NCCI Holdings, Inc.

NCCI RESEARCH BRIEF

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by Tony DiDonato, Matt Crotts

# Workers Compensation Claim Frequency Continues to Fall in 2006

## Overview

The decline in claim frequency for workers compensation injuries has continued into 2006, and the decline continues to be widespread. Both of these findings bode well for workers, employers, and their insurers.

The 2006 drop in claim frequency extends a trend that started in the 1990s. And, as first reported last year, the decline seems to have become just as prominent among the medium and large claims as it is for the small claims.

NCCI's latest review of claim frequency[1] and severity shows that, while claim frequency is down, indemnity and medical severities continue to rise.

In the course of updating our annual study to reflect the latest frequency and severity results, a new dimension has been added. Claim frequency differences between the voluntary and residual markets are examined this year.

## Key Issues

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. Virtually every major employment category examined has experienced marked declines. A previous NCCI research report, "Frequency Turning Points" (available on **ncci.com**) examined factors underlying the long-term decline in frequency since the early 1900s.

Preliminary summary data for Accident Year 2006 reveals continued overall declines in claim frequency and overall increases in indemnity and medical severities. In order to more closely examine 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 2005 to policies that expired in 2001.

## Key Findings

Key findings of our analysis are:

- Over the last three years, the claim frequency decline appears to be just as strong for the large claims as for the small lost-time claims.
- Over the last five years, significant declines occurred for all injury types, including permanent total and permanent partial claims.
- The Assigned Risk market has substantially higher lost-time claim frequency than does the voluntary market, especially for larger claims. This is true even after controlling for differences in occupational mix.
- All geographic regions of the country experienced significant declines over the last five years.
- While there is some variation, the decline in workers compensation claim frequency occurred in all major industry groups and spanned almost all occupations.

[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 or claims per $1 million of premium. Exhibits are labeled to indicate which definition is used.

- The shift in occupational mix is a minor contributor to the decline in claim frequency.

## 2006 Megatrends

As communicated at NCCI's ***2007 Annual Issues Symposium*** in May and noted above, workers compensation claim frequency appears to have fallen again in 2006.

Exhibit 1 provides the results of an analysis based on aggregate workers compensation data submitted by NCCI-affiliated carriers. The results for Accident Year 2006 are preliminary. While claim frequency continues to drop, this chart shows that indemnity and medical severities continue to rise.

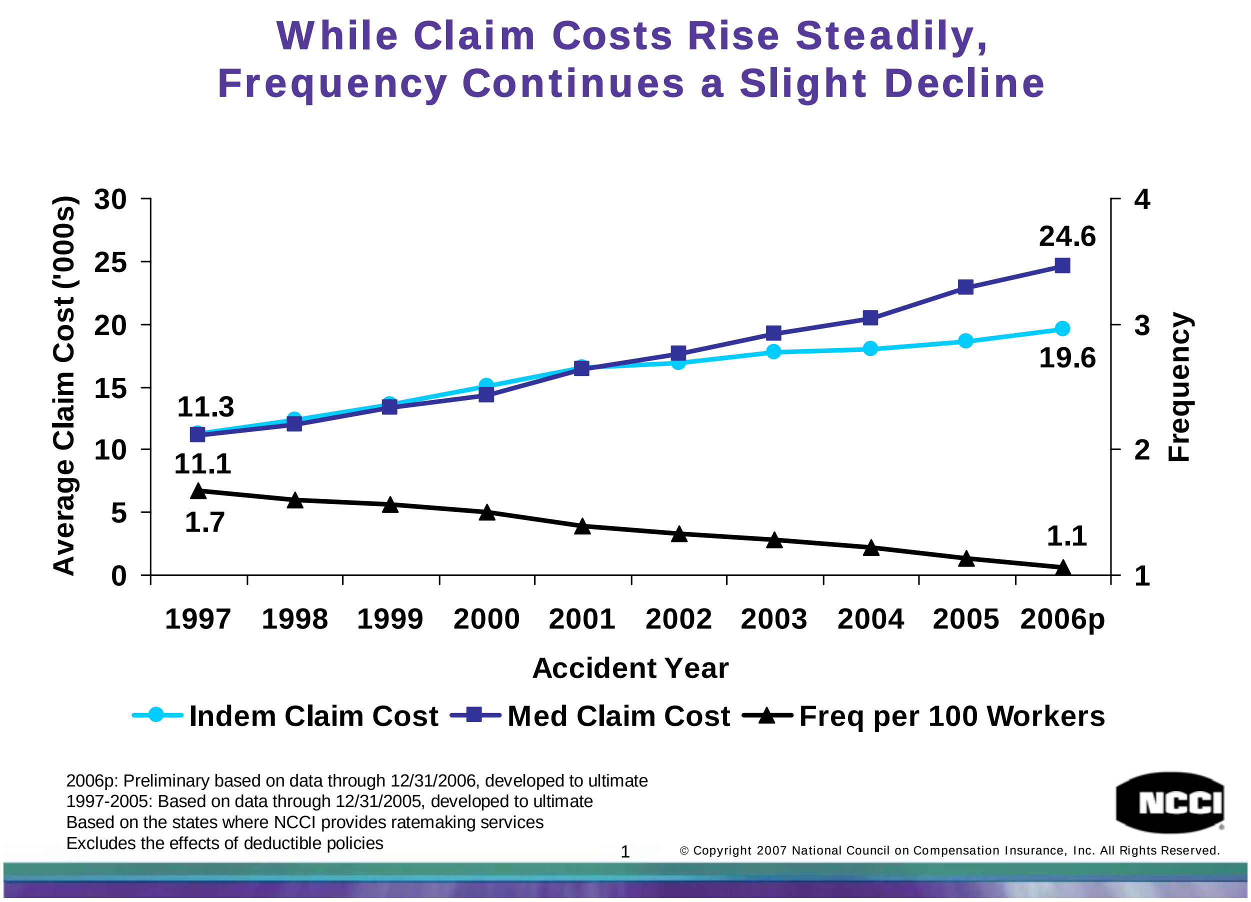


*Exhibit 1. Lost-Time Claim Frequency Continues to Decline While Claim Costs Continue to Increase*

If there is any good news to be gleaned from the severity changes, it is that the annual increases in average indemnity costs per claim have tapered off significantly in the last five years. While indemnity severity rose by an average 9.9% from 1997 to 2001, the average annual increase since then has been 3.5%. This includes an NCCI-estimated increase of 5.5% for 2006. In part, this easing in the growth of indemnity severity reflects the limited growth in wages during and following the recession of 2001.

Increases in average medical costs per claim remain substantial, however, averaging 8.5% per year over the last five years. While significant, this is less than the 10.3% average annual increase from 1997 to 2001. The estimated increase in medical costs for 2006 is 7.5%. In addition to medical price inflation, increases in the utilization of medical services (including prescription drugs) are a significant driver of these increases.

Nonuniform changes in claim frequency by size of claim, discussed later, have also contributed to the severity increases for both indemnity and medical in certain years. To some degree, nonuniform changes in claim frequency by size of claim also might be related to changes in utilization patterns.

The reduction in claim frequency, though, continues to be a major bright spot for workers compensation. Injury rates have dropped by an average of 4.9% per year since 1997, including an estimated decline of 6.8% in 2006.

## Frequency by Claim Size

In order to further analyze the claim frequency results, NCCI used ***Workers Compensation Statistical Plan*** data in states for which NCCI provides ratemaking services. Policies expiring in 2001 were compared to policies expiring in 2005.

Exhibit 2 shows declines in lost-time claim frequency by size of claim, after adjusting the claim sizes for the estimated impact of inflation and changes in utilization. While earlier studies revealed a substantially greater claim frequency decline for the smaller lost-time claims, last year we reported that all claim sizes now appear to be sharing equally in the claim frequency improvement. This exhibit reveals a continuation of this most recent trend, with all claim sizes experiencing significant declines over the five-year period shown.

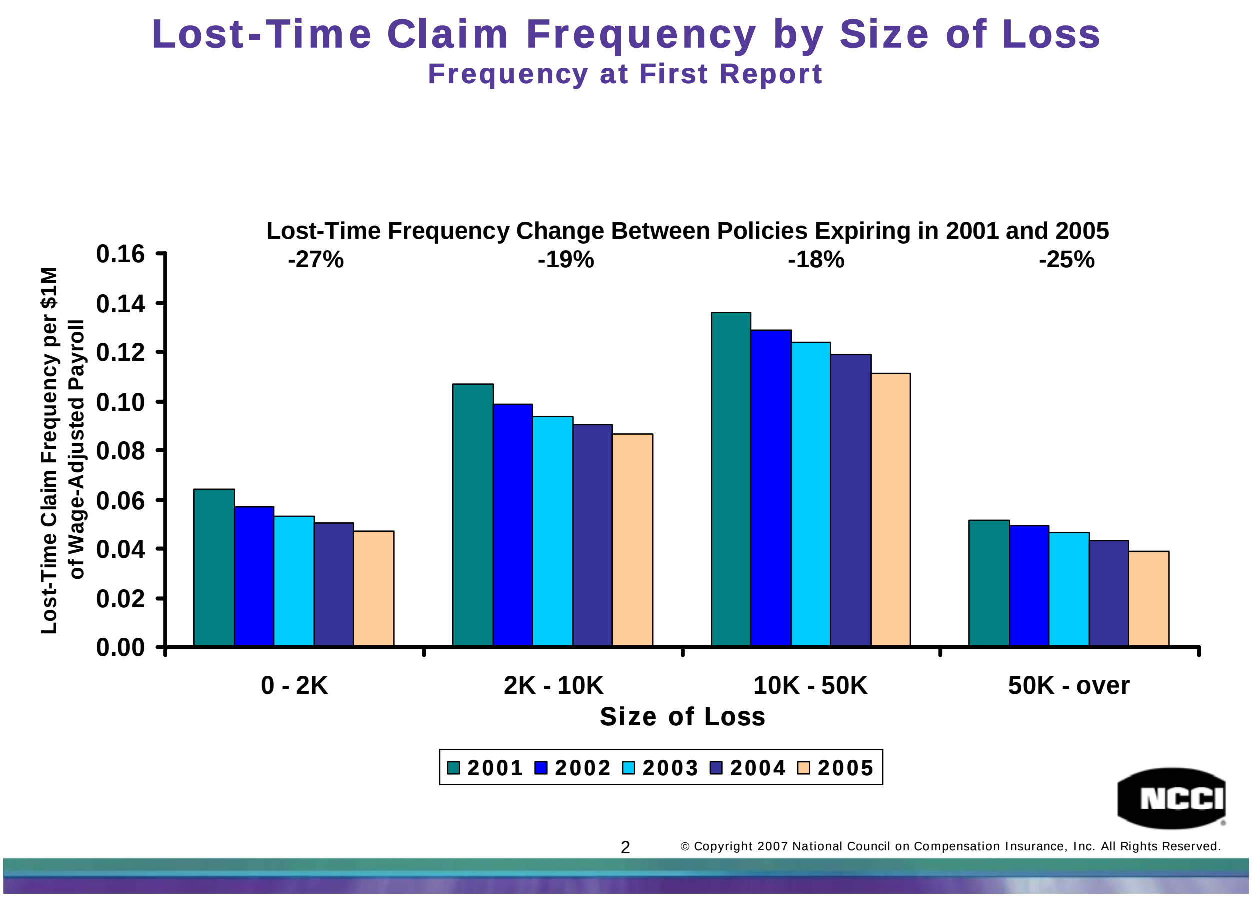


*Exhibit 2. Lost-Time Claim Frequency by Size of Loss*

The smallest claims (less than $2,000 in adjusted dollars) experienced a 27% decline over this period while the largest claims (more than $50,000) experienced a similar 25% decline. This is good news because it means the high-cost claims are now sharing equally in the claim frequency improvement.

These results are corroborated by recent Bureau of Labor Statistics (BLS) duration data as shown in Exhibit 3. In the past, the most significant declines were for the relatively minor cases involving the fewest days away from work. The BLS data now reveals similar declines for all durations, even those where the inured worker is out for 31 days or more. Because the time period shown is four years, the magnitude of the declines are slightly less than the five-year changes shown in the prior exhibit.

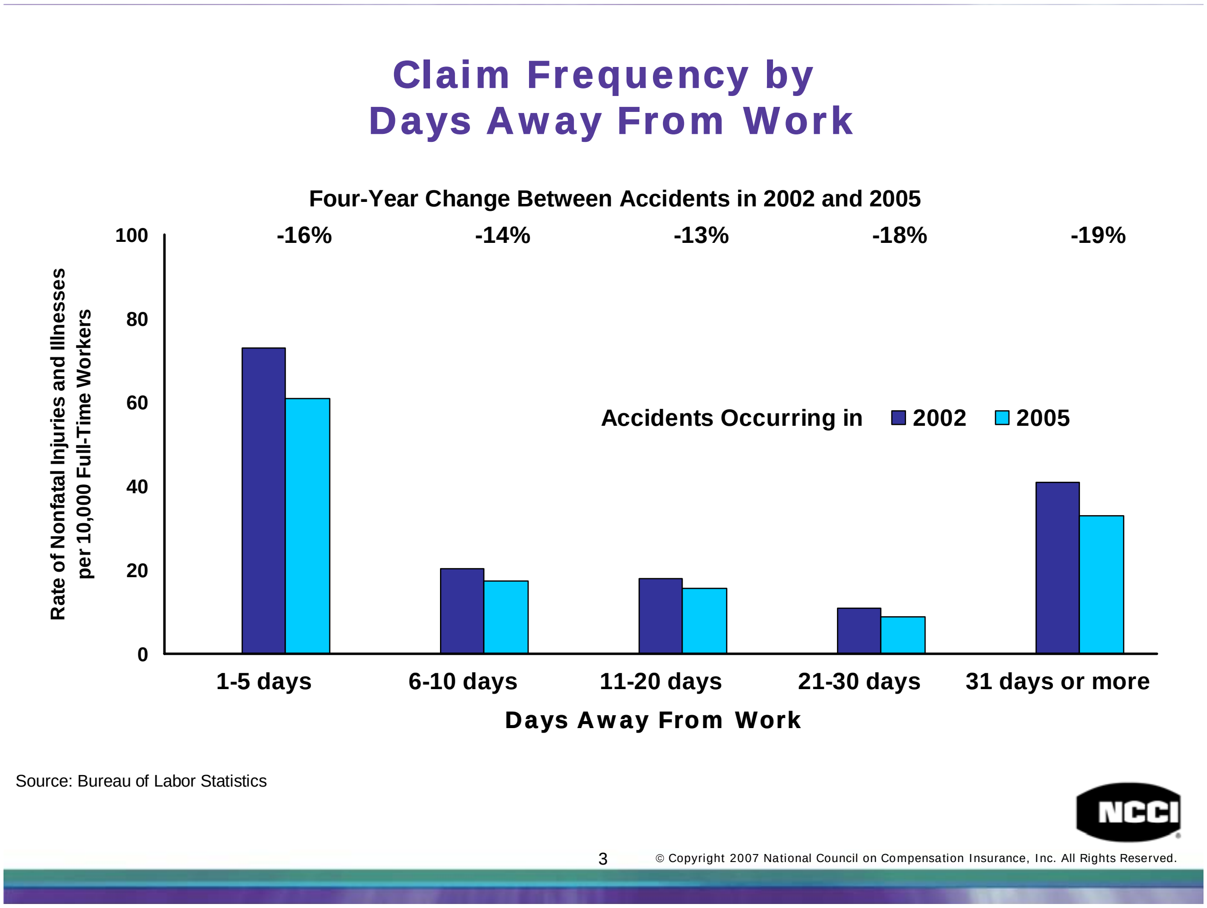


*Exhibit 3. Claim Frequency by Days Away From Work*

## Changing Claim Frequency and Its Impact on Severity

Understanding the impact that changes in claim frequency can have on claim severity can help predict future changes in both. Exhibit 1 revealed significant increases in both indemnity and medical severities. Part of this increase is due to the greater percentage decline in small claims versus large claims over much of that time period, since it is the relatively larger claims that remained in the system.

In our 2005 study, we estimated that the uneven changes in injury rates (by size of claim) contributed approximately 3% per year to the indemnity severity increase and approximately 2% per year to the medical severity increase from 1999 to 2003.

Because the frequency decline appears to have been more uniform by size of claim since 2002, it has not been a factor in the severity increases since then. This is consistent with the lower indemnity increases shown in Exhibit 1 during that time period.

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 are reflected in NCCI ratemaking since 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 4 demonstrates that, while there is some variation, all injury types continue to experience significant declines.

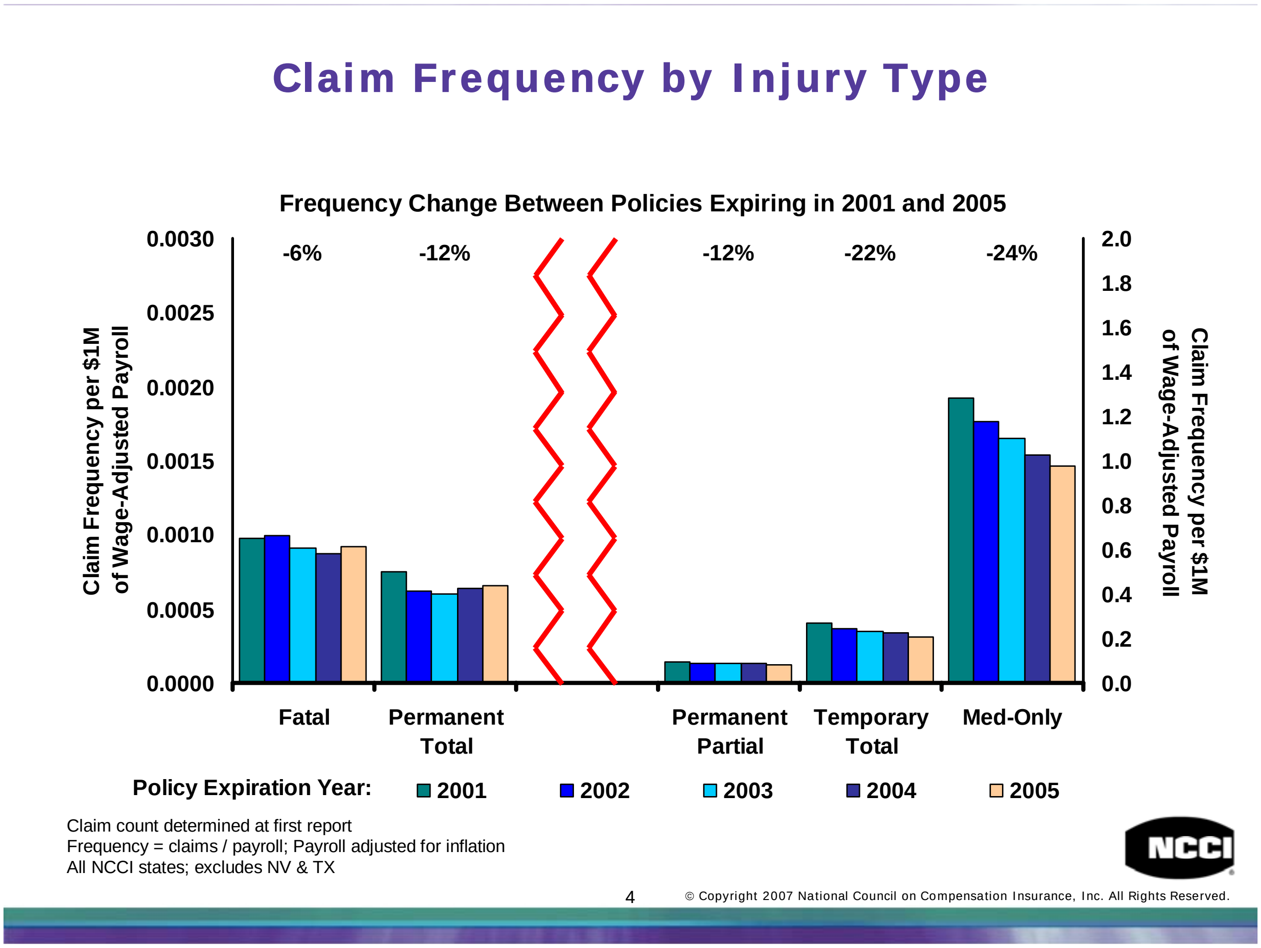


*Exhibit 4. Claim Frequency by Injury Type*

## Comparing Voluntary and Residual Markets

New to this year's study is a comparison of claim frequency in the voluntary and residual (assigned risk) markets, shown in Exhibits 5 and 6.

Actual lost-time claim frequency in the residual market is more than double that in the voluntary market. However, after controlling for differences in class (occupational) mix, the involuntary market has 33% higher frequency than the voluntary market. When we also control for size of risk, state, and year, the involuntary market still has 23% higher frequency than the involuntary market.

Medical-only claim frequency is also significantly higher in the residual market, at a level 38% higher than in the voluntary market. After controlling for class-mix differences, the difference between the two markets is virtually eliminated with frequency in the involuntary market 4% below that in the voluntary market.

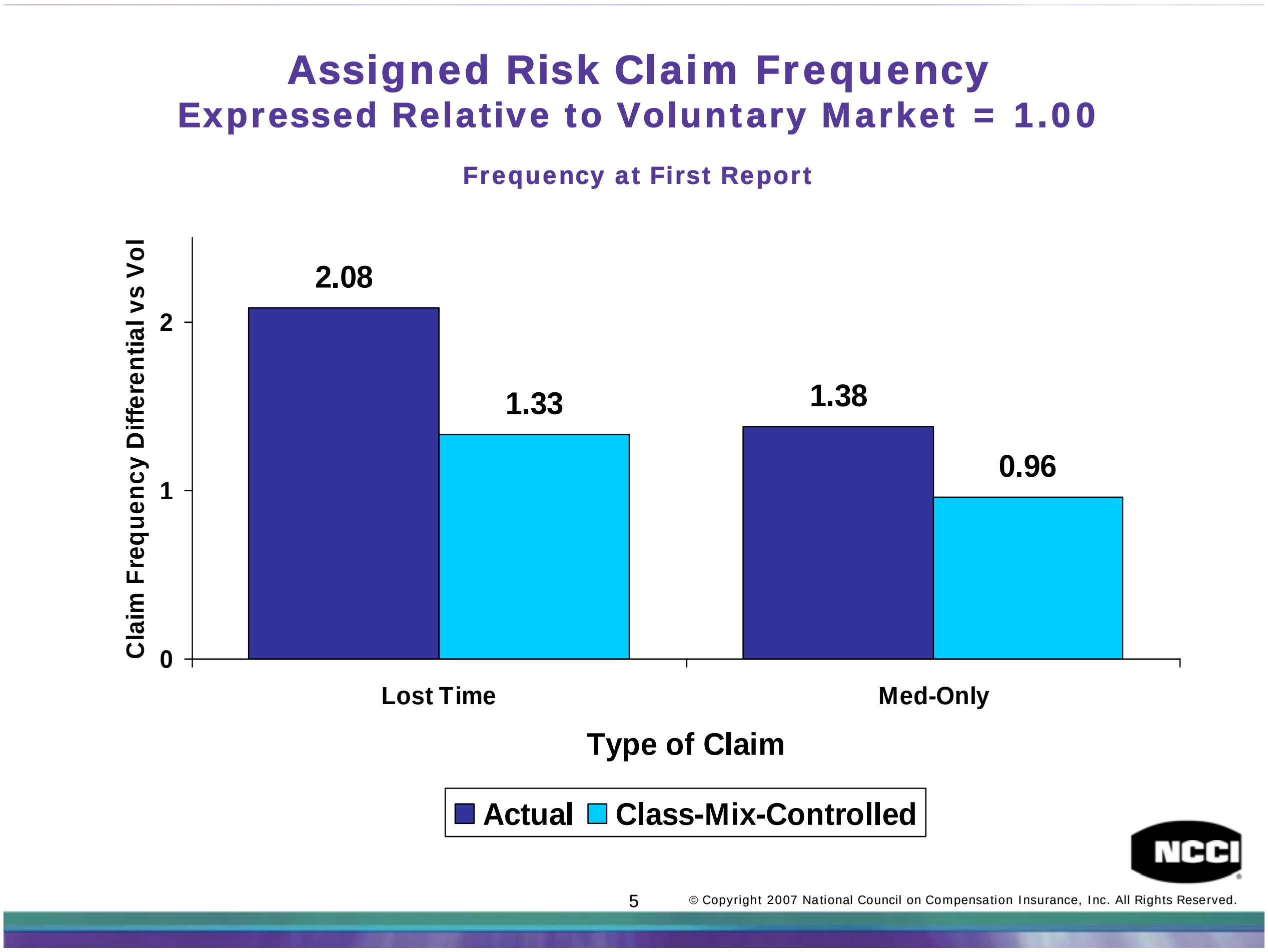


*Exhibit 5. Claim Frequency—Voluntary vs. Residual Market*

Differences in lost-time claim frequency between the two markets are examined by size of claim in Exhibit 6.

For the smallest claim-size group, claims with incurred values less than $25,000, the actual claim frequency is 92% higher in the assigned risk market. After controlling for class-mix, the difference shrinks to 24%. Claim frequency differences for the medium-sized claims ($25K–$50K) are slightly higher and are very similar to the overall lost-time differences shown in the prior exhibit.

The most striking finding is for the largest claims (>$50K). The actual claim frequency is 252% higher in the residual market than in the voluntary market for these large lost-time claims. Even after controlling for class-mix, the frequency rate in the residual market for these claims is more than double the voluntary market.

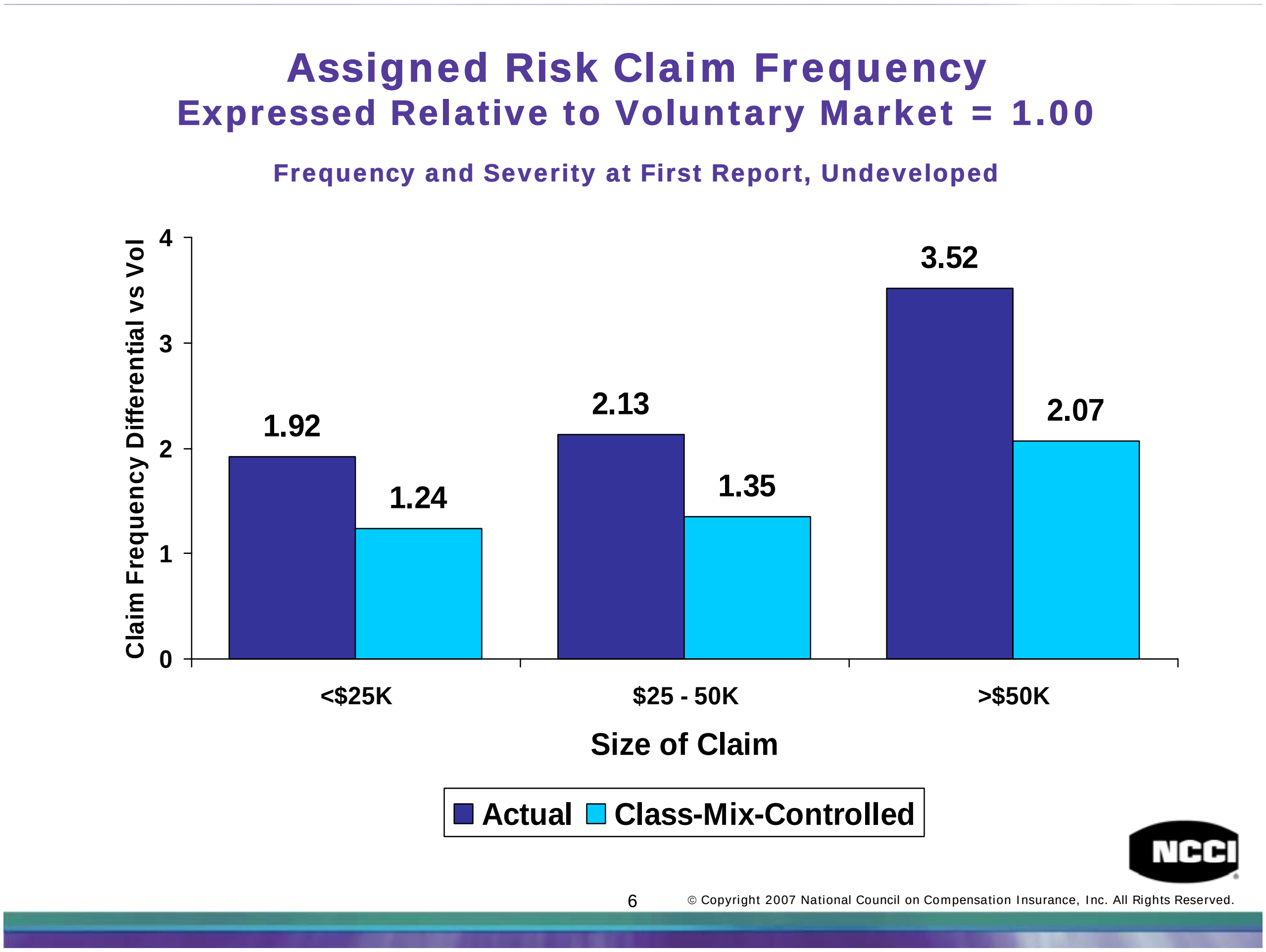


*Exhibit 6. Lost-Time Claim Frequency by Size of Claim—Voluntary vs. Residual Market*

## Geographic Regions

While there are some differences by region, Exhibit 7 shows that all areas of the country have experienced substantial declines in lost-time claim frequency. While the West region is now showing the smallest decline during the latest five years, it had the largest decline in our 2005 study.

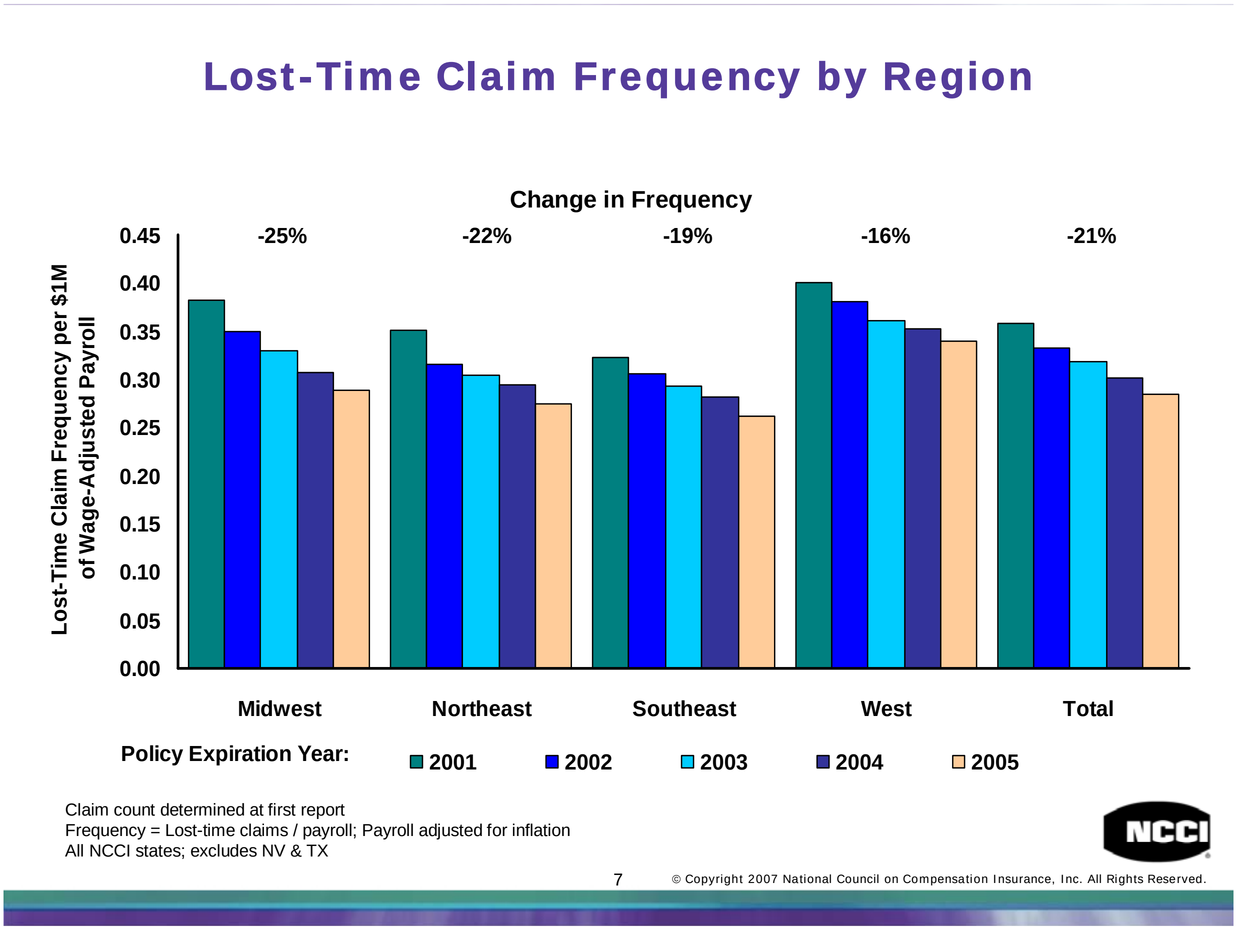


*Exhibit 7. Lost-Time Frequency by Region*

## Results for Large Classifications

Exhibit 8 reveals an across-the-board decline in claim frequency for 15 of the largest occupations. Changes in occupational mix accounted for 3% of the 21% claim frequency decline between 2001 and 2005.

### Lost-Time Claim Frequency for Largest Classes

| Countrywide Classes | Policies Expiring in 2005 Wage-Adjusted Payroll ($M) | Lost Time # Claims | Frequency | Policies Expiring in 2001 Lost Time # Claims | Frequency | Frequency Change |
|---|---|---|---|---|---|---|
| **1. Manufacturing** | | | | | | |
| Television/Radio | $ 7,360 | 2,035 | 0.276 | 3,860 | 0.341 | -19% |
| Machine Shop | $ 7,707 | 4,919 | 0.638 | 6,838 | 0.791 | -19% |
| Plastics Manufacturing | $ 6,538 | 3,837 | 0.587 | 4,867 | 0.711 | -17% |
| **2. Contracting** | | | | | | |
| Electrical Wiring | $ 12,379 | 6,726 | 0.543 | 9,126 | 0.674 | -19% |
| Contractor-Supervisor | $ 12,819 | 2,257 | 0.176 | 2,898 | 0.259 | -32% |
| Plumbing | $ 10,244 | 6,533 | 0.638 | 8,178 | 0.752 | -15% |
| **3. Office and Clerical** | | | | | | |
| Clerical | $ 596,101 | 27,489 | 0.046 | 32,388 | 0.055 | -17% |
| Salesperson-Outside | $ 138,180 | 8,634 | 0.062 | 10,591 | 0.079 | -21% |
| College Professional | $ 69,034 | 5,752 | 0.083 | 8,172 | 0.105 | -21% |
| **4. Goods and Services** | | | | | | |
| Store-Retail | $ 39,324 | 16,898 | 0.430 | 17,518 | 0.492 | -13% |
| Restaurant/Caterer | $ 30,608 | 16,836 | 0.550 | 22,665 | 0.752 | -27% |
| Auto Service/Repair | $ 23,076 | 12,267 | 0.532 | 15,698 | 0.654 | -19% |
| **5. Miscellaneous** | | | | | | |
| Trucking (NOC, Local, Long-Distance) | $ 19,347 | 21,011 | 1.086 | 28,002 | 1.415 | -23% |
| Drivers/Chauffeurs | $ 10,113 | 8,416 | 0.832 | 12,227 | 1.068 | -22% |
| Police Officers | $ 8,932 | 4,375 | 0.490 | 5,533 | 0.622 | -21% |
| **Total All classes** | **$ 1,768,682** | **501,221** | **0.283** | **627,258** | **0.358** | **-21%** |
| **Mixed-Adjusted Total** | | | | | | **-18%** |

Claim count determined at first report
Frequency = Lost-time claims / payroll; Payroll adjusted for inflation
All NCCI states; excludes NV

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*Exhibit 8. Lost-Time Claim Frequency for 15 Large Occupations*

## What's Driving the Claims Frequency Trend?

As previously reported, NCCI believes that the many factors 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:

- 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 and severity
- Further analyzing frequency changes for small policies

New research will be posted to **ncci.com** as it becomes available.

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