

Medical-Only Claims

That Become Lost-Time Claims A Study of Characteristics



Workers compensation claims adjusters typically handle two distinct types of claims: claims that include indemnity payments, known as lost-time claims, and claims for which the only payments are for medical costs, known as medical-only claims. Understanding the characteristics of workers compensation claims that are more likely to be converted from medical-only claims to lost-time claims can help industry participants focus resources and minimize total workers compensation costs.

The vast majority of claims are medical-only claims that keep employees out of work for only a short period of time, if at all. To qualify for indemnity benefits, workers need to be away from work longer than three to seven days, depending on state waiting periods.

Medical-only claims make up 77.9% of claim counts¹—but account for only 6.0% of loss dollars.² For that reason, insurance companies often handle lost-time claims quite differently from medical-only claims, focusing the majority of their expertise on the lost-time claims.

For example, many companies have medical-only units for fast-track handling of the small medical claims. This works well for the vast majority of medical-only claims. Only 4.6% of claims that are medical-only 90 days after the date of injury become lost-time claims within 30 months of that date.

However, as this study examines, there are certain types of medical-only claims where the likelihood of becoming a late-recognized indemnity claim is much greater.

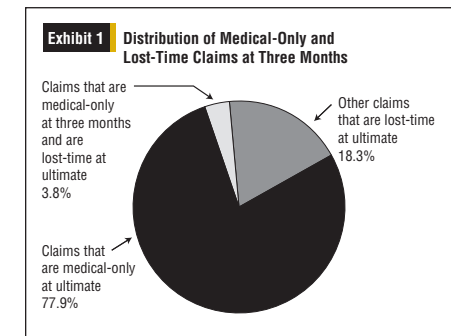
Some findings for claims that are medical-only at 3 months and become lost-time by 30 months include:

- About 80% make the transition within 12 months of the date of injury
- They cost an average of 40 times more than those that remain medical-only
- Carpal tunnel claims are the most likely claims to transition from medical-only to lost-time, with a probability of about 34%
- The larger the incurred value (paid plus case reserves), the greater the probability of the claim becoming a lost-time claim
- The probability of a claim transitioning increases with claimant age until 65, and then it declines

Background

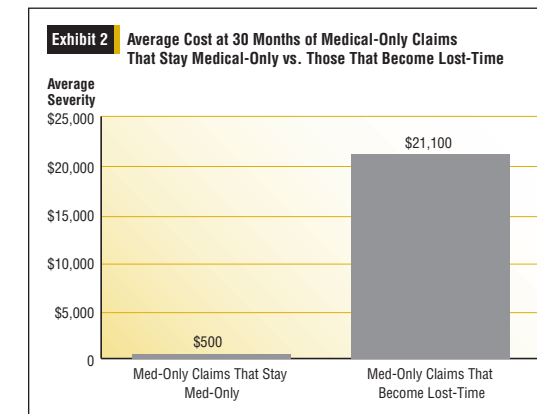
This study considers approximately five million claims that have no lost-time component—that is, no indemnity paid and no indemnity case reserve—three months after the date of injury. A claim that becomes lost-time is a claim for which some indemnity benefits are paid, or some indemnity case reserve has been set up, within the first 30 months after report. The studied claims are from a sample of claims provided by carriers.

As you can see in Exhibit 1, claims that are medical-only at three months and ultimately become lost-time claims constitute some 3.8% of all claims. Other ultimately lost-time claims make up 18.3% of all claims, meaning that about one out of every six ultimately lost-time claims was a medical-only claim at three months.



Claims that transition from medical-only to lost-time are on average of a far greater severity than claims that remain medical-only. Exhibit 2 shows that the average cost at 30 months for medical-only claims that transition to lost-time is 40 times greater than the cost of medical-only claims that do not transition.

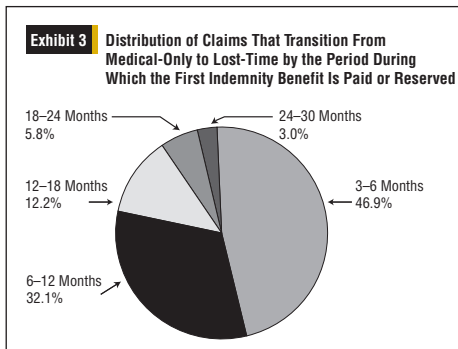
The results using 3 months as the starting point are not significantly different from 6 months or 12 months, except that the rates of transition are smaller and there may be some slight shifting in the exact rankings of these rates for part of body/nature of injury/cause of injury (discussed below).



by John Robertson, FCAS, and Derek Schaff, ACAS

¹ 2004 Annual Statistical Bulletin, Exhibit XII
² 2004 Annual Statistical Bulletin, Exhibit X

The first 30 months after report are sufficient to capture the majority of claims for which indemnity benefits are eventually paid, because the percentage of medical-only claims that become lost-time decreases rapidly as claims mature. In fact, less than 0.1% of all claims that are medical-only at 3 months become lost-time after 30 months. Of the medical-only claims that become lost-time in the first 30 months, approximately 80% become lost-time within 12 months of the date of injury, as shown in Exhibit 3.



Differences by State

There are differences between states in the rates of conversion of medical-only claims to lost-time claims. The states with the greatest percentage of medical-only claims that become lost-time claims are:

- New York, 8.5%
- Hawaii, 7.6%
- Missouri, 7.2%
- California, 7.0%
- South Carolina, 6.8%

The states with the smallest percentage of medical claims that become lost-time claims are:

- Arkansas, 2.3%
- Indiana, 2.4%
- Arizona, 2.7%
- Pennsylvania, 2.7%
- Utah, 2.7%

In addition, it seems to make no difference whether the employer or the

employee has the right to make the initial choice of physician. States in which the employer has the choice have a 4.5% chance of a medical-only claim becoming a lost-time claim. States in which the employee has the choice have a 4.7% chance of a medical-only claim becoming a lost-time claim.

Types of Injury

The likelihood of a medical-only claim becoming lost-time depends greatly on the type of injury that has occurred. We examined three-way combinations of part of body, nature of injury, and cause of injury to determine which types of injury are more likely to incur indemnity benefits in the future.

One must be careful in interpreting the following results. The coding of these fields is not reflected as of three months, but rather as of the latest valuation, meaning that the part of body, nature of injury, or cause of injury coded at three months may have been different.

However, it is unusual for these codes to change over the life of a claim, so claims with the characteristics shown below might offer opportunities for improved claims handling.

The 10 combinations of part of body/nature of injury/cause of injury with the greatest probabilities of transitioning, and with at least 1,000 medical-only claims in the sample, are:

- Wrist/Repetitive Motion/Carpal Tunnel Syndrome (5,023 claims)—38.0%
- Wrist/Strain or Injury by, NOC/Carpal Tunnel Syndrome (1,090 claims)—33.7%
- Wrist(s) & Hand(s)/Repetitive Motion/Carpal Tunnel Syndrome (1,188 claims)—33.4%
- Wrist/Repetitive Motion/Carpal Tunnel Syndrome (6,052 claims)—33.0%
- Wrist/Cumulative, NOC/Carpal Tunnel Syndrome (2,071 claims)—30.7%

- Multiple Upper Extremities/Repetitive Motion/Carpal Tunnel Syndrome (1,089 claims)—28.7%
- Hand/Repetitive Motion/Carpal Tunnel Syndrome (1,169 claims)—28.5%
- Wrist/Fall, Slip, or Trip, NOC/Fracture (1,541 claims)—17.6%
- Multiple Upper Extremities/Repetitive Motion/Inflammation (6,754 claims)—17.6%
- Wrist/on Same Level/Fracture (1,451 claims)—17.2%

Clearly, carpal tunnel claims transition from medical-only to lost-time far more often than other types of claims. In fact, the average transition probability among the seven carpal tunnel categories above is 34%, meaning that medical-only carpal tunnel claims at three months are roughly seven times more likely to incur indemnity losses than the average medical-only claim at three months.

It is interesting to examine each of these three variables individually.

Exhibit 4 shows the predominance of vertebral discs, which have a far greater probability of becoming a lost-time claim than any other body part. Carpal tunnel accounts for only 5% of medical-only wrist claims, with most medical-only wrist claims being fractures or other such types of claims with less propensity for becoming lost-time.

Exhibit 4 Parts of Body With Highest Probabilities of a Medical-Only Claim Becoming a Lost-Time Claim

Part of Body	Number of Medical-Only to Lost-Time Claims	Percentage of All Medical-Only to Lost-Time Claims	Probability of Medical-Only Claim Becoming Lost-Time
Disc, Noncervical	1,218	0.5%	28.3%
Disc, Cervical	751	0.3%	25.7%
Wrist(s) and Hand(s)	1,515	0.6%	14.9%
Heart	121	0.0%	10.6%
Shoulder(s)	11,553	4.6%	10.5%

In Exhibit 5 we see the parts of the body that have the greatest number of medical-only to lost-time claims. These five body parts alone comprise half of all medical-only to lost-time claims. Most of these

body parts have a higher than average probability of leading to a lost-time claim. Knee claims are twice as likely to lead to a lost-time claim. However, finger claims are about half as likely as average to do so.

Exhibit 5 Parts of Body With Greatest Number of Medical-Only to Lost-Time Claims

Part of Body	Number of Medical-Only to Lost-Time Claims	Percentage of All Medical-Only to Lost-Time Claims	Probability of Medical-Only Claim Becoming Lost-Time
Lower Back Area	40,324	16.0%	5.7%
Knee	25,446	10.1%	9.0%
Wrist	22,595	9.0%	8.3%
Multiple Body Parts	19,981	7.9%	6.7%
Finger(s)	17,929	7.1%	2.5%

In Exhibit 6, we can see that the nature of injury—“Rupture”—has a probability of about 70%, or about 15 times the average, of leading to a lost-time claim, far in excess of the next nature of injury. Often, that diagnosis is made within the first three months—a rupture claim that’s in the medical-only unit is likely to be reassigned.

Exhibit 6 Natures of Injury With Highest Probabilities of a Medical-Only Claim Becoming a Lost-Time Claim

Nature of Injury	Number of Medical-Only to Lost-Time Claims	Percentage of All Medical-Only to Lost-Time Claims	Probability of Medical-Only Claim Becoming Lost-Time
Rupture	4,261	1.7%	69.5%
Amputation	1,279	0.5%	36.6%
Carpal Tunnel	8,257	3.3%	33.3%
Mental Disorder	312	0.1%	24.5%
Severance	657	0.3%	22.7%

(It may seem strange that an amputation claim should incur no indemnity loss after three months, but we found that, in fact, 21% of all amputation claims remain medical-only.)

Exhibit 7 shows that “Strain” accounts for about 40% of all medical-only to lost-time claims. Together, the top five natures of injury account for three quarters of all medical-only to lost-time claims. Laceration claims are about three times less likely than the average claim to become lost-time.

Exhibit 7 Nature of Injury With Greatest Number of Medical-Only to Lost-Time Claims

Nature of Injury	Number of Medical-Only to Lost-Time Claims	Percentage of All Medical-Only to Lost-Time Claims	Probability of Medical-Only Claim Becoming Lost-Time
Strain	101,750	40.6%	6.8%
All Other Specific Injuries, NOC	32,543	13.0%	5.4%
Contusion	25,701	10.2%	3.1%
Sprain	15,790	6.3%	5.1%
Laceration	15,144	6.0%	1.6%

Exhibit 8 shows the top causes of injury for which a medical-only claim becomes a lost-time claim. These probabilities are much smaller than in either Exhibit 4 or Exhibit 6. Because any cause of injury can be associated with many different types of injury, the cause of injury is not as reliable an indicator of the probability of a medical-only claim becoming lost-time as are part of body or nature of injury.

Exhibit 8 Causes of Injury With Highest Probabilities of a Medical-Only Claim Becoming a Lost-Time Claim

Cause of Injury	Number of Medical-Only to Lost-Time Claims	Percentage of All Medical-Only to Lost-Time Claims	Probability of Medical-Only Claim Becoming Lost-Time
Repetitive Motion, CTS	14,569	5.8%	14.7%
Cumulative, NOC	5,196	2.1%	14.4%
Repetitive Motion	9,968	4.0%	14.1%
Continual Noise	210	0.1%	11.0%
Motor Vehicle, NOC	3,386	1.3%	10.6%

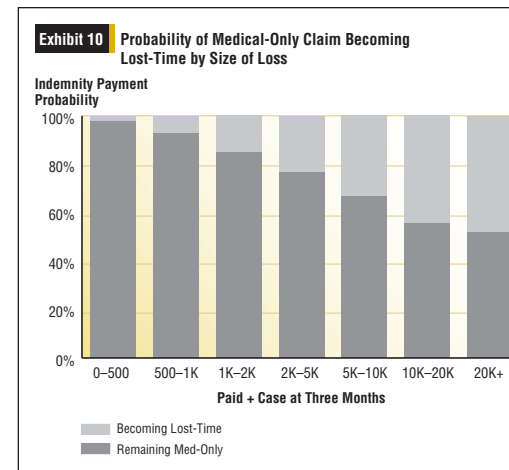
We can see from Exhibit 9 that the distribution of *cause* of injury is more uniform than *nature* of injury, as the top five causes of injury for medical-only to lost-time claims account for only 40% of such claims. Note the reoccurrence in this exhibit of the cause of injury “Repetitive Motion, CTS,” which we saw in Exhibit 8 to be the cause of injury with the highest probability of leading to a lost-time claim.

Exhibit 9 Causes of Injury With Greatest Number of Medical-Only to Lost-Time Claims

Cause of Injury	Number of Medical-Only to Lost-Time Claims	Percentage of All Medical-Only to Lost-Time Claims	Probability of Medical-Only Claim Becoming Lost-Time
Lifting	37,711	15.0%	6.0%
Strain or Injury by, NOC	16,672	6.6%	6.4%
Fall, Slip or Trip, NOC	14,775	5.9%	7.2%
Pushing or Pulling	14,774	5.9%	6.9%
Repetitive Motion, CTS	14,569	5.8%	14.7%

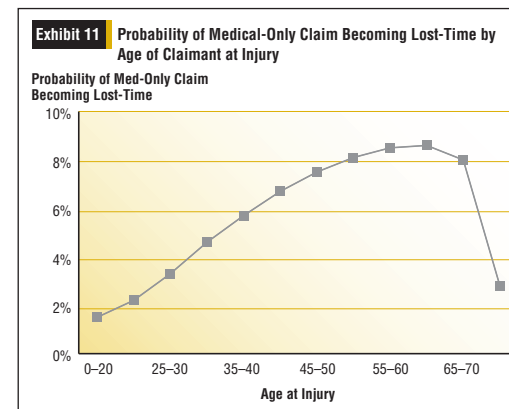
Size of Loss

It would seem that the more severe a medical-only claim is, the greater the likelihood that indemnity benefits will eventually be paid. In Exhibit 10, we can see that this is indeed the case, and that the size of loss at three months has a great impact on whether or not the claim will eventually become lost-time. For claims greater than \$20,000, the probability is nearly 50% that eventually there will eventually be an indemnity payment.



Age

Another factor related to size of loss that impacts the probability of a medical-only claim becoming lost-time is the age of the claimant at injury. Typically, injuries to older workers incur greater medical costs than injuries to younger workers. In view of the results shown in Exhibit 10, we might expect the probability of transitioning to increase with the age of the worker. We can see from Exhibit 11 that this is essentially true.



The probability does increase up to age 65, after which it drops off sharply. One reason for this is that workers over 65 often have sources of income available that replace workers compensation benefits.

Conclusion

This study finds several claims characteristics that correlate the propensity of a claim to transition from medical-only to lost-time.

There are areas in which the above research may need to be refined. Some of the variables used may be inter-related (e.g., age and severity). It would be instructive to examine one variable while controlling for the other related ones (e.g., look at the breakdown among age groups for a common severity).

Other factors might be considered. Examples include gender, industry group, hazard group, and medical procedures performed.

As further research is conducted and new claims results become available, NCCI may reexamine this issue. Please continue to visit ncci.com for ongoing NCCI research updates.

John Robertson, FCAS, is a research focus lead and coordinates much of the research activity at NCCI. He has held positions at insurance companies and consulting firms. He has degrees in mathematics from Harvard College and the University of California at Berkeley.

Derek Schaff, ACAS, has a graduate degree in mathematics from the University of Florida and has worked at NCCI since 2001 in the ratemaking and research focus areas.