

# Hospital professional liability database

## Key findings

Tony Bloemer, FCAS, MAAA  
 Rachel Soich, ACAS, MAAA  
 Tim Vosicky, FCAS, MAAA

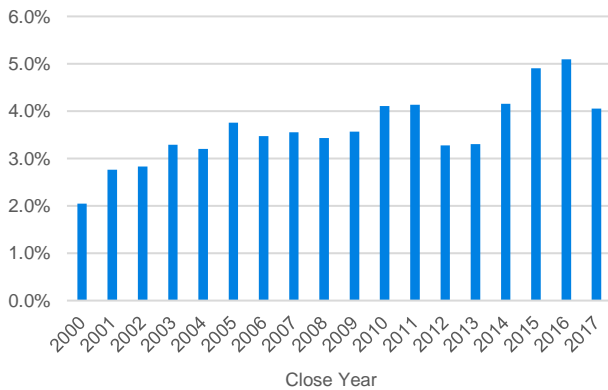


In 2010, Milliman created a hospital professional liability database. This includes professional liability for hospitals, nursing homes, and long-term care facilities using data gathered from Milliman offices throughout the country. We have updated this analysis in 2018 and compiled the key findings below.

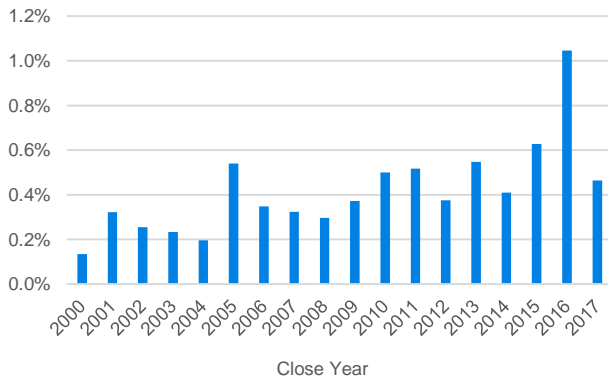
### Large claims

As shown in Figure 1, the percentage of claims closed with an indemnity payment of \$1 million or more was relatively flat between 2003 and 2013, but has increased from 2014 to 2016. There was an even more significant increase in the percentage of claims that closed with an indemnity payment of \$5 million or more (Figure 2).

**FIGURE 1: PERCENTAGE OF CLOSED CLAIMS WITH INDEMNITY PAYMENT OF \$1M OR MORE**



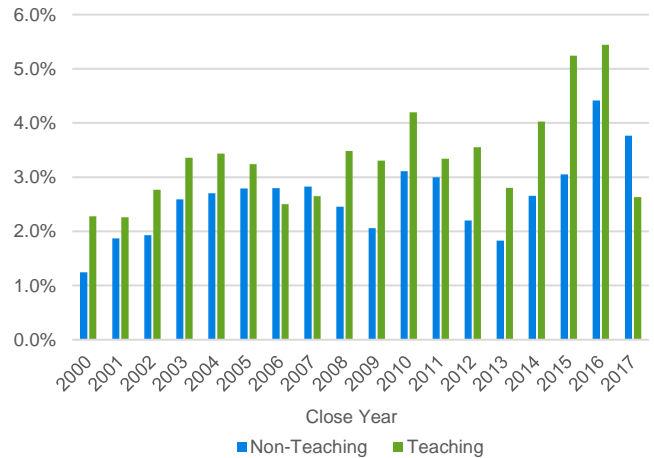
**FIGURE 2: PERCENTAGE OF CLOSED CLAIMS WITH INDEMNITY PAYMENT OF \$5M OR MORE**



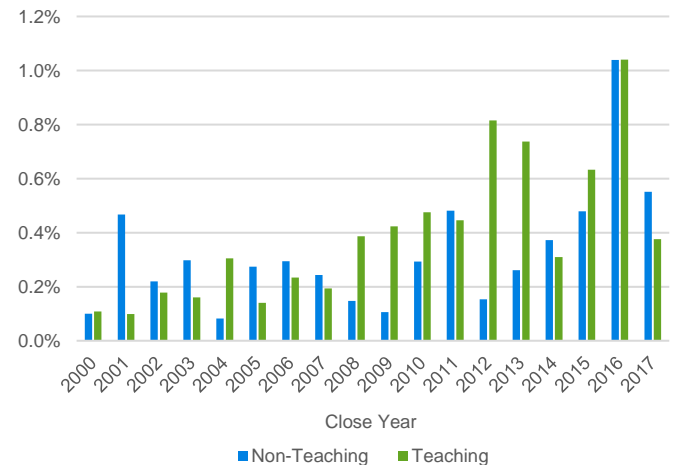
### Teaching versus non-teaching hospitals

The average closed claim severity for teaching hospitals is twenty percent higher than for non-teaching hospitals over the last thirty years. The higher average claim severity also leads to a higher percentage of large claims at teaching hospitals. See Figures 3 and 4.

**FIGURE 3: PERCENTAGE OF CLOSED CLAIMS WITH INDEMNITY PAYMENT OF \$1M OR MORE**



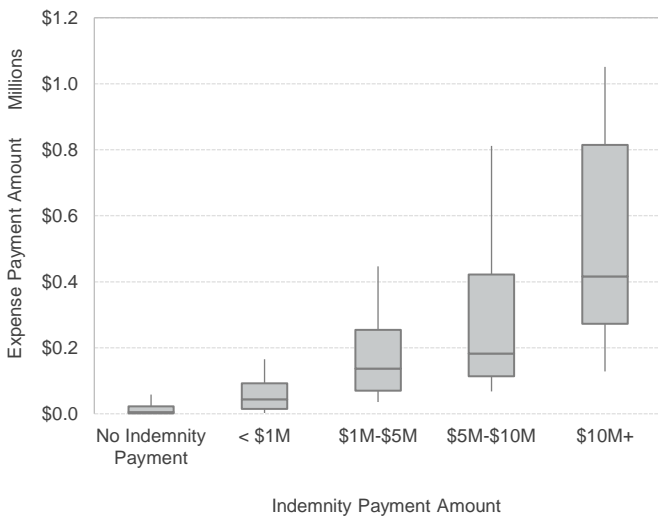
**FIGURE 4: PERCENTAGE OF CLOSED CLAIMS WITH INDEMNITY PAYMENT OF \$5M OR MORE**



## Expense payment versus indemnity payment

Figure 5 summarizes the amount of expense payments for claims closed in the last 10 years based on the size of the indemnity payment. As expected, the average expenses increase along with the size of the indemnity payments. The box represents the 25th to 75th percentile, with the line in the box being the median. The top and bottom bars extend to the 90th and 10th percentiles, respectively.

**FIGURE 5: AMOUNT OF EXPENSE PAYMENTS FOR CLAIMS CLOSED IN THE LAST 10 YEARS**



## Lag by claim size

We have analyzed the lag periods, both from occurrence date to report date and from report date to close date based on the indemnity payment amount. As anticipated, the lag from report date to close date increases as the amount of the indemnity payment increases. Interestingly, the occurrence to report lag is not linearly correlated with the indemnity payment size. Claims that end up closing without an indemnity payment typically take longer to be reported than those with indemnity payments less than \$1,000,000. One possible reason is that more of these claims without indemnity payments are reported as the statute of limitations is expiring. It is also interesting that claims that end up with \$10,000,000 or greater indemnity payments are reported more quickly than those with indemnity payments between \$1,000,000 and \$10,000,000. In some of these more severe cases, it may be more evident to the hospital that a significant incident has occurred and it is reported faster. See Figure 6.

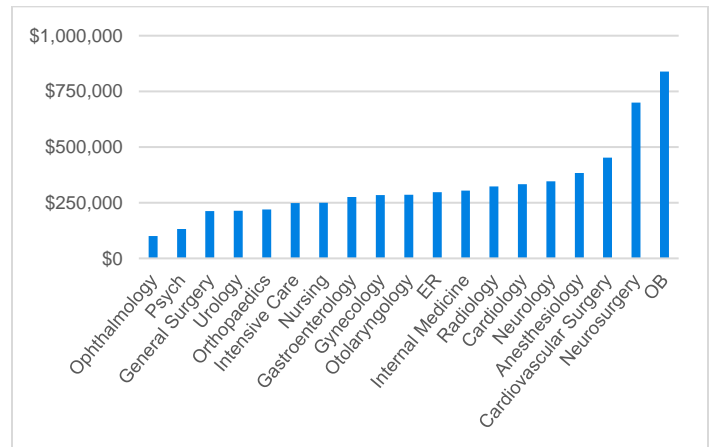
**FIGURE 6: AVERAGE LAG (IN YEARS)**

INDEMNITY PAYMENT SIZE	OCCURRENCE TO REPORT LAG	REPORT TO CLOSE LAG
\$0	1.282	1.967
< \$1M	0.884	2.304
\$1M < \$5M	1.375	3.593
\$5M < \$10M	1.361	3.915
\$10M +	0.825	3.578

## Severity by specialty

Figure 7 shows the average closed claim severity by specialty, including both loss and allocated loss adjustment expenses (ALAE). Claims have been trended from their close date to 2018 by 3.5% per year. All specialties shown contain a minimum of 200 closed claims.

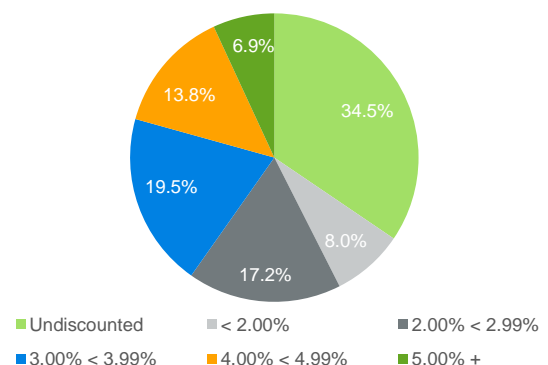
**FIGURE 7: TRENDED AVERAGE SEVERITY BY SPECIALTY**



## Discount summary

The interest rates used by the clients in this study to discount their reserves are summarized in Figure 8. We express no opinion on the appropriateness of the interest rates.

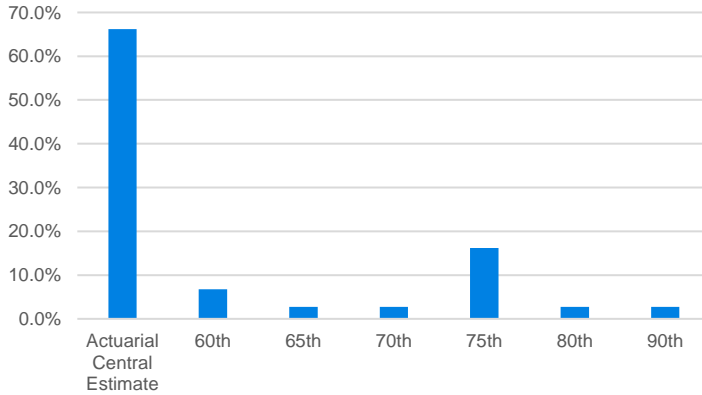
**FIGURE 8: DISCOUNT RATES USED**



## Percentile booked

The percentiles used by the clients in this study to book their reserves are in Figure 9. Sixty-five percent of the clients in our analysis book reserves at the actuarial central level. We express no opinion on the appropriateness of the percentiles used.

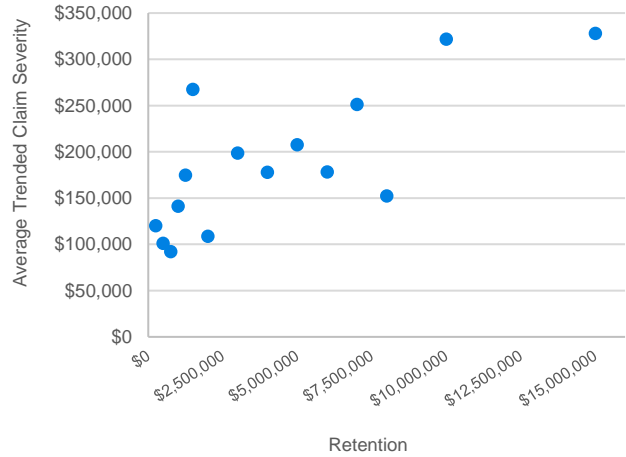
**FIGURE 9: PERCENTILES BOOKED**



## Retention

Figure 10 plots the current retention of each client along the x-axis and the average unlimited claim severity along the y-axis. It appears that the average claim size increases as the retention increases. One plausible reason for this is that the market will force clients with a history of large claims to retain more risk. Another possibility is that claims are more likely to settle at or near a client's retention, therefore increasing the average claim severity for clients with higher retentions.

**FIGURE 10: RETENTION**



Milliman is among the world's largest providers of actuarial and related products and services. The firm has consulting practices in life insurance and financial services, property & casualty insurance, healthcare, and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe.

[milliman.com](http://milliman.com)

### CONTACT

Tony Bloemer  
[tony.bloemer@milliman.com](mailto:tony.bloemer@milliman.com)

Rachel Soich  
[rachel.soich@milliman.com](mailto:rachel.soich@milliman.com)

Tim Vosicky  
[tim.vosicky@milliman.com](mailto:tim.vosicky@milliman.com)