On Stairs
Misc Causes	82	Miscellaneous Causes: Absorption, Ingestion or Inhalation, NOC
	87	Miscellaneous Causes: Foreign Matter (Body) in Eye(s)
	88	Natural Disaster
	89	Miscellaneous Causes: Person in Act of a Crime
	90	Miscellaneous Causes: Other Than Physical Cause of Injury
	91	Mold
	96	Losses Due to Act of Terrorism
	99	Miscellaneous Causes: Other—Miscellaneous, NOC
Motor Vehicle	40	Motor Vehicle: Crash of Water Vehicle
	41	Motor Vehicle: Crash of Rail Vehicle
	45	Motor Vehicle: Collision or Sideswipe With Another Vehicle
	46	Motor Vehicle: Collision With a Fixed Object
	47	Motor Vehicle: Crash of Airplane
	48	Motor Vehicle: Vehicle Upset
	50	Motor Vehicle: Motor Vehicle, NOC
Rubbed or Abraded By	94	Rubbed or Abraded By: Repetitive Motion
	95	Rubbed or Abraded By: Rubbed or Abraded, NOC
Strain	52	Strain or Injury By: Continual Noise
	53	Strain or Injury By: Twisting
	54	Strain or Injury By: Jumping
	55	Strain or Injury By: Holding or Carrying

	56	Strain or Injury By: Lifting
	57	Strain or Injury By: Pushing or Pulling
	58	Strain or Injury By: Reaching
	59	Strain or Injury By: Using Tool or Machinery
	60	Strain or Injury By: Strain or Injury By, NOC
	61	Strain or Injury By: Wielding or Throwing
	97	Strain or Injury By: Repetitive Motion
"Cause of Injury" Group	**COI Code**	**"Cause of Injury" Description**
Striking Against/Stepping On	65	Striking Against or Stepping On: Moving Parts of Machine
	66	Striking Against or Stepping On: Object Being Lifted or Handled
	67	Striking Against or Stepping On: Sanding, Scraping, Cleaning Operations
	68	Striking Against or Stepping On: Stationary Object
	69	Striking Against or Stepping On: Stepping on Sharp Object
	70	Striking Against or Stepping On: Striking Against or Stepping On, NOC
Struck By	74	Struck or Injured By: Fellow Worker, Patient
	75	Struck or Injured By: Falling or Flying Object
	76	Struck or Injured By: Hand Tool or Machine in Use
	77	Struck or Injured By: Motor Vehicle
	78	Struck or Injured By: Moving Parts of Machine
	79	Struck or Injured By: Object Being Lifted or Handled
	80	Struck or Injured By: Object Handled by Others
	81	Struck or Injured By: Struck or Injured, NOC
	85	Struck or Injured By: Animal or Insect
	86	Struck or Injured By: Explosion or Flare Back
Other	N/A	

Exhibit 14—Claim Frequency by Geographic Region

Geographic Region	States
Midwest	Illinois Indiana Iowa Kansas Missouri Nebraska Oklahoma South Dakota Texas
West	Arizona Colorado Idaho Montana Nevada New Mexico Oregon Utah Hawaii Alaska
Northeast	Connecticut District of Columbia Maine Maryland New Hampshire Rhode Island Vermont
Southeast	Alabama Arkansas Florida Georgia Kentucky Louisiana Mississippi North Carolina South Carolina Tennessee Virginia