



Workers Compensation Claim Frequency Down Again

The decline in claim frequency for workers compensation injuries has continued into 2004—good news for workers, employers, and their insurers. This decline continues to be the greatest for smaller claims.

The higher rate of frequency decline for smaller claims than for larger claims has contributed to an increase in severity (average cost per claim). The latest NCCI research indicates that approximately 30% of the growth in severity in recent years, or about 2.5% out of the 8.4% average annual increase, can be attributed to this uneven claim frequency decline.

NCCI's 2005 review of claim frequency¹ and severity shows that recent trends have continued into 2004. While claim frequency is down, indemnity and medical severities continue to rise.

In the course of updating last year's study to reflect the latest frequency and severity results, several new dimensions have been added. Claim frequency was analyzed by size of the indemnity component of loss and separately by size of the medical component of loss. Claim frequencies were analyzed by injury type (fatal, permanent total, permanent partial, temporary total, medical-only), by part of body injured, and by nature of injury.

Background

A key issue facing employers and workers compensation insurers is whether the large declines in claim frequency that began in the 1990s are likely to continue. Accurately predicting a continuation of that declining trend is difficult because it has been such a widespread phenomenon. In fact, virtually every major employment category examined has experienced marked declines.

Preliminary summary data for Accident Year 2004 reveals continued overall declines in claim frequency and overall

increases in indemnity and medical severities. In order to drill down on these recent broad trends, NCCI compared the latest available statistical plan data for states in which we provide ratemaking services to the same data from five years prior, or earlier. Most analyses in this study compare policies that expired in 2003 to policies that expired in 1999.

Key Findings

Key findings of our analysis are:

- There has been a larger decline in the frequency of smaller lost-time claims than in the frequency of larger lost-time claims. This relatively larger decline in the frequency of smaller claims adds two to three points a year to the severity increases caused by rising prices and expanding utilization.
- Over the last five years, significant declines occurred for all injury types, including permanent total and permanent partial claims. The greater frequency decline for smaller claims is evident within each injury type, other than fatal, and for both indemnity and medical losses.
- Nearly all parts of body and nature of injury categories experienced significant frequency declines.
- There appears to be little regional difference in frequency changes by state. For example, western states' overall claim frequency declined by 23%, and this is the largest regional decline over the five-year period studied. While southeastern states had the smallest overall frequency decline, they still had an 18% decline over that period.
- The decline in frequency of workers compensation claims spanned almost all occupations and all employer sizes.
- The shift in occupational mix is a minor contributor to the decline in claim frequency.

¹ Generally, the term "frequency" is used in this report to mean the number of claims per \$1 million of wage-adjusted payroll. In a few cases it means claims per 100 workers per year. Exhibits are labeled to indicate which definition is used.

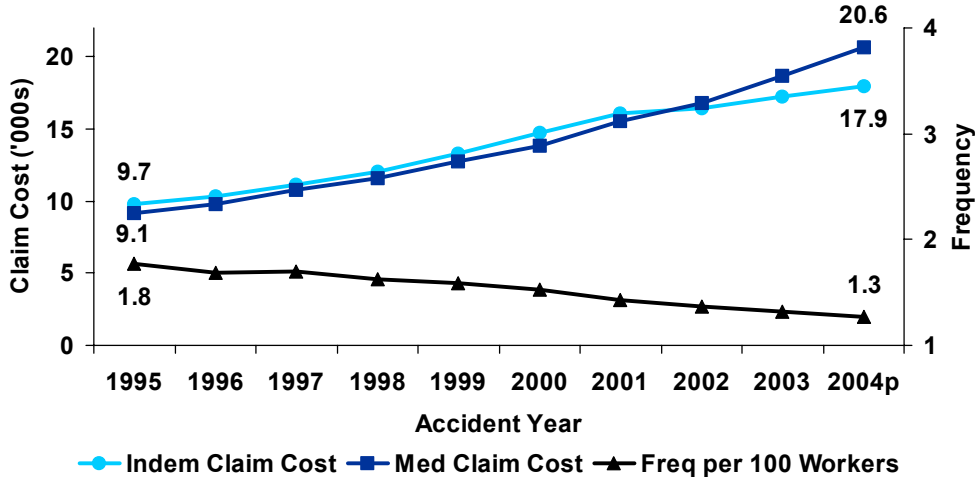
2004 Mega Trends

As communicated at NCCI's **2005 Annual Issues Symposium** and noted above, workers compensation claim frequency appears to have fallen again in 2004.

Exhibit 1 provides the results of an analysis based on aggregate workers compensation data submitted by

NCCI-affiliated carriers. The results for Accident Year 2004 are preliminary. While claim frequency continues to drop, this chart shows that indemnity and medical severities continue to rise.

While Claim Costs Rise Steadily, Frequency Continues a Slight Decline



2004p: Preliminary based on data through 12/31/2004, developed to ultimate
 1995-2003: Based on data through 12/31/2003, developed to ultimate
 Based on the states where NCCI provides ratemaking services
 Excludes the effects of deductible policies



Exhibit 1. Lost-time Claim Frequency Continues to Decline While Claim Costs Continue to Increase

If there is any good news to be gleaned from the severity changes, it is that the annual increases in indemnity have tapered off in the last three years. While indemnity severity rose by an average 8.7% from 1995–2001, the average annual increase since then has been 3.7%. This includes an NCCI estimated increase of 4.2% for 2004.

Increases in average medical costs per claim continue to be substantial however, averaging 9.9% over the last three years, including a 10.5% estimated increase in 2004. Medical cost increases have averaged 9.5% over the entire 1995–2004 period. In addition to medical price inflation, increases in the utilization of medical services (including prescription drugs) are a major driver of the increase. Non-uniform changes in claim frequency by size of claim, discussed later, also have contributed to the severity increases.

The reduction in claim frequency, though, continues to be a major bright spot for workers compensation. Injury rates have dropped by an average of 3.6% per year since 1995, including an estimated decline of 3.4% in 2004.

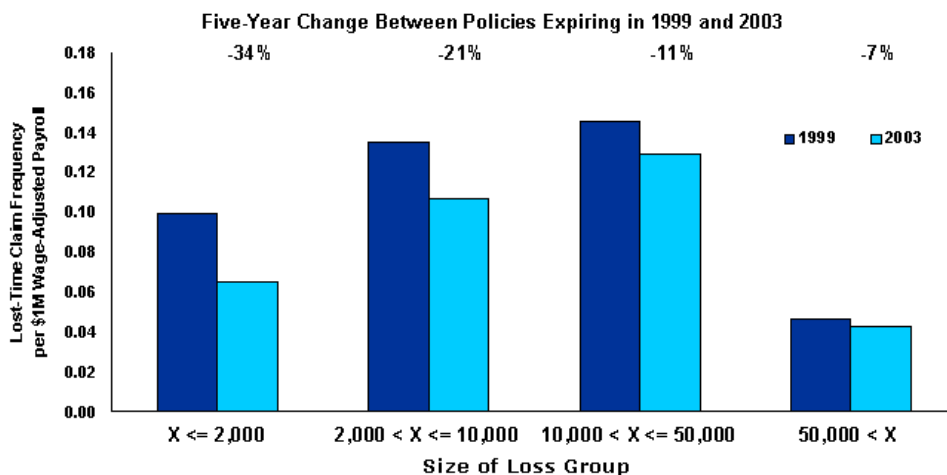
Frequency by Claim Size

In order to drill down on the claim frequency results, NCCI used Workers Compensation Statistical Plan data in states for which NCCI provides ratemaking services. Policies expiring in 1999 were compared to policies expiring in 2003.

Exhibit 2 shows declines in lost-time claim frequency by size of claim, after adjusting the claim sizes for the impact of inflation and utilization. The results show the following:

- For the smallest claims (less than \$2,000 in 2003 dollars), a decline of 34%
- For claims between \$2,000 and \$10,000, a decline of 21%
- For claims between \$10,000 and \$50,000, a decline of 11%
- For the largest claims (more than \$50,000), a decline of 7%

Lost-Time Claim Frequency by Size of Loss



Annual Loss Size Adjustments: 4.2% Indemnity, 7.4% Medical
 Frequency = Lost-time claims / payroll; Payroll adjusted for inflation
 Claim count determined at first report
 NCCI states, excluding Texas

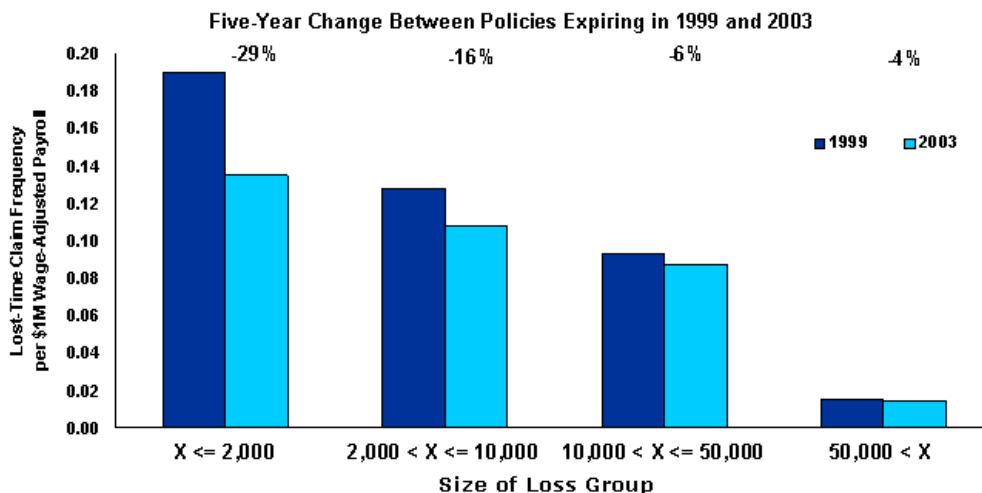


Exhibit 2. Lost-Time Claim Frequency by Size of Loss

New to this year's study of claim frequency by size of loss is a separate analysis of the changes based on the size of the indemnity and medical components of the loss. Exhibit 3 shows the decline in claim frequency for various indemnity loss amounts.

These results are generally consistent with the Bureau of Labor Statistics data in Exhibit 4 that shows the most significant declines were for the relatively minor cases involving the fewest days away from work.

Lost-Time Claim Frequency by Size of Indemnity Loss

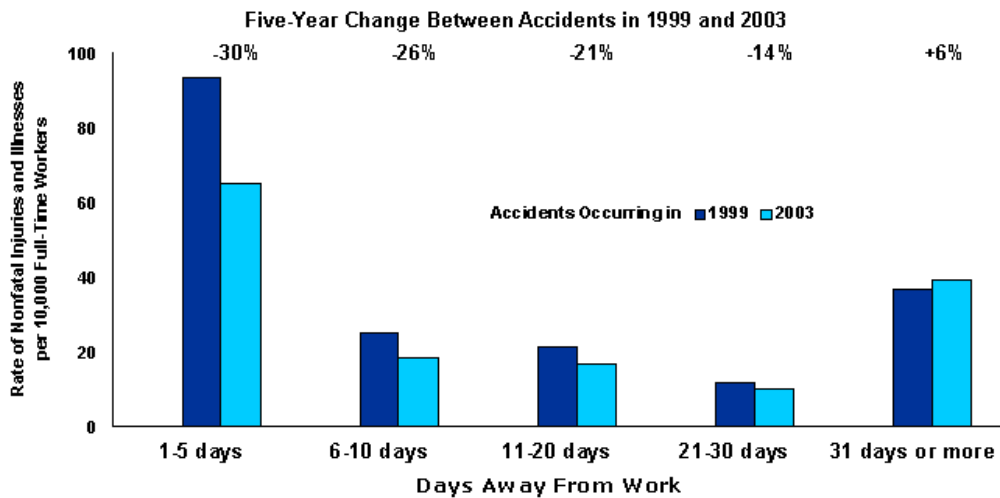


Annual Indemnity Loss Size Adjustment: 4.2%
 Frequency = Lost-time claims / payroll; Payroll adjusted for inflation
 Claim count determined at first report
 NCCI states, excluding Texas



Exhibit 3. Lost-Time Claim Frequency by Indemnity Loss Range

Lost-Time Claim Frequency by Days Away From Work



Source: Bureau of Labor Statistics

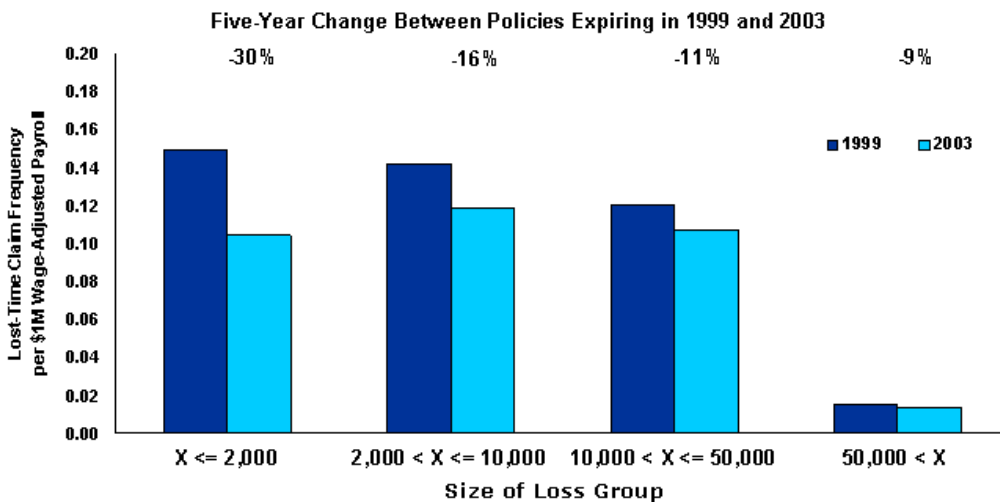


Exhibit 4. Lost-Time Claim Frequency by Days Away from Work

Exhibit 5 provides the results when grouped by the size of medical loss. Together with Exhibit 3, these results show

that claims with small indemnity and claims with small medical loss both had a greater frequency decline than the larger claims.

Lost-Time Claim Frequency by Size of Medical Loss



Annual Medical Loss Size Adjustment: 7.4%
 Frequency = Lost-time claims / payroll; Payroll adjusted for inflation
 Claim count determined at first report
 NCCI states, excluding Texas



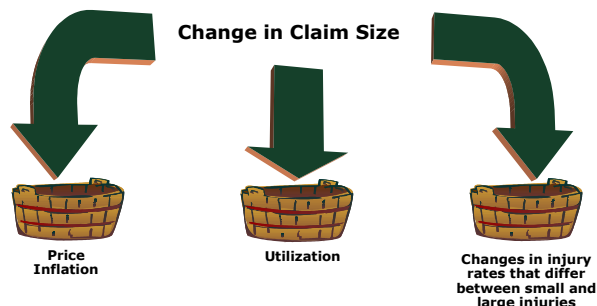
Exhibit 5. Lost-Time Claim Frequency by Medical Loss Range

Factors Affecting Claims

The forces acting to change the average claim size and the distribution of claims by size can be separated into three types (see Exhibit 6):

- Type 1: Price or “pure” inflation. Inflation due to rising wages and rising medical costs will increase the average claim size.
- Type 2: Utilization and other noninflation factors impacting the cost of a claim. Changes in the frequency or type of medical services, types of injuries, occupations, attorney involvement, indemnity durations or awards, can all affect the size of a claim. Additionally, changes in case reserve adequacy can impact our perception of claim size.
- Type 3: Claim frequency changes that vary by claim size. If small claims and large claims experience different frequency changes, the mix of claims by size will change. Relatively fewer small claims translate into an increase in average claim size.

Average Claim Size Why Does it Change Over Time?



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Exhibit 6. Three Factors Affecting Average Claim Size

The data shown in Exhibits 2, 3 and 5 has been adjusted to common wage and price levels (Type 1, as described above) and utilization levels (Type 2). Application of these adjustments is designed to isolate the true frequency changes by size of claim. These adjustments (4.2% for indemnity and 7.4% for medical) represent a refinement from those used last year, which only accounted for wage and cost inflation (Type 1).

Changing Claim Frequency and Its Impact on Severity

It is crucial to understand the impact of claim frequency on claim severity in order to predict future changes in both. Exhibit 1 revealed significant increases in both indemnity and medical severities over the last several years. Part of this increase is due to the greater percentage decline in small claims versus large claims (Type 3, as described above).

The impact that claim frequency has on severity changes depends on the rate of frequency decline for small claims versus large claims. Those rates of decline, in turn, depend on the inflation and utilization assumptions (4.2% for indemnity and 7.4% for medical) underlying Exhibits 2, 3 and 5.

For indemnity, it appears that the uneven changes in injury rates (by size of claim) accounted for approximately 40% of the severity increase over the 1999–2003 time period studied, or about 3% out of the 7.4% average annual increase in indemnity costs.

For medical, the uneven frequency decline has accounted for approximately 20% of the severity increase over the 1999–2003 time period studied, or about 2% out of the 9.8% average annual increase in medical costs. These results are illustrated in Exhibit 7.

Frequency Change by Size of Loss: Impact on Severity

Average Annual Changes Between 1999-2003

	Severity Change*	Frequency Change Impact	Adjusted Severity Change
Indemnity	7.2%	3%	4.2%
Medical	9.4%	2%	7.4%
Combined	8.4%	2.5%	5.9%

* Average annual severity change underlying WCSP data

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Exhibit 7. The Impact of Uneven Frequency Changes on Severity

The larger impact on indemnity severity implies that the lost time claims being eliminated have a smaller proportion of indemnity (versus medical) than an average-sized claim.

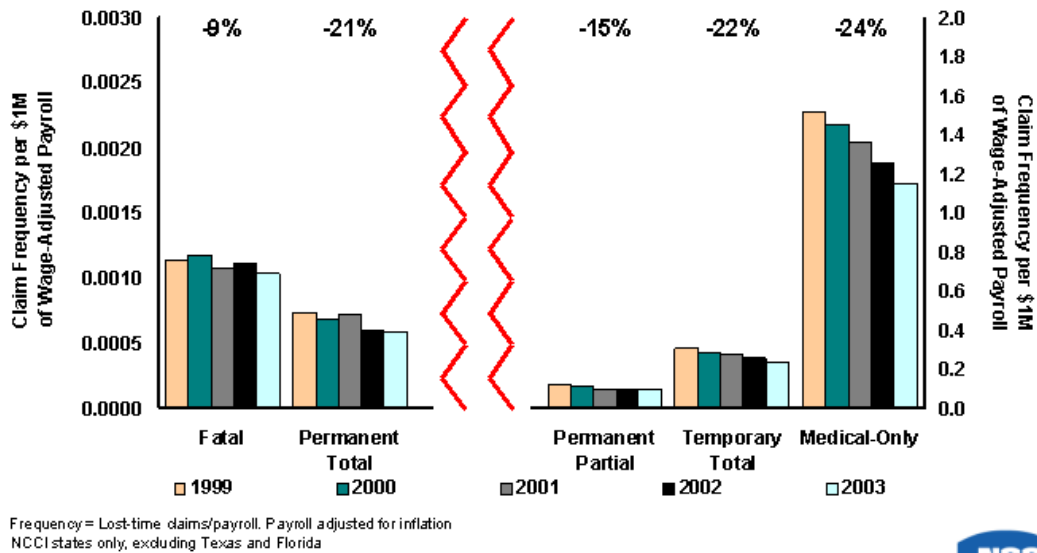
It is important to note that shifts in severity due to pure inflation, utilization, and uneven changes in injury rates for large and small claims do not distort NCCI ratemaking. While not explicitly measured, they are implicitly included in the loss ratio trends utilized by NCCI.

Claim Frequency Results by Injury Type

In addition to examining claim frequency by size of claim, NCCI has updated prior analyses that examined claim frequency by injury type. Exhibit 8 demonstrates that all injury types, whether minor or severe, experienced significant declines over the most recent five years. This suggests that frequency declines are not mainly due to decreases in reporting of minor claims.

Claim Frequency by Injury Type

Five-Year Change Between Policies Expiring in 1999 and 2003 at First Report



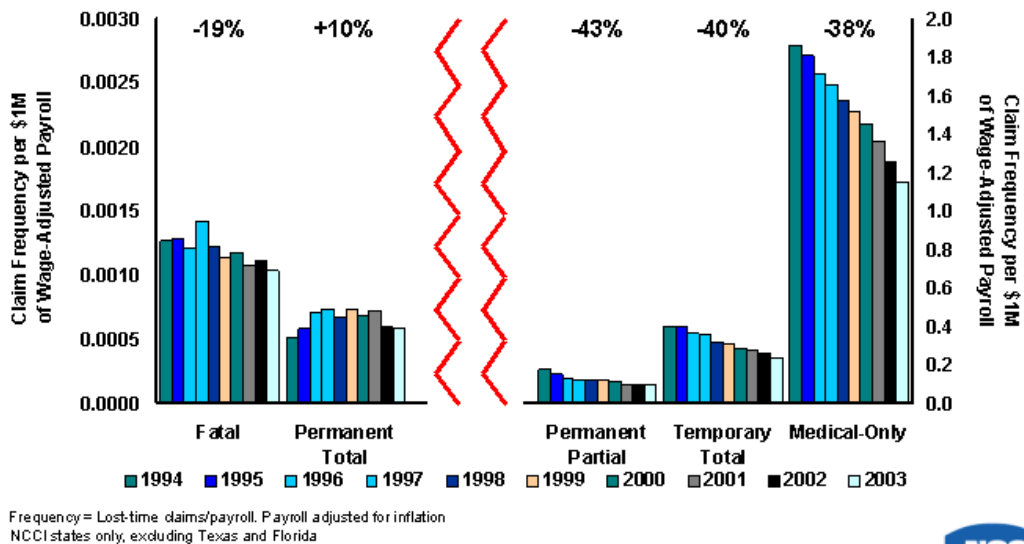
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Exhibit 8. Claim Frequency by Injury Type—Five Years

Added to this year's study is a review of injury type over a 10-year period, as shown in Exhibit 9. The declining claim frequency trend is evident over this longer period with the exception of permanent total claims. Due primarily to the relatively low number of permanent total claims in 1994 and 1995, they have experienced a 10% increase in claim frequency when measured over this ten-year period.

Claim Frequency by Injury Type

Ten-Year Change Between Policies Expiring in 1994 and 2003 at First Report

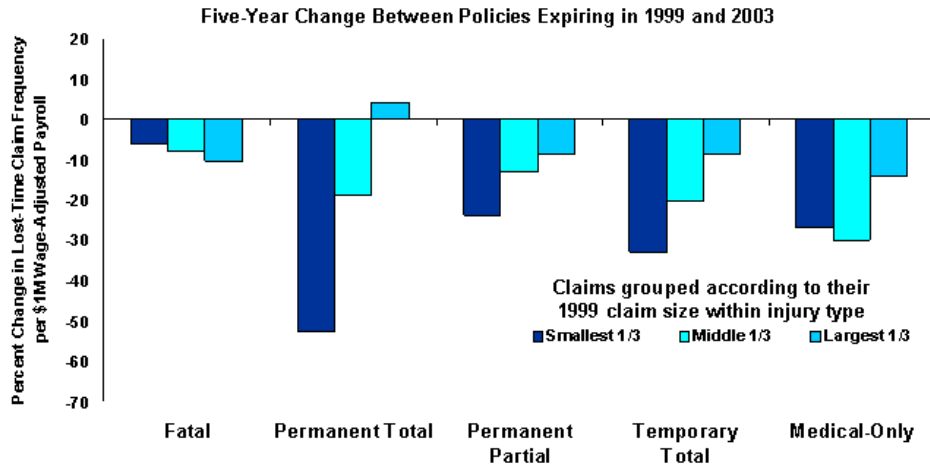


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Exhibit 9. Claim Frequency by Injury Type—Ten Years

Also added to this year's study is an analysis of claim frequency by size of loss for each injury type. Generally, the greater frequency decline for smaller claims is evident even within each injury type, as illustrated in Exhibit 10. Fatalities are a notable exception where a small decline is present across the board. Medical-only claims are at the other extreme showing substantial declines for all claim sizes with some tapering off in the largest range. These specific observations are consistent with the broader findings that it is the relatively minor claims that are being eliminated.

Claim Frequency by Injury Type and by Size of Loss



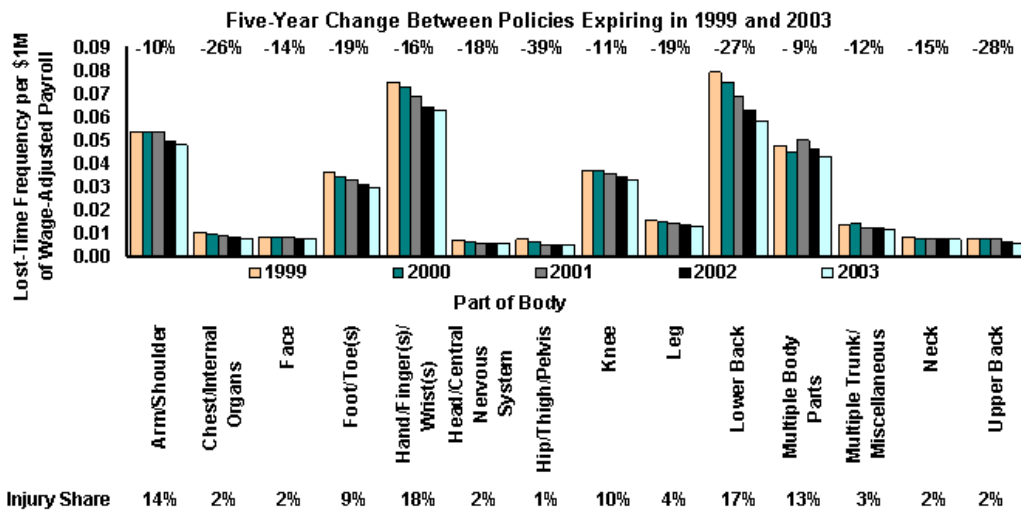
Loss Size Adjustments: 42% Indemnity, 7.4% Medical
 Frequency = Lost-time claims / payroll; Payroll adjusted for inflation
 Claim count determined at first report
 NCCI states, excluding Texas



Exhibit 10. Claim Frequency by Injury Type and by Size of Loss

Other additions to this year's study are an analysis of claim frequency by part of body and a separate analysis by nature of injury. Exhibits 11 and 12 reveal cross-the-board declines with limited exceptions.

Lost-Time Claim Frequency by Part of Body



Frequency = Lost-time claims/payroll. Payroll adjusted for inflation
 Claim count determined at first report
 NCCI states only, excluding Texas and Oregon



Exhibit 11. Lost-Time Claim Frequency by Part of Body

Lost-Time Claim Frequency by Nature of Injury

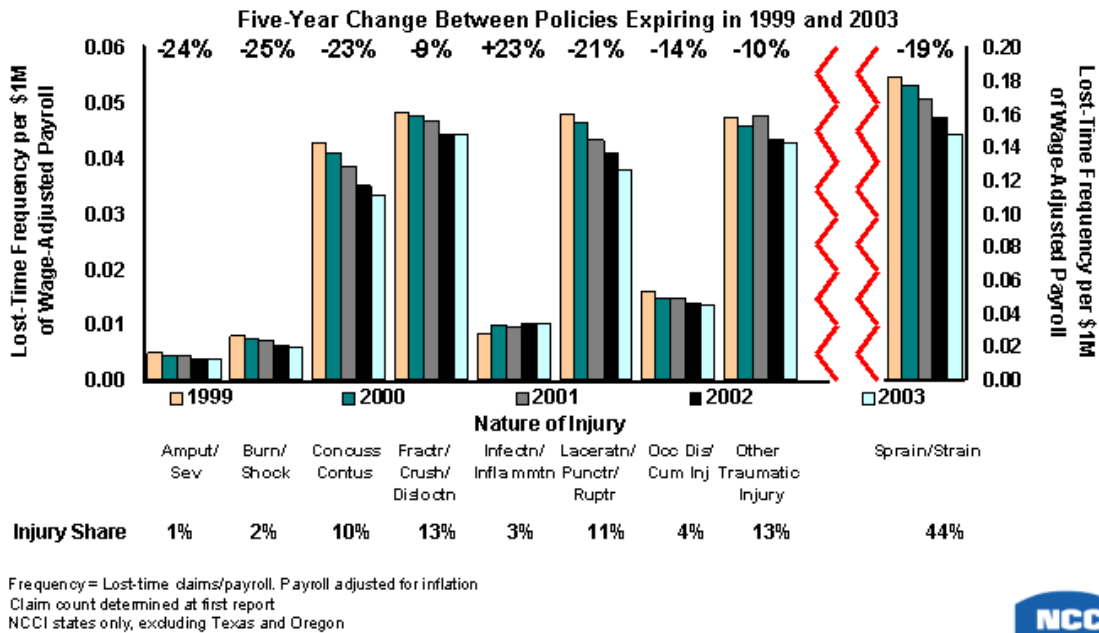


Exhibit 12. Lost-Time Claim Frequency by Nature of Injury

Effect of Employer Location, Size and Occupation on Claim Frequency
 Exhibit 13 provides the lost-time claim frequency for NCCI states by region. All regions experienced double-digit decreases in frequency over the studied time period.

Lost-Time Claim Frequency by Region

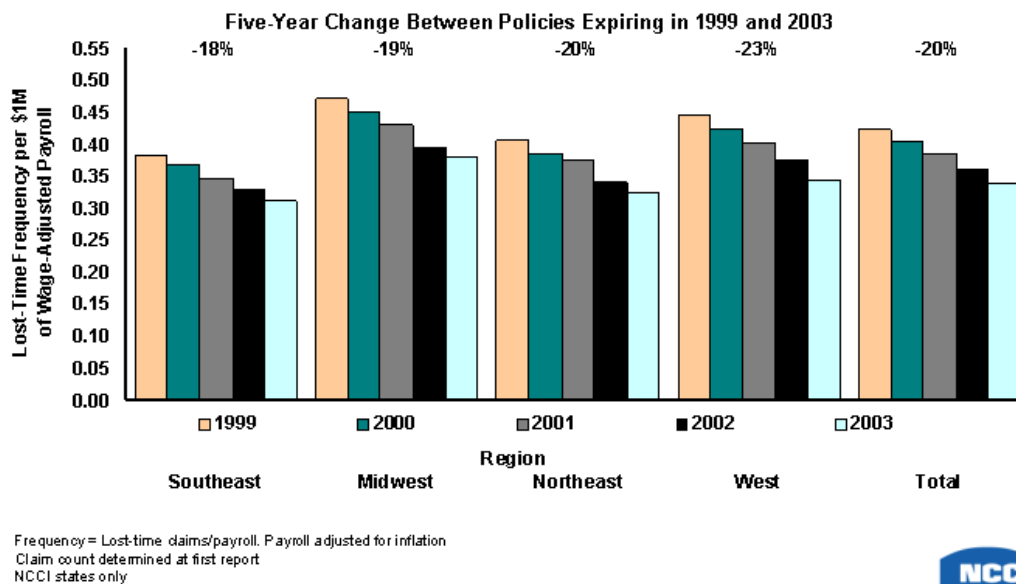
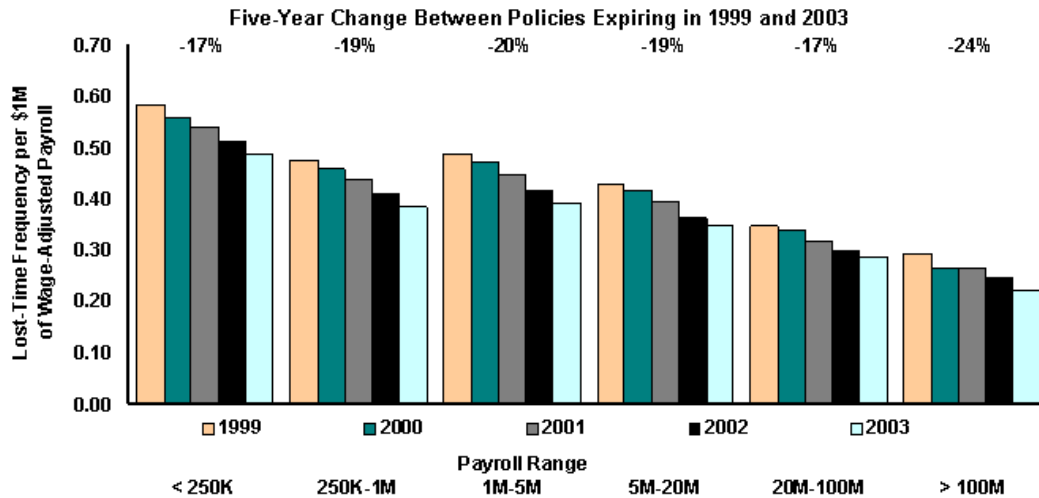


Exhibit 13. Lost-Time Claim Frequency by Region

Lost-time claim frequency by employer payroll size is examined in Exhibit 14. There is a significant difference in average frequency by employer size, which may be due to differences in occupational mix. However, all employer sizes experienced substantial improvements in workplace injuries over the time period studied. This is consistent with findings by the Bureau of Labor Statistics.

Lost-Time Claim Frequency by Size of Payroll



Frequency = Lost-time claims/payroll. Payroll adjusted for inflation
 Claim count determined at first report
 NCCI states only



Exhibit 14. Lost-Time Claim Frequency by Size of Employer

Exhibit 15 shows an across-the-board decline in claim frequency for 15 of the largest occupations. Changes in occupational mix accounted for 4.6% of the 20.1% claim frequency decline between 1999 and 2003.

Claim Frequency for Largest Classes

Countrywide Class	Policies Expiring in 2003			Policies Expiring in 1999		Freq Change
	Payroll (\$M)	Claims	Freq	Claims	Freq	
Clerical	\$ 526,085	29,402	0.056	28,974	0.060	-8%
Salesperson - Outside	\$ 117,728	8,688	0.074	9,964	0.089	-17%
College Professional	\$ 67,230	6,531	0.097	7,385	0.108	-10%
Physician	\$ 59,364	4,568	0.077	4,173	0.080	-4%
Retail Store	\$ 32,183	16,555	0.514	15,626	0.513	0%
Hospital Professional	\$ 28,806	7,665	0.266	8,343	0.313	-15%
Attorneys	\$ 26,717	938	0.035	1,064	0.047	-25%
Auditors/Accountants	\$ 25,334	408	0.016	431	0.017	-5%
Caterer	\$ 22,642	15,357	0.678	19,459	0.887	-24%
Auto Service/Repair	\$ 16,593	10,414	0.628	11,484	0.703	-11%
Architect/Engineer	\$ 15,189	1,655	0.109	1,619	0.129	-16%
Electrical Wiring	\$ 11,754	7,219	0.614	8,602	0.779	-21%
Fast Food Restaurant	\$ 10,985	6,931	0.631	7,643	0.821	-23%
Convalescent/Nursing Home	\$ 10,093	9,239	0.915	12,701	1.249	-27%
Plumbing	\$ 9,927	7,150	0.720	8,065	0.892	-19%
Total - Largest Classes	\$ 980,630	132,720	0.135	145,533	0.160	-16%
Total - All Classes	\$ 1,568,658	529,404	0.337	633,235	0.422	-20%
Mix-Adjusted Total						-16%

Frequency = Lost-time claims/payroll. Payroll adjusted for inflation
 Claim count determined at first report
 NCCI states only



Exhibit 15. Lost-Time Claim Frequency for 15 Large Occupations

What's Driving the Claims Frequency Trend?

Among the many factors that NCCI believes are driving this long-term trend are:

- Continued emphasis on workplace safety in all employment classes
- Increased use of robotics
- Increased use of modular design and construction techniques
- Increased use of power-assisted processes
- Advances in ergonomic design
- Proliferation of cordless tools
- More and better job training
- Improved fraud deterrents

Looking Forward

NCCI will continue to closely monitor the critical area of claim frequency. Future research may include:

- Determining year to year variances in the impacts on severity caused by the differing frequency changes by size of claim
- Exploring alternative methodologies for estimating each of the three forces impacting severity: price, utilization, and differing frequency changes by size of claim
- Studying the effect of the increasing proportion of the workforce over age 60 on claim frequency
- Further analyzing frequency changes for small policies

New information and research data will be posted to ncci.com as it becomes available.

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