

MILLIMAN REPORT

Analysis of a Modification to the Statutory Cap on Damages for Virginia Medical Professional Liability

Commissioned by Medical Society of Virginia, Virginia Hospital & Healthcare Association, and Virginia Health Care Association

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Introduction

Milliman, Inc. (“Milliman”) was retained by the Medical Society of Virginia (“MSV”), the Virginia Hospital & Healthcare Association (“VHHA”), and the Virginia Health Care Association (“VHCA”) to estimate the impact on physicians professional liability (“PPL”) and hospital professional liability (“HPL”) costs in Virginia due to a potential change to the tort environment. Specifically, this report estimates the impact of removing the current cap on total damages. Our analysis relies on Virginia-specific data provided by several medical professional liability (“MPL”) insurance carriers and hospitals and health systems (referred to as “hospitals” for the remainder of this report) in the state, as well as supplemental publicly available data as needed. This report presents the findings of our analysis. The Virginia-specific data comprises a total of 6,491 claims, \$843M of indemnity payments, and \$362M of allocated loss adjustment expense (“ALAE”)¹ payments for claims closed in 2004 through 2023.

Background on Damages in Medical Liability Cases

Currently, Virginia has a cap on total damages of \$2,650,000 (as of July 1, 2024). The cap has been in place for several years and has increased annually. While the cap on damages in Virginia is currently a total cap, damages are often broken out into two separate categories. Damages awarded to a patient injured from a medical event can be separated into economic and non-economic components². Economic damages compensate the injured party for the financial impact of the injury. These damages are typically directly quantifiable and include items such as lost wages and medical expenses. Non-economic damages are more difficult to quantify as there are no specific monetary amounts from which to indemnify. Non-economic damages include items such as pain and suffering, loss of consortium, etc. The sum of these damage components is the total amount awarded to the injured party.

The purpose of this analysis is to analyze the estimated impact should the total damage cap be eliminated. However, we have typically modeled economic and non-economic damages separately due to the differences in claim severity and distribution when the total damages are broken down into its components. Therefore, the remainder of this report considers the damage types separately while the current cap applies in total.

Scope of Milliman Analysis

The scope of Milliman’s analysis was to estimate the impact on MPL loss costs for Virginia physicians, hospitals, and nursing homes should the current cap on total damages be removed. Our analysis contemplates an increase in severity³ due to the removed cap on total damages, as well as a resulting increase in frequency⁴. We have not considered any other potential changes to the MPL tort environment in Virginia beyond the removal of the cap on total damages. Please note that changes in claim costs may not directly translate to changes in insurance rates/premiums since the latter is impacted by things other than costs, such as the investment markets, market competition, regulatory decisions, etc.

¹ Referred to in insurance company Annual Statements as defense and cost containment expense (“DCCE”). These costs typically include attorney costs as well as other defense costs such as court reporter fees, expert witness fees, etc.

² Punitive damages also exist but are rare and typically not a part of MPL cases.

³ “Severity” is an actuarial term referring to the average cost per claim.

⁴ “Frequency” is an actuarial term denoting the measure of claims relative to an underlying volume of exposure, such as premium or the number of physicians.

Our analysis considers the following:

- Policy limits of \$1M, \$2M, \$2.65M, \$3M, \$5M, \$10M or \$50M.
- Policy limits applicable on a per claim basis, including indemnity only (i.e., ALAE payments are unlimited).
- Low, central, and high projections based on the uncertainty in the frequency projections in particular.

In performing our analysis, we have reviewed data provided by many insurers and hospitals in Virginia and supplemented with publicly available data as needed.

Milliman Qualifications

The authors of this report are members of the Casualty Actuarial Society and the American Academy of actuaries (AAA) and meet the Qualification Standards of the AAA to render the actuarial opinion contained herein.

Summary of Results

Impact on Loss Costs

The table below and Summary Exhibit 1 display the estimated increase in overall loss costs for physicians and hospitals combined at several policy limits under the central estimate:

Table 1
Indicated Increase in Virginia Loss Costs
Under Removal of Cap on Total Damages

Policy Limits	Severity	Frequency	Total
\$1,000,000	0.9%	8.9%	9.9%
\$2,000,000	1.4	9.1	10.6
\$2,650,000	2.0	9.2	11.3
\$3,000,000	6.5	9.3	16.4
\$5,000,000	25.4	13.7	42.6
\$10,000,000	49.0	13.9	69.7
\$50,000,000	85.7	14.1	111.9

The results consider policy limits applied on a per claim basis to indemnity payments only. The policy limits do not consider any extra contractual obligations or excess of policy limits losses. We have assumed that the removal of the total damage caps is applicable to all claims with an occurrence date on or after January 1, 2026.

Summary Exhibit 1 also shows the estimated increase broken out by physicians and hospitals separately. Further, Summary Exhibits 2 and 3 show the estimated increase under the low and high scenarios, respectively.

Data Sources

We relied on various data sources in our analysis. The following provides a discussion of the most significant of these sources, including the most notable areas in which we have relied on them.

Data Sources

- 1) Historic claim-level detail provided by insurance carriers and hospitals in Virginia (“Virginia carriers and hospitals data”) – not publicly available
- 2) Annual statement data for large MPL writers across the country retrieved from S&P Global – publicly available with subscription (<https://www.capitaliq.spglobal.com/>)
- 3) National Practitioner Data Bank (“NPDB”) Public Use Data File – publicly available (<https://www.npdb.hrsa.gov/>)
- 4) Texas Department of Insurance Liability Insurance Closed Claim Reports (“Texas data”) – publicly available⁵ (<https://www.tdi.texas.gov/reports/report4.html>)
- 5) Association of American Medical Colleges (“AAMC”) *State Physician Workforce Data Report*, multiple editions – publicly available (<https://www.aamc.org/data-reports/workforce/report/state-physician-workforce-data-report>)
- 6) The American Medical Association’s (“AMA”) *Physician Characteristics and Distribution in the US*, multiple editions – publicly available via purchase (<https://www.ama-assn.org/>)

Virginia Carriers and Hospitals Data

As part of this engagement, Milliman received closed claim data from several MPL insurance carriers in the state, as well as closed claim data from hospitals and health systems. In total, Milliman received submissions from 15 Virginia hospitals and health systems and 4 insurance companies. The insurance companies are listed below.

- CURI
- Medical Mutual
- ProAssurance
- The Doctors Company

⁵ "Claims from closed years 2007 through 2012 are currently available on the Texas Department of Insurance website. We obtained earlier closed year data from the Texas Department of Insurance website when it was previously available for download."

We relied on this data to the extent possible within our analysis, including in deriving indications of the following model parameters (the overall structure of our model is discussed further in the following section of this report):

- Claims per occurrence;
- Claims closed with indemnity (“CWI”) ratio;
- Claim severities (indemnity, ALAE on CWI claims, and ALAE on CWE⁶ claims);
- Claim closure lags; and
- Relationship between paid indemnity and paid ALAE.

As is typical of claims databases for carriers and hospitals, the data received does not contain information on the economic and non-economic components of the indemnity payments⁷. Consequently, we rely on other data sources to estimate the decomposition of the indemnity payments into economic and non-economic components, as well as to estimate a possible increase in claim frequency, as discussed below.

Annual Statement Data

We have relied on annual statement data for MPL writers across the country to review the impact to closed with indemnity ratios when a cap is overturned. Annual statement data was retrieved from S&P Global.

National Practitioner Data Bank Public Use Data File

The NPDB is a “confidential information clearinghouse created by Congress to improve health care quality, protect the public, and reduce health care fraud and abuse.” The NPDB provides a public use data file⁸ with de-identified MPL claims paid on behalf of physicians and other individual health care providers (i.e., not facilities or corporate entities). The data file can be useful in assessing the number and rounded amount of paid claims against physicians and other individual health care providers by state. We have relied on the NPDB public use data file to analyze the distribution fit of claim-level indemnity severities for states with uncapped damages. We have also relied in part on data from the NPDB public use data file to determine the potential increase in frequency resulting from an increase in the cap on damages.

⁶ Claims closed with expense payment only.

⁷ The majority of indemnity payments are the result of settlements, in which a distinction between economic and non-economic damages is typically not specified.

⁸ The NPDB requests that we refer to this data file more completely as “National Practitioner Data Bank Public Use Data File, December 31, 2023, U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, Division of Practitioner Data Banks.”

Texas Liability Insurance Closed Claim Reports

Through 2012, Texas maintained a long-standing publicly available database of MPL claims. Although modified in 2013, for many years Texas Insurance Code Sections 38.153 to 38.163 required insurers to report closed MPL claims to the Texas Department of Insurance (“TDI”). A report was required to be filed if the covered indemnity payment was \$25,000 or more. Data fields available from the Texas data include the paid indemnity, paid defense costs, closed date, and number of additional defendants (by type of defendant) for each MPL claim in the database. We relied on this dataset to derive indications of the distributions of economic and non-economic indemnity and the relationship between them, the relationship between loss and ALAE, the average number of claims per occurrence, and the distribution of number of physicians versus hospital claims, given the number of total claims.

AAMC’s State Physician Workforce Data Report, Multiple Editions

The AAMC’s *State Physician Workforce Data Report* provides the number of active physicians by state and year, along with other information. We relied on this information together with the data from the NPDB to estimate relative claim frequency by state.

AMA’s Physician Characteristics and Distribution in the US, Multiple Editions

We relied on the AMA’s publication *Physician Characteristics and Distribution in the US* to estimate growth rates in the number of active physicians by state to estimate physician counts for years prior to 2014.

Discussion of Analysis

There are several ways in which the costs associated with MPL coverage will be impacted if the cap on total damages is removed:

- 1) Those claims that go to trial and for which a verdict is rendered will incur greater indemnity payments, primarily due to the removal of the cap on damages.
- 2) Many settlement amounts will also increase under these provisions. For many claimants the possibility of a verdict in excess of the current cap on damages will disincentivize them from accepting a settlement they otherwise might have accepted prior to the removal of the cap. Consequently, defendants in MPL claims may be inclined to make larger settlements so as to avoid potentially larger verdicts.
- 3) Given the larger indemnity payments, plaintiff attorneys may be financially motivated to incur additional expenses such as expert witnesses to support the amounts on which these payments are based. Hence MPL insurers will incur additional costs in defending against these arguments.
- 4) The number of claims reported can be expected to increase. This results from the greater incentive for plaintiffs and plaintiff attorneys to file claims, given the possibility of greater recovery (both for a plaintiff and their attorney).
- 5) The number of claims indemnified can also be expected to increase. Defendants in MPL claims may be more inclined to settle a claim resulting in an indemnity payment in order to mitigate the risk associated with a large verdict that could occur should the claim proceed to trial.

Items (1) through (3) above represent an increase in indemnity severity (i.e., average indemnity claim cost). Items (4) and (5) is an increase in reported or indemnified claim frequency.

Impact of the Removal of the Cap on Damages

As discussed in the Background section of this report, the cap on total damages has been in place in Virginia throughout the available history. Consequently, data is not available within Virginia with which to derive the financial impact of removing the cap directly. Our approach to estimating the impact of removing the cap on damages is by use of a simulation-based size of loss model intended to replicate MPL claims as they would be distributed if the cap on damages were removed⁹.

In developing this model, we have relied on data provided by Virginia carriers and hospitals and information from other resources when the requisite data was unavailable¹⁰. The data was used to define model input assumptions, each of which is discussed further below.

Claims per Occurrence

An occurrence of alleged medical professional liability can result in multiple claims and defendants¹¹. It is necessary to distinguish between claims and occurrences in our analysis as the statutory cap on damages applies per occurrence, while policy limits apply either per claim or per occurrence. We estimated a distribution of claims per occurrence using the Virginia carriers and hospitals data when a companion claim field was provided. A review of the Virginia data indicates that, on average, 1.30 claims are reported for each occurrence. This estimate was derived using the closed year information detailed on Exhibit C1 and summarized in Table 2.

Table 2
Claims Per Occurrence
Virginia Carriers and Hospitals Data – All Claims

Closed Years	Claims	Occurrences	Claims per Occurrence
2004-2023	6,491	5,031	1.29
2009-2023	5,581	4,273	1.31
2014-2023	4,299	3,336	1.29
2019-2023	1,946	1,470	1.32
2004-2029	4,957	3,894	1.27
Selected Claims per Occurrence			1.30

We have further assumed that the number of claims per occurrence follows a Zero-Truncated Poisson distribution¹² (with a mean of 1.30 claims per occurrence).

⁹ We discussed a similar model estimating the effect of the overturn of the cap on damages in Illinois in an article entitled "Illinois Tort Reform and the Cost of Medical Liability Claims," published in the July/August 2010 issue of *Contingencies*, the magazine of the American Academy of Actuaries.

¹⁰ These are discussed in the Data Sources segment of this report.

¹¹ An example of an occurrence resulting in multiple claims is a surgical injury in which multiple surgeons, the anesthesiologist, hospital, and perhaps others are named as liable.

¹² The goodness-of-fit of this distribution relative to other discrete distributions that might have been considered was confirmed in a similar manner to the goodness-of-fit tests discussed below for the distribution of indemnity per claim.

Distribution of Claim Type (Physicians versus Hospitals)

As the simulation model is intended to reflect the simulation of a single occurrence, the model must include a provision to distribute the number of claims to physicians versus hospitals. Data from Virginia carriers and physicians was grouped by occurrence when possible, and the number of physicians versus hospitals claims was summarized. This information is then used to estimate the distribution of number of physicians and hospitals associated with an occurrence. The distribution varies based on the number of total claims. Due to data limitations, the implied distribution is limited to claims within an insurance carrier or hospital dataset, and does not account for an occurrence that could have claims associated with other carriers or hospitals. The estimated distribution is shown on Exhibit C2.

Claim Disposition Ratios

Within the simulation model we must distinguish between closed with indemnity (“CWI”) and non-CWI claims. Thus, we must estimate the portion of claims that fall within each of these categories. We have varied this assumption for physicians and hospital claims. The physicians-specific indications for these percentages and our selections are shown on Exhibit C3 and are based Virginia carrier data and represent the expected distribution of claim type assuming that the cap on total damages is in place.

**Table 3
Claim Disposition Ratios
Physicians**

Closed Years	Portion CWI	Portion non-CWI
2004-2023	24%	76%
2009-2023	23	77
2014-2023	22	78
2019-2023	23	77
2004-2029	23	77
Selected	22%	78%

The hospital indication for these percentages and our selection are shown on Exhibit C4 and are based on Virginia hospital data. The CWI ratio for hospitals is higher than that for physicians, potentially because hospitals are more inclined to settle small claims.

Table 4
Claim Disposition Ratios
Hospitals

Closed Years	Portion CWI	Portion non-CWI
2004-2023	38%	62%
2009-2023	38	62
2014-2023	37	63
2019-2023	37	63
2004-2029	39	61
Selected	37%	63%

Indicated Indemnity and Defense Cost Severity

Using the Virginia carriers and hospitals data, we estimate indemnity severities for physicians and hospitals claims separately under the current Virginia tort environment as well as defense cost severity for all claims. In particular, we estimate each of the following:

- Indemnity severity;
- ALAE severity per CWI claim; and
- ALAE severity per CWE claim.

Indications and our selections for each of these capped at \$1,000,000 are shown on Exhibits C5 through C10 and summarized in the following tables:

Table 5
Projected Severity Per Claim (Indemnity Limited to \$1,000,000 per Claim)
Physicians

Cost Type	Projected Severity	Data and Indications
Indemnity per Physician CWI	\$620,000	Exhibit C5
ALAE per Physician CWI	150,000	Exhibit C7
ALAE per Physician CWE	70,000	Exhibit C9

Table 6
Projected Severity Per Claim (Indemnity Limited to \$1,000,000 per Claim)
Hospitals

Cost Type	Projected Severity	Data and Indications
Indemnity per Hospital CWI	\$500,000	Exhibit C6
ALAE per Hospital CWI	66,000	Exhibit C8
ALAE per Hospital CWE	45,000	Exhibit C10

As seen in the tables above, the selected severities are higher for physicians compared to hospitals. Although high severity claims against hospitals are more frequent, hospitals are also more likely to settle smaller claims, as previously mentioned in the CWI ratio discussion. While the average severity for hospitals is lower, the distribution around the mean is broader. This is discussed in more detail in a subsequent section of this report.

These indications are derived using Virginia data on a closed year basis. The indemnity indications have been capped at \$1,000,000 per claim in order to produce more stable severity indications and also to account for the cap on total damages which has increased annually for several years. Thus, our selections serve as estimates for the average severities in Virginia under current tort law considering a limit of \$1,000,000 per claim. In addition, as noted above, in estimating ALAE severity, we have derived separate indications for both CWI and CWE claims. We have observed that CWI claims have higher ALAE, on average, than CWE claims.

Note that each of the severities is adjusted for inflation to an assumed claims-made rate effective date of January 1, 2026. Our analysis of inflation rates and trending dates is shown in Exhibits C11 through C16. We have relied on Virginia closed claim data projecting that indemnity and ALAE severity (subject to \$1,000,000 per claim and the current cap on damages) will increase at 3.0% per annum and 3.0% per annum, respectively for physicians, and 6.0% per annum and 3.0% per annum, respectively for hospitals.

Distribution of Indemnity per Claim

In addition to estimating the component portions of indemnity severity, it is also necessary to estimate the manner in which individual indemnity payments will vary around the average indemnity severity. To do so, we have performed goodness of fit tests of various statistical distributions against each of the detailed claim datasets available. A goodness of fit test¹³ measures how well a given statistical distribution fits a given set of observations. Three of the most common goodness of fit tests (which we believe to be the most appropriate three for these circumstances) are the Kolmogorov-Smirnov, Anderson-Darling, and Chi-Square tests. A brief description of each test follows:

- Kolmogorov-Smirnov¹⁴: measures the greatest difference at all points (i.e., values in the dataset) between the statistical distribution and the empirical distribution of the dataset.
- Anderson-Darling¹⁵: measures the difference at various segmented points between the statistical distribution and the empirical distribution of the dataset, then weights the squared differences based on the expected distribution.
- Chi-Square¹⁶: apportions the data points by size into various segments and measures the difference between the number of data points in each segment and the number expected in each segment based on the statistical distribution.

¹³ See http://en.wikipedia.org/wiki/Goodness_of_fit for additional information on goodness of fit tests.

¹⁴ See http://en.wikipedia.org/wiki/Kolmogorov%E2%80%93Smirnov_test for additional information on the Kolmogorov-Smirnov test.

¹⁵ See http://en.wikipedia.org/wiki/Anderson%E2%80%93Darling_test for additional information on the Anderson-Darling test.

¹⁶ See http://en.wikipedia.org/wiki/Chi-Square_test for additional information on the Chi-Squared test.

Exhibit D1 summarizes the results of the Kolmogorov-Smirnov, Anderson-Darling, and Chi-Square goodness of fit tests for Virginia physicians and hospitals data. Additionally, the results of the tests based on the Texas closed claim data is also shown, broken out by economic versus non-economic losses. Finally, since the Virginia data is censored by the cap on total damages that has been in place, additional distribution fit results are shown for states that are geographically close to Virginia and have not had a recent cap on damages.

Note that a lower test statistic, as shown on this exhibit, indicates a better fit to the given statistical distribution. We considered all common statistical distributions in performing these tests, not only those shown on the exhibits. The exhibits display only the best-fitting three of all statistical distributions considered¹⁷.

While the Virginia results indicate the gamma distribution as a potential best fit, as mentioned above, it is important to consider the existing cap that censors the existing Virginia data. It is expected that the existing cap on total damages impacts the tail of the distribution (i.e., there are not as many large claims in the claims history as there would be if the cap did not exist). The purpose of the model is to simulate unlimited claim amounts, and therefore, we have given more weight to the uncapped datasets shown on Exhibit D1. We believe that the lognormal distribution best represents the distribution of indemnity per claim in total and in its components. The lognormal distribution is completely defined by two parameters:

- The mean of the distribution, which in our case is the expected unlimited indemnity per claim (i.e., indemnity severity).
- The coefficient of variation¹⁸ of the distribution, which determines how widely dispersed individual indemnity payments are around the mean.

The means of the lognormal distributions for each indemnity type were discussed in the section above. The coefficients of variation for economic and non-economic loss were estimated based on the Texas data. We use the coefficients of variation to model losses prior to the cap on non-economic damages. Therefore, we relied on Texas data from closed years 2000-2005 to estimate the coefficient of variation for each indemnity type.

The economic and non-economic loss coefficients of variation shown discussed above are used to define the distribution of physicians losses. Since the indicated coefficient of variation for hospitals is larger than that for physicians, as shown on Exhibits D2 and D4, we have used proportionately higher coefficients of variation for the distribution of hospital losses.

Relationship between ALAE and Indemnity

Exhibits E show the relationship between indemnity and ALAE based on the Virginia carriers and hospitals data. In general, we have observed that claims with greater indemnity payments tend to have greater ALAE. We tested both linear and log-linear¹⁹ relationships between indemnity and ALAE. Based on the results of

¹⁷ Distributions considered included the Lognormal, Gamma, Weibull, Exponential, Logistic, Student's *t*, Normal, Beta, and Pareto, among others.

¹⁸ The reader may be more familiar with the concept of standard deviation. The coefficient of variation is equal to the standard deviation of the given distribution divided by its mean.

¹⁹ A log-linear relationship between indemnity and ALAE means that there is a linear relationship between $\text{Ln}(\text{indemnity})$ and $\text{Ln}(\text{ALAE})$, where "Ln" is the natural logarithm.

our analysis, we selected a log-linear relationship with a slope of 0.354 for physicians and 0.365 for hospitals. In other words, we have assumed that ALAE increases less than one dollar for each dollar increase in indemnity, and that the rate of increase in ALAE declines as indemnity increases.

For example, the relationship between indemnity and ALAE on indemnified claims for physicians is as follows²⁰:

$$\text{Ln (ALAE)} = \text{Ln (Indemnity)} \times 0.354 + \text{Constant}$$

This is mathematically equivalent to²¹:

$$\text{ALAE} = \exp [\text{Ln (Indemnity)} \times 0.354 + \text{Constant}]$$

The constant is calculated so that the average ALAE resulting from the model is equal to the indication discussed above.

We rely on an analogous equation to the above for ALAE on non-CWI claims. However, for these claims, we model a theoretical indemnity intended to estimate the payment that would have resulted if the claim had closed with indemnity payment. This theoretical indemnity is based on the same parameters as the CWI claims themselves. Hence to project the ALAE on non-CWI claims we rely on the same selected slope of 0.354 or 0.365 but apply it to the natural logarithm of the theoretical indemnity. The constant differs in the equation so that the overall average ALAE on non-CWI claims is equal to the amount estimated for these claims. Modeling a non-CWI severity is necessary for this analysis because even if a claim does not close with an indemnity payment, there may still be an increase in ALAE costs due to a higher incentive to defend the claim when there is a potential for a higher payout.

Economic and Non-Economic Loss Severities

Our model separately projects economic and non-economic loss. To do so, we selected a ratio between the economic and non-economic severities based on the Texas data, as shown on Exhibit F1. Note that we do not rely on the Texas severities themselves but rely on the ratio between them applied to Virginia experience. We have relied primarily on the more recent closed data as Texas's \$250,000 cap on non-economic damages took effect for claims reported on or after September 1, 2003. Hence, we believe the indicated ratios from the more recent closed years are more appropriate for use in apportioning Virginia severities under the current cap on damages.

Probabilities of Indemnity Types on CWI Claims

We have observed that economic and non-economic losses are not present in every claim payment (as evidenced by the Texas data, as this level of detail was not available from the Virginia data). Therefore, we relied on the Texas data to estimate the probability of economic loss only, non-economic loss only, or both indemnity types occurring. The results of this analysis are detailed in Table 7 and Exhibit F2.

²⁰ Here, the mathematical expression "Ln" refers to the natural logarithm function.

²¹ The mathematical expression "exp" refers to taking the exponent of the expression within the following braces, in which the base of the exponent is the natural number "e."

Table 7
Probability of Indemnity Type on CWI Claims
Based on Texas Department of Insurance Data

Indemnity Type	Probability
Economic Damages Only	3%
Non-Economic Damages Only	19%
Both Economic and Non-Economic Damages	78%

Correlation between Economic and Non-Economic Indemnity Payments

We have observed that claims with greater economic indemnity payments tend to have greater non-economic indemnity payments as well. Exhibit F3 provides various indications of this relationship using various time periods within the Texas data for non-wrongful death claims. We tested both linear and log-linear relationships between the economic and non-economic indemnity. Based on these indications, we selected a log-linear relationship with a correlation of 0.60.

Note that while our analysis considers correlation between economic and non-economic losses on a claim level basis, it does not consider correlation across claims associated with the same occurrence. While there is likely a statistical relationship between claims on a related occurrence, this would have greatly complicated the model and therefore we have not considered the relationship for simplicity.

The Simulation Model

We created a simulation model incorporating each of the assumptions discussed above. The model simulated 1,000,000 occurrences of medical professional liability, including the number of claims for each occurrence. For each claim, the model simulated whether the claim is associated with a physician or a hospital, and whether the claim was closed with indemnity or without indemnity. If the claim was simulated to close with indemnity, the model in turn simulated whether it had only economic damages, non-economic damages, or both types of indemnity. Given this information, the model simulated the economic and non-economic indemnity.

For each simulated occurrence, the total indemnity was capped at \$2.65M under the current Virginia tort environment. ALAE was projected based on both the capped losses and uncapped losses, according to the formula discussed above. Policy limits are applied under the various scenarios discussed previously. The mean indemnity (subject to the given policy limit) and ALAE per occurrence were calculated from the 1,000,000 simulated values under the capped and uncapped scenarios, as shown on Exhibit A1.

Model Validation

We have validated the model by performing several reasonability checks, some of which we will discuss further in this section. Within the modeling process, we calibrate the model such that the average indemnity and ALAE from simulated occurrences resembles the current average experience in Virginia under \$1,000,000 policy limits. The distribution of modeled claim severities capped at \$1M were also compared to the empirical data, also capped at \$1M. Finally, sensitivity tests were performed on key parameters to ensure that the changes in output are consistent with the expected change to the input variables.

Impact Due to Increase in Claim Frequency

In addition to an increase in indemnity and defense cost severity, we also believe that the removal of the cap on total damages would result in an increase in the number of filed and indemnified claims. Without a cap on damages, potential claims will have a higher expected net financial value when considering damages, likelihood of a plaintiff verdict, and litigation costs. With a cap on damages in place, it may not be financially worthwhile to file a claim, but as the financial incentive increases with a higher cap, a plaintiff and their attorney may be more likely to file the claim.

The increase in frequency that results from a change to the statutory damage cap has been demonstrated empirically by the experience of other states. In particular, an increase in reported claim frequency when a cap on damages has been overturned and decreases in claim frequency in states that have enacted caps on damages both demonstrate the significant effect on frequency that a cap can have (see Exhibit B1).

Table 8
Projected Increase in Claim Frequency by Scenario
Under Removal of Cap on Total Damages

Low	Central	High
0.0%	5.0%	10.0%

Exhibit B2 estimates the empirical impact in Oregon of the increase in claim frequency after Oregon's cap on damages was overturned in 1999. Columns (2) and (3) on this exhibit provide the claim frequency in Oregon and countrywide (excluding states impacted by tort reform – Florida, Mississippi, Nevada, Oklahoma, South Carolina, Texas, and Oregon)²². Columns (4) and (5) normalize each of these frequencies to 1999 so that the change in frequency in Oregon since the overturn of the cap on damages can be compared against the experience of other states not materially impacted by the enactment or overturn of tort reform during the corresponding time period. This is shown in column (6).

Note that, for the first two years following the overturn, claim frequency in Oregon decreased relative to the countrywide frequency. We believe this is because the claim data aggregated by the NPDB is collected on a closed year basis. Consequently, there is a lag between an increase in claims reported due to the overturn (which we believe would have occurred beginning as early as 1999, subsequent to the overturn) and their subsequent closing (which is not manifest in the data until 2002). Beginning in 2002 claim frequency in Oregon shows a consistent increase relative to the countrywide norm.

Exhibit B3 is similar to Exhibit B2 but provides indications of the effect of the enactment of a cap on damages (rather than its overturn) in the six states identified as "tort reform" states for purposes of this discussion. Therefore, an additional step on Exhibit B3 is required to convert the empirical indications of the impact of enacting a cap on damages to indications of overturning a cap on damages (which we have assumed is the mathematical inverse). Several indications are presented, which we reference in projecting the frequency increase due to the increase in the cap on damages. Exhibit B5, which shows the actual

²² Calculated as the number of claims closed with indemnity from the NPDB public use data file divided by the number of active physicians from successive editions of the AAMC's *State Physician Workforce Data Report* (used to estimate earlier years of active physician counts) or the AMA's *Physician Characteristics and Distribution in the US*.

frequency by calendar year for the tort reform states, is referenced by Exhibit B3, which shows only the relative frequency beginning with the base year.

In addition to a potential increase in reported claim frequency, we also estimate that removing the cap on total damages would result in an increase in the ratio of claims closed with an indemnity payment. With the potential for a larger verdict should a claim proceed to trial, there may be a higher propensity to settle claims with an indemnity payment to mitigate that risk. In several states where existing caps were overturned, an increase in the CWI ratio is observed starting a few years after the cap overturn. Exhibits B6 through B9 display the CWI ratios by closed year as well as an average before and after the cap overturn. These exhibits are based on publicly available insurance company annual statement data retrieved from S&P Global. Since the Schedule P data used includes countrywide results, the companies selected are writers with a majority portion of business in the given state. The presented CWI ratios are based on closed claim data. However, because changes to a statutory cap often apply to claims with an occurrence date after the cap is overturned, the observed impact is delayed by several years. The average CWI ratio without a cap on damages is calculated starting three years after the overturn to account for this lag.

We also estimate that the impact on closed with indemnity ratios varies by policy limits. The table below displays the selected percentage increase to the modeled closed with indemnity ratio (on a multiplicative basis) for the low, central, and high scenarios.

Table 9
Projected Increase Closed with Indemnity Ratio
Under Removal of Cap on Total Damages

Policy Limits	Low	Central	High
\$3M and below	0%	5%	10%
\$5M and above	0%	10%	20%

While we have classified the increase in closed with indemnity ratio as an impact to frequency, this change was incorporated within the simulation model.

Nursing Home Commentary

As part of this engagement, Milliman also received closed claim data from several nursing home or long-term care facilities (referred to as “nursing homes” for the remainder of this report). Milliman received submissions from 4 nursing homes. Each contributor is listed below.

- American Healthcare
- Commonwealth Care
- Saber Healthcare
- Virginia Health Services

Additionally, some carriers or hospitals mentioned above included data on claims related to a nursing home. Table 10 below summarizes the closed claim counts from 2004 through 2023 related to nursing homes data versus claims data related to hospitals or physicians.

Table 9
Total Claim Counts by Claim Type

	Nursing Homes	Hospitals	Physicians
Closed With Indemnity	133	1,206	924
Closed With Expense	147	1,992	2,954

Milliman reviewed the nursing home data using a similar approach to the physicians and hospitals model parameters. Milliman summarized closed-year indications of the nursing home specific CWI ratio, loss severity limited to \$1M per claim, ALAE severity for CWI claims, and ALAE severity for CWE claims. Exhibits G1 through G4 show these results for nursing homes, physicians, and hospitals. It is important to note that the charts shown on these exhibits all share the same scale, and therefore, the volatility of the year-over-year indications can be compared across charts. The analysis reveals that the nursing home data exhibits greater volatility across closed years.

Exhibit G5 compares the cumulative distribution of loss severities for nursing homes, hospitals, and physicians. As the chart shows, nursing homes claims tend to be lower in severity. For example, 96% of nursing home claims are less than or equal to \$500,000, while only 83% of hospitals and 69% of physicians claims are less than or equal to \$500,000.

Given the limited volume of nursing home data and the heightened volatility of indications, Milliman was unable to create a model specifically for nursing homes claims to estimate the impact of a potential change to the tort environment. However, considering that nursing home claims are generally smaller than those associated with physicians and hospitals, Milliman believes that removing the current cap on total damages will have a comparatively lower impact on loss costs for nursing homes than the results presented in this report for physicians and hospitals.

Uncertainty

Any change to the liability system as it currently exists in Virginia is inherently subject to significant uncertainty. MPL costs in Virginia with no cap on damages will ultimately depend upon the societal attitudes toward litigation, insurer actions following any ruling, and other future uncertainties such as the impact of inflation, economic conditions, and changes to health care coverage.

The results of our analysis are additionally uncertain due to the somewhat limited availability of data to evaluate the impact of the various provisions. In specific instances, credible Virginia-specific data was unavailable for model parameterization. Data for our analysis was requisitely based in part on data from other states. Furthermore, though many states have implemented various tort reforms over the past 45 years, limited empirical data is available on the effect of increasing or overturning a damage cap. The effect of increasing or overturning a damage cap is both a function of the existing tort environment and the change to the tort environment. Therefore, a change to a damage cap in one state cannot be relied upon directly in order to estimate the projected impact in another state.

In estimating the impact of eliminating the cap on total damages, we requisitely modeled future MPL claim costs. Any model is a simplification of reality and cannot reasonably contemplate all possible factors and influences of future behaviors of claimants, health care providers, attorneys, juries, etc.

As discussed in this report, the number of indemnity payments is estimated to increase if the cap on total damages is eliminated. Both patients and plaintiff attorneys will have additional financial incentive to file a claim alleging negligence in a medical environment. We expect such incentives will increase the number of filed claims relative to the current environment. However, the impact on the number of filed claims is highly uncertain and the impact on resulting related payments is even more uncertain as it is magnified by the corresponding uncertainty in severity. The impacts could be higher or lower than we have estimated herein.

The actions of MPL defendants may serve to limit the financial impact of increasing the cap on damages. Specifically, the behavior of MPL defendants will influence whether a claim is settled. This additional layer of reaction to the possible overturn of the cap on damages adds additional uncertainty to the resultant financial effect.

We have relied on data and information provided by MSV, VHHA, VHCA, and others. We have not audited or independently verified this data and information. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete. In that event, the results of our analysis may not be suitable for the intended purpose. We have performed a limited review of the data used directly in our analysis for reasonableness and consistency. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or relationships that are materially inconsistent. Such a review is beyond the scope of our assignment.

Public Disclosure of Results

In the event that MSV, VHHA, and VHCA wishes to disclose the results of Milliman's work publicly, the following conditions shall apply:

MSV, VHHA, and VHCA may distribute or submit for publication the final, non-draft version of reports which, by mutual written agreement, are intended for general public distribution. MSV, VHHA, and VHCA shall not edit, modify, summarize, abstract or otherwise change the content of any final report and any distribution must include the entire report.

Professional reviewers engaged by MSV, VHHA, and VHCA or independent journals to provide peer review of Milliman's work must agree to terms of confidentiality which are reasonable and customary in the industry. Any piece of Milliman draft work to be provided to peer reviewers must receive prior Milliman approval, and Milliman shall not unreasonably withhold such approval. The copyright to all report content shall remain with Milliman unless otherwise agreed. Press releases mentioning such reports may be issued by Milliman or MSV, VHHA, and VHCA upon mutual agreement of MSV, VHHA, and VHCA and Milliman to their content. Mentions of Milliman work will provide citations that will allow the reader to obtain the full report.

Closing

We appreciate the opportunity to perform this analysis. If you have any questions or comments, please let us know.

Respectfully submitted,



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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Summary of Estimated Impact of Statutory Cap Modification to Current Virginia Tort Environment
Policy Limit Applied Per Claim, Indemnity Only Included in Limit
Central Estimate

Policy Limit	Physicians & Hospital / Health Systems Combined			Physicians Only			Hospital / Health Systems Only		
	Severity Impact ¹	Frequency Impact ²	Total Impact ³	Severity Impact ¹	Frequency Impact ²	Total Impact ³	Severity Impact ¹	Frequency Impact ²	Total Impact ³
\$1M	0.9%	8.9%	9.9%	1.3%	8.5%	9.9%	0.7%	9.1%	9.9%
\$2M	1.4%	9.1%	10.6%	1.8%	8.8%	10.7%	1.0%	9.4%	10.5%
\$2.65M	2.0%	9.2%	11.3%	2.6%	8.9%	11.7%	1.5%	9.5%	11.1%
\$3M	6.5%	9.3%	16.4%	6.7%	8.9%	16.1%	6.5%	9.5%	16.6%
\$5M	25.4%	13.7%	42.6%	22.6%	13.1%	38.7%	27.5%	14.2%	45.6%
\$10M	49.0%	13.9%	69.7%	40.4%	13.3%	59.1%	55.3%	14.3%	77.5%
\$50M	85.7%	14.1%	111.9%	60.7%	13.5%	82.4%	104.1%	14.4%	133.6%

¹ Source: Exhibit A1

² Source: Exhibit B1, Central Selected Impact

³ Equal to (1 + Severity Impact) x (1 + Frequency Impact) -1. Represents the average impact per reported occurrence.

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Summary of Estimated Impact of Statutory Cap Modification to Current Virginia Tort Environment
Policy Limit Applied Per Claim, Indemnity Only Included in Limit
Low Estimate

Policy Limit	Physicians & Hospital / Health Systems Combined			Physicians Only			Hospital / Health Systems Only		
	Severity Impact ¹	Frequency Impact ²	Total Impact ³	Severity Impact ¹	Frequency Impact ²	Total Impact ³	Severity Impact ¹	Frequency Impact ²	Total Impact ³
\$1M	0.9%	0.0%	0.9%	1.3%	0.0%	1.3%	0.7%	0.0%	0.7%
\$2M	1.4%	0.0%	1.4%	1.8%	0.0%	1.8%	1.0%	0.0%	1.0%
\$2.65M	2.0%	0.0%	2.0%	2.6%	0.0%	2.6%	1.5%	0.0%	1.5%
\$3M	6.5%	0.0%	6.5%	6.7%	0.0%	6.7%	6.5%	0.0%	6.5%
\$5M	25.4%	0.0%	25.4%	22.6%	0.0%	22.6%	27.5%	0.0%	27.5%
\$10M	49.0%	0.0%	49.0%	40.4%	0.0%	40.4%	55.3%	0.0%	55.3%
\$50M	85.7%	0.0%	85.7%	60.7%	0.0%	60.7%	104.1%	0.0%	104.1%

¹ Source: Exhibit A1

² Source: Exhibit B1, Low Selected Impact

³ Equal to (1 + Severity Impact) x (1 + Frequency Impact) -1. Represents the average impact per reported occurrence.

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Summary of Estimated Impact of Statutory Cap Modification to Current Virginia Tort Environment
Policy Limit Applied Per Claim, Indemnity Only Included in Limit
High Estimate

Policy Limit	Physicians & Hospital / Health Systems Combined			Physicians Only			Hospital / Health Systems Only		
	Severity Impact ¹	Frequency Impact ²	Total Impact ³	Severity Impact ¹	Frequency Impact ²	Total Impact ³	Severity Impact ¹	Frequency Impact ²	Total Impact ³
\$1M	0.9%	18.2%	19.3%	1.3%	17.5%	18.9%	0.7%	18.7%	19.6%
\$2M	1.4%	18.7%	20.4%	1.8%	18.0%	20.2%	1.0%	19.3%	20.5%
\$2.65M	2.0%	18.8%	21.2%	2.6%	18.2%	21.2%	1.5%	19.4%	21.2%
\$3M	6.5%	19.0%	26.7%	6.7%	18.3%	26.1%	6.5%	19.4%	27.2%
\$5M	25.4%	28.3%	60.9%	22.6%	27.2%	56.0%	27.5%	29.1%	64.5%
\$10M	49.0%	28.7%	91.7%	40.4%	27.7%	79.2%	55.3%	29.3%	100.9%
\$50M	85.7%	29.1%	139.7%	60.7%	28.2%	106.2%	104.1%	29.5%	164.4%

¹ Source: Exhibit A1

² Source: Exhibit B1, High Selected Impact

³ Equal to (1 + Severity Impact) x (1 + Frequency Impact) -1. Represents the average impact per reported occurrence.

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Indicated Increase in Severity
Policy Limit Applied Per Claim, Indemnity Only Included in Limit

Component ¹	(1)	(2)	(3) = (2) / (1)	(4)	(5)	(6) = (5) / (4)	(7)	(8)	(9) = (8) / (7)	(10)	(11)	(12) = (11) / (10)	(13)	(14)	(15) = (14) / (13)	(16)	(17)	(18) = (17) / (16)	(19)	(20)	(21) = (20) / (19)
	\$1M Policy Limit			\$2M Policy Limit			\$2.65M Policy Limit			\$3M Policy Limit			\$5M Policy Limit			\$10M Policy Limit			\$50M Policy Limit		
	Current	Proposed	Impact	Current	Proposed	Impact	Current	Proposed	Impact	Current	Proposed	Impact	Current	Proposed	Impact	Current	Proposed	Impact	Current	Proposed	Impact
Combined Indemnity	201,000	202,700	0.8%	292,300	296,300	1.4%	331,300	337,900	2.0%	331,300	356,500	7.6%	331,300	433,800	30.9%	331,300	532,000	60.6%	331,300	687,700	107.6%
Combined ALAE	88,000	88,900	1.0%	96,600	98,000	1.4%	99,200	101,000	1.8%	99,200	102,100	2.9%	99,200	106,000	6.9%	99,200	109,300	10.2%	99,200	111,900	12.8%
Combined Indemnity & ALAE	289,000	291,600	0.9%	388,900	394,300	1.4%	430,500	438,900	2.0%	430,500	458,600	6.5%	430,500	539,800	25.4%	430,500	641,300	49.0%	430,500	799,600	85.7%
Physician Indemnity	77,300	78,300	1.3%	112,100	114,200	1.9%	126,100	129,600	2.8%	126,100	136,400	8.2%	126,100	163,300	29.5%	126,100	194,100	53.9%	126,100	230,000	82.4%
Hospital / Health System Indemnity	123,700	124,500	0.6%	180,200	182,000	1.0%	205,100	208,200	1.5%	205,100	220,100	7.3%	205,100	270,500	31.9%	205,100	338,000	64.8%	205,100	457,700	123.2%
Physician ALAE	49,500	50,100	1.2%	54,400	55,300	1.7%	55,800	57,000	2.2%	55,800	57,600	3.2%	55,800	59,700	7.0%	55,800	61,300	9.9%	55,800	62,400	11.8%
Hospital ALAE	38,500	38,900	1.0%	42,200	42,700	1.2%	43,400	44,000	1.4%	43,400	44,500	2.5%	43,400	46,300	6.7%	43,400	48,000	10.6%	43,400	49,500	14.1%
Physician Indemnity & ALAE	126,800	128,400	1.3%	166,500	169,500	1.8%	181,900	186,600	2.6%	181,900	194,000	6.7%	181,900	223,000	22.6%	181,900	255,400	40.4%	181,900	292,400	60.7%
Hospital / Health System Indemnity & ALAE	162,200	163,400	0.7%	222,400	224,700	1.0%	248,500	252,200	1.5%	248,500	264,600	6.5%	248,500	316,800	27.5%	248,500	386,000	55.3%	248,500	507,200	104.1%

¹ Displayed indemnity and ALAE amounts represent the mean per reported occurrence.

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Selected Impact on Frequency

		Reference	Value
(1)	Impact of Cap on Damages on Frequency Empirical Effect of Increasing Cap -- Based on Oregon	Exhibit B2	32.5%
(2)	Empirical Effect of Increasing Cap -- Based on Tort Reform States	Exhibit B3	40.0%
(3)	Selected Impact of Increasing Cap on Frequency ¹	= [(1) + (2) × 6] / 7	38.9%
(4)	Estimated Impact on Loss Costs of Additional Claims Under Increase in Cap ²	= (3) / 2	19.5%
		<u>Low</u>	<u>Central</u>
(5)	Adjustment Factor Specific to Virginia Environment ³	0.0%	25.0%
(6)	Selected Impact on Loss Costs of Additional Reported Claims⁴	0.0%	5.0%
(7)	Selected Impact on CWI Ratio - Policy Limits \$3M and Below⁵	0.0%	5.0%
(8)	Selected Impact on CWI Ratio - Policy Limits Greater than \$3M⁵	0.0%	10.0%

¹ Weights based on number of states in each group.

² We have assumed that the additional claims would incur half as much cost as others due to these claims presumably stemming largely from less meritorious claims.

³ Factor judgementally selected in order to reduce the indications above since existing cap is higher than states shown.

⁴ Equal to (4) x (5), rounded to nearest 2.5%

⁵ Judgementally selected based on Exhibits B6 through B9.

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Impact on Frequency - Based on Repeal State

(1) Calendar Year	(2) Frequency		(4) Relative Frequency		(6) Change in Oregon Relative to Countrywide ¹
	Oregon	Countrywide ¹	Oregon	Countrywide ¹	
1999	1.14%	2.10%	1.00	1.00	0.0%
2000	1.07%	2.08%	0.94	0.99	-5.4%
2001	1.10%	2.18%	0.96	1.04	-7.8%
2002	1.33%	1.95%	1.17	0.93	25.4%
2003	1.46%	1.86%	1.28	0.89	44.6%
2004	1.25%	1.74%	1.10	0.83	32.4%
2005	0.87%	1.66%	0.76	0.79	-3.5%
2006	0.98%	1.51%	0.86	0.72	19.7%
2007	0.97%	1.34%	0.85	0.64	32.4%
2008	1.03%	1.27%	0.91	0.61	49.4%
2009	0.86%	1.23%	0.75	0.59	28.3%
2010	0.92%	1.14%	0.80	0.54	48.3%
2011	0.74%	1.12%	0.65	0.53	21.9%
2012	0.86%	1.05%	0.76	0.50	51.6%
2013	0.56%	1.07%	0.49	0.51	-4.3%
2014	0.70%	1.01%	0.61	0.48	27.9%
2015	0.75%	0.96%	0.65	0.46	42.8%
			Average, 2002 and Subsequent		29.8%
			Average, 2002 to 2010		30.8%
			Average, 2002 to 2004		34.1%
			Average, 2002 to 2006		23.7%
				Indicated Difference in CWI Frequency Due to Only BI Damage Cap Overturn Relative to Countrywide:	30.0%
				Indicated Increase if Overturn had been Applicable to All Claims (i.e., Including WD claims)²:	40.5%
				Selected Increase if Overturn had been Applicable to All Claims³:	32.5%

¹ Excluding tort reform impacted states: FL, MS, NV, OK, SC, TX, & OR.

² Calculated as 30.0% / [(1 + 30.0%) x 80.0% - 30.0%], where 80.0% is the estimated portion of all CWI claims that are bodily injury (after overturn).

³ Judgmentally reduced under assumption that increase in wrongful death claims under cap increase is less likely.

Note: Claims are obtained from the NPDB's public use data file and counts of active physicians from the AMA's *Physician Characteristics and Distribution in the US*, multiple editions.

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Impact on Frequency - Based on Overturn States
Relative Frequency, Damage Cap Year as the Base Year¹

(1)	(2)	(3) = (2) / (15) - 1	(4)	(5) = (4) / (14) - 1	(6)	(7) = (6) / (16) - 1	(8)	(9) = (8) / (16) - 1	(10)	(11) = (10) / (17) - 1	(12)	(13) = (12) / (15) - 1	(14)	(15)	(16)	(17)	
Calendar Year	Tort Reform States												Countrywide ² - Varying Start Years				
	FL	Change in FL Relative to Countrywide ²	MS	Change in MS Relative to Countrywide ²	NV	Change in NV Relative to Countrywide ²	OK	Change in OK Relative to Countrywide ²	SC	Change in SC Relative to Countrywide ²	TX	Change in TX Relative to Countrywide ²	2002	2003	2004	2005	
2001																	
2002			1.00	0.0%									1.00	0.96	1.00		
2003	1.00	0.0%	0.69	-27.6%							1.00	0.0%	0.89	0.94	1.00		
2004	0.87	-6.7%	0.62	-30.2%	1.00	0.0%	1.00	0.0%			0.98	4.7%	0.85	0.89	0.95	1.00	
2005	0.81	-8.9%	0.55	-35.2%	1.03	8.7%	1.07	13.0%	1.00	0.0%	0.92	3.1%	0.78	0.89	0.95	1.00	
2006	0.63	-22.5%	0.65	-15.7%	0.81	-6.6%	0.79	-8.9%	1.04	13.6%	0.57	-29.9%	0.63	0.81	0.87	0.91	
2007	0.59	-18.8%	0.59	-15.3%	0.77	-0.2%	0.97	25.4%	1.16	42.7%	0.48	-33.1%	0.69	0.72	0.77	0.81	
2008	0.63	-7.4%	0.50	-23.3%	0.68	-7.0%	0.85	15.8%	0.83	8.4%	0.40	-41.2%	0.65	0.68	0.73	0.77	
2009	0.58	-12.9%	0.46	-27.0%	0.70	-0.8%	0.92	30.3%	0.76	1.9%	0.40	-39.9%	0.63	0.66	0.71	0.74	
2010	0.52	-14.3%	0.42	-28.7%	0.47	-27.2%	0.66	1.1%	0.64	-7.2%	0.38	-37.0%	0.58	0.61	0.65	0.69	
2011	0.48	-20.3%	0.43	-25.8%	0.52	-19.2%	0.68	5.9%	0.59	-13.0%	0.33	-45.8%	0.57	0.60	0.64	0.67	
2012	0.43	-23.0%	0.57	5.2%	0.44	-26.6%	0.54	-10.4%	0.70	10.5%	0.33	-41.4%	0.54	0.56	0.60	0.63	
2013	0.45	-22.6%	0.37	-33.0%	0.49	-21.0%	0.75	21.7%	0.68	5.2%	0.30	-48.2%	0.55	0.58	0.62	0.65	
2014	0.47	-13.4%	0.44	-14.5%	0.41	-29.5%	0.64	10.6%	0.59	-2.6%	0.28	-47.6%	0.52	0.54	0.58	0.61	
2015	0.49	-5.9%	0.26	-46.3%	0.46	-15.6%	0.55	-0.5%	0.60	4.0%	0.24	-52.5%	0.49	0.52	0.55	0.58	
All Year Average ³		-16.1%		-23.6%		-16.3%		11.1%		0.9%		-41.7%					
Three-Year Average ³		-16.2%		-22.1%		-2.7%		23.8%		1.0%		-34.7%					
Five-Year Average ³		-15.2%		-23.3%		-10.9%		15.7%		0.1%		-36.2%					
Indicated Impact of Enacting Damage Cap		-16.1%		-23.6%		-16.3%		11.1%		0.9%		-41.7%					
Indicated Impact of Overturning Damage Cap ⁴		19.2%		30.9%		19.5%		-10.0%		-0.9%		71.4%					
Weight ⁵		45%		5%		3%		6%		5%		36%					
Weighted Average Impact of Overturn ⁶		36.3%															
Selected Impact of Overturn		40.0%															

¹ Based on the frequencies calculated on Exhibit B5, normalized to the year of tort reform.

² Excluding tort reform impacted states: FL, MS, NV, OK, SC, TX, & OR.

³ All averages begin three years subsequent to the Base Year.

⁴ = [1 / (1 + Indicated Impact of Enacting Damage Cap)] - 1

⁵ Weights are based on the number of claims closed with indemnity in the base year (i.e., year in which the cap was enacted).

⁶ Weighted average of Indicated Impact of Overturning Damage Cap for each Tort Reform State, where the weights are as given above.

Note: Claims are obtained from the NPDB's public use data file and counts of active physicians from the AMA's *Physician Characteristics and Distribution in the US*, multiple editions.

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Selected Portion of Wrongful Death CWI Claims

	(1)	(2)	(3)	(4) = (3) / (2)	(4)	(5)	(6) = (5) / (4)
Calendar Year	Countrywide				Oregon		
	Total	Deaths	Portion Death		Total	Deaths	Portion Death
2004	13,313	3,918	29.4%		112	25	22.3%
2005	12,878	4,047	31.4%		80	14	17.5%
2006	11,525	3,585	31.1%		94	24	25.5%
2007	10,593	3,436	32.4%		95	27	28.4%
2008	10,160	3,279	32.3%		105	24	22.9%
2009	9,929	3,222	32.5%		89	20	22.5%
2010	9,274	3,032	32.7%		97	24	24.7%
2011	9,099	2,852	31.3%		80	24	30.0%
2012	8,686	2,698	31.1%		95	14	14.7%
2013	8,962	2,755	30.7%		63	12	19.0%
2014	8,643	2,706	31.3%		81	18	22.2%
2015	8,403	2,620	31.2%		88	17	19.3%
2016	7,818	2,414	30.9%		70	13	18.6%
2017	8,263	2,470	29.9%		92	21	22.8%
2018	7,950	2,485	31.3%		73	16	21.9%
2019	7,896	2,351	29.8%		63	8	12.7%
2020	6,713	2,013	30.0%		54	7	13.0%
2021	5,869	1,869	31.8%		53	15	28.3%
2022	7,301	2,256	30.9%		68	11	16.2%
2023	8,046	2,565	31.9%		103	13	12.6%
Total	181,321	56,573	31.2%		1,655	347	21.0%
Last 5	35,825	11,054	30.9%		341	54	15.8%
						Selected:	20.0%

Note: Based on data from the NPDB's public use data file.

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MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages

Historical Frequency - Defined as Closed With Indemnity Claims per Physician¹

Calendar Year	Frequency by State						Countrywide ²
	FL	MS	NV	OK	SC	TX	
2001	3.28%	2.99%	2.34%	2.12%	1.61%	2.84%	2.18%
2002	3.11%	3.27%	3.10%	1.90%	1.46%	2.57%	1.95%
2003	3.26%	2.26%	2.63%	2.08%	1.50%	2.54%	1.86%
2004	2.85%	2.04%	2.32%	2.48%	1.32%	2.49%	1.74%
2005	2.64%	1.80%	2.40%	2.66%	1.52%	2.33%	1.66%
2006	2.05%	2.14%	1.88%	1.96%	1.57%	1.45%	1.51%
2007	1.91%	1.91%	1.79%	2.40%	1.76%	1.23%	1.34%
2008	2.06%	1.64%	1.58%	2.10%	1.27%	1.02%	1.27%
2009	1.88%	1.51%	1.63%	2.28%	1.15%	1.01%	1.23%
2010	1.70%	1.36%	1.10%	1.63%	0.97%	0.98%	1.14%
2011	1.56%	1.39%	1.20%	1.68%	0.89%	0.83%	1.12%
2012	1.41%	1.85%	1.03%	1.34%	1.06%	0.84%	1.05%
2013	1.46%	1.21%	1.13%	1.86%	1.04%	0.76%	1.07%
2014	1.53%	1.45%	0.95%	1.58%	0.90%	0.72%	1.01%
2015	1.58%	0.87%	1.08%	1.36%	0.92%	0.62%	0.96%
2016	1.41%	0.95%	1.04%	1.19%	0.89%	0.63%	0.87%
2017	1.63%	0.89%	1.20%	1.36%	1.00%	0.68%	0.89%
2018	1.70%	0.75%	0.88%	1.39%	1.01%	0.62%	0.83%
2019	1.57%	0.86%	0.83%	1.56%	0.96%	0.59%	0.82%
2020	1.33%	0.65%	0.88%	1.74%	0.65%	0.53%	0.68%
2021	1.23%	0.73%	0.82%	1.24%	0.80%	0.54%	0.56%
2022	1.51%	1.02%	1.08%	1.30%	0.77%	0.59%	0.69%
2023	1.48%	0.92%	1.41%	1.37%	0.99%	0.62%	0.76%

¹ Claims are obtained from the NPDB's public use data file and counts of active physicians from the AMA's *Physician Characteristics and Distribution in the US*, multiple editions.

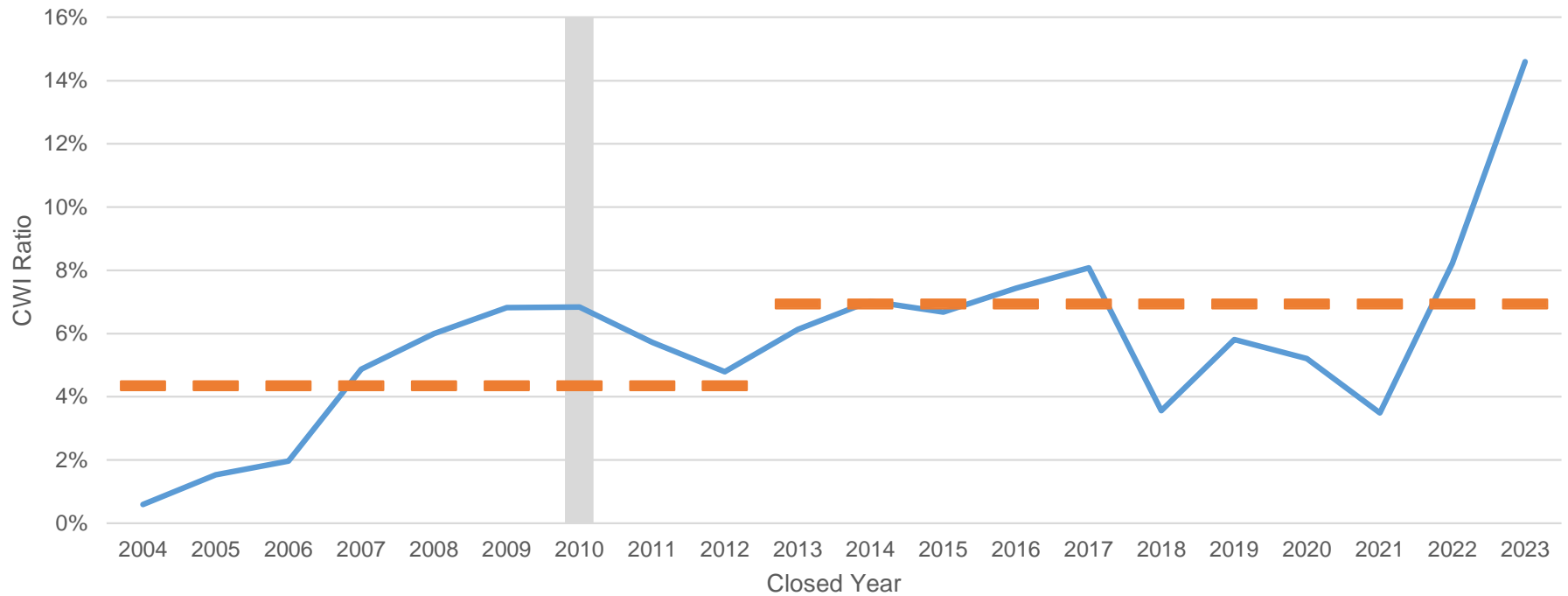
² Excluding tort reform impacted states: FL, MS, NV, OK, SC, TX, & OR.

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Illinois
Review of ISMIE MPL Claims-Made Annual Statement Data
Cap overturned in 2010
Previous Cap: 500k/1M NonEcon

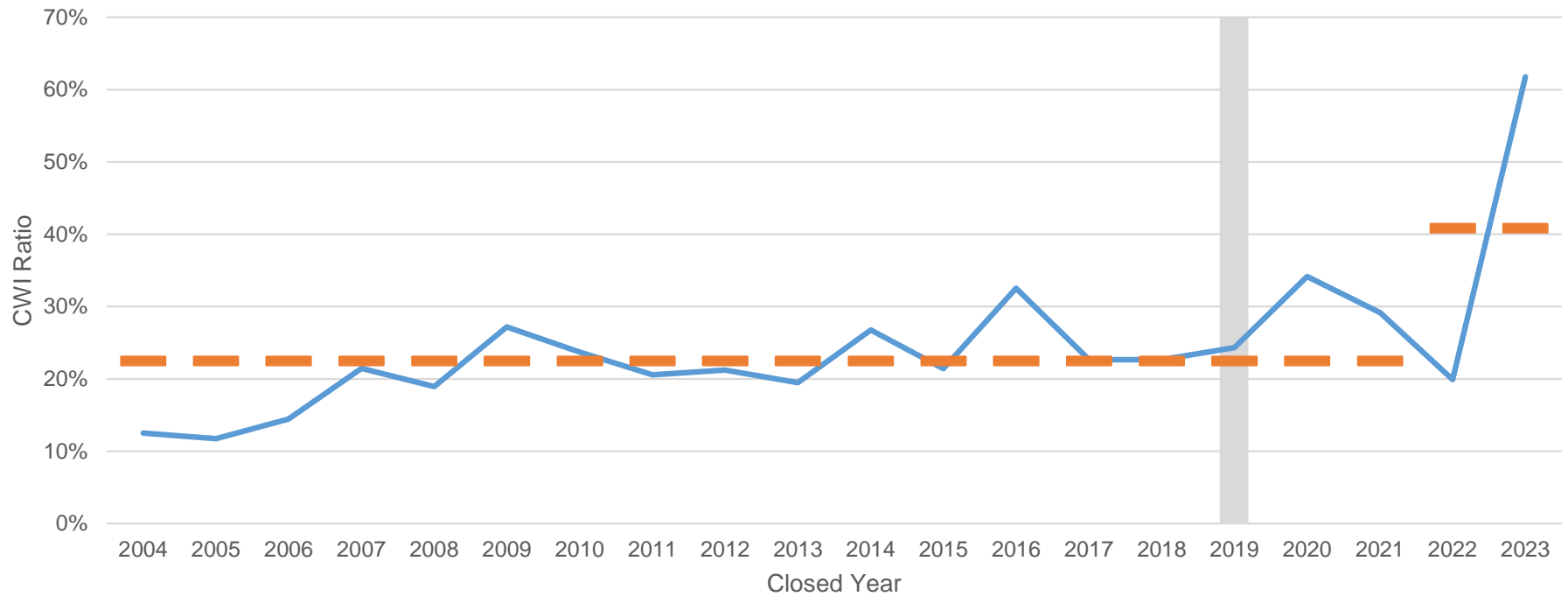


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MSV, VHHA, and VHCA Analysis of a Modification to the Statutory Cap on Damages

Kansas
Review of Kansas Medical Mutual Ins Co MPL Claims-Made Annual Statement Data
Cap overturned in 2019
Previous Cap: 300k NonEcon

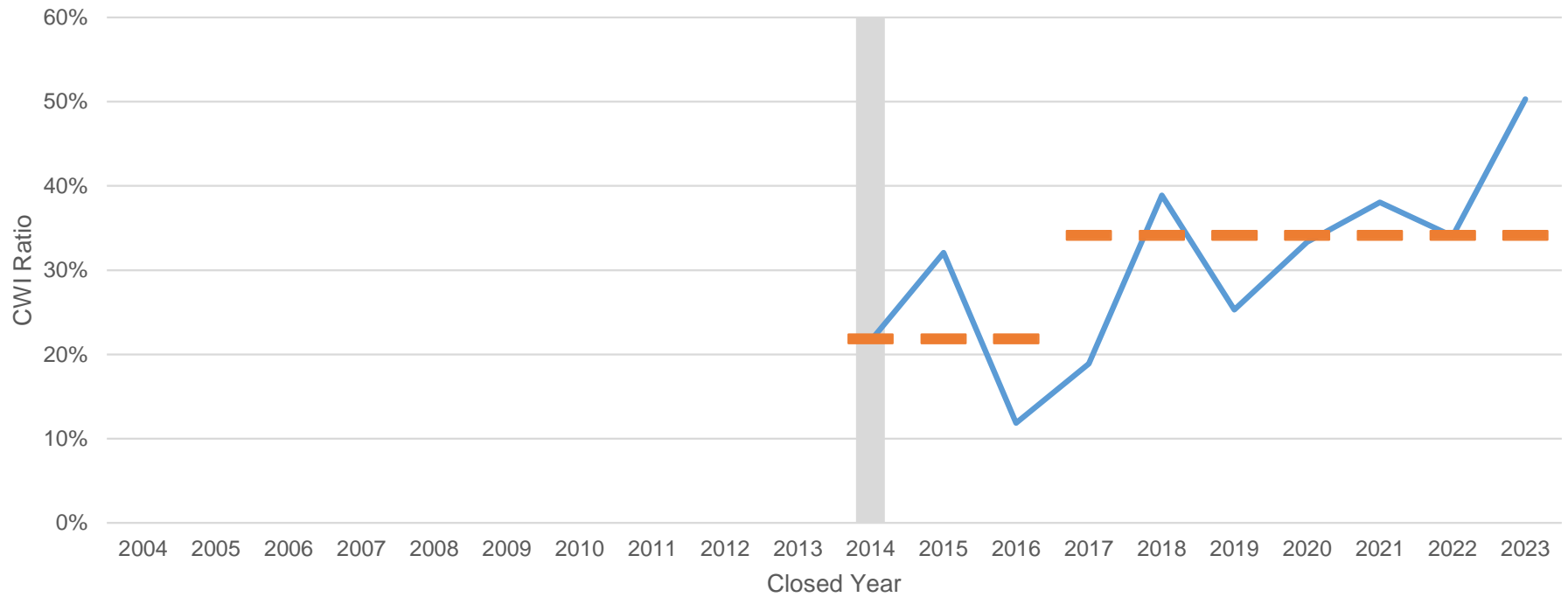


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MSV, VHHA, and VHCA Analysis of a Modification to the Statutory Cap on Damages

Florida
Review of MedMalDirect Insurance Co MPL Claims-Made Annual Statement Data
Cap overturned in 2014
Previous Cap: 500k/1M NonEcon for practitioners, 50% higher for non-practitioners

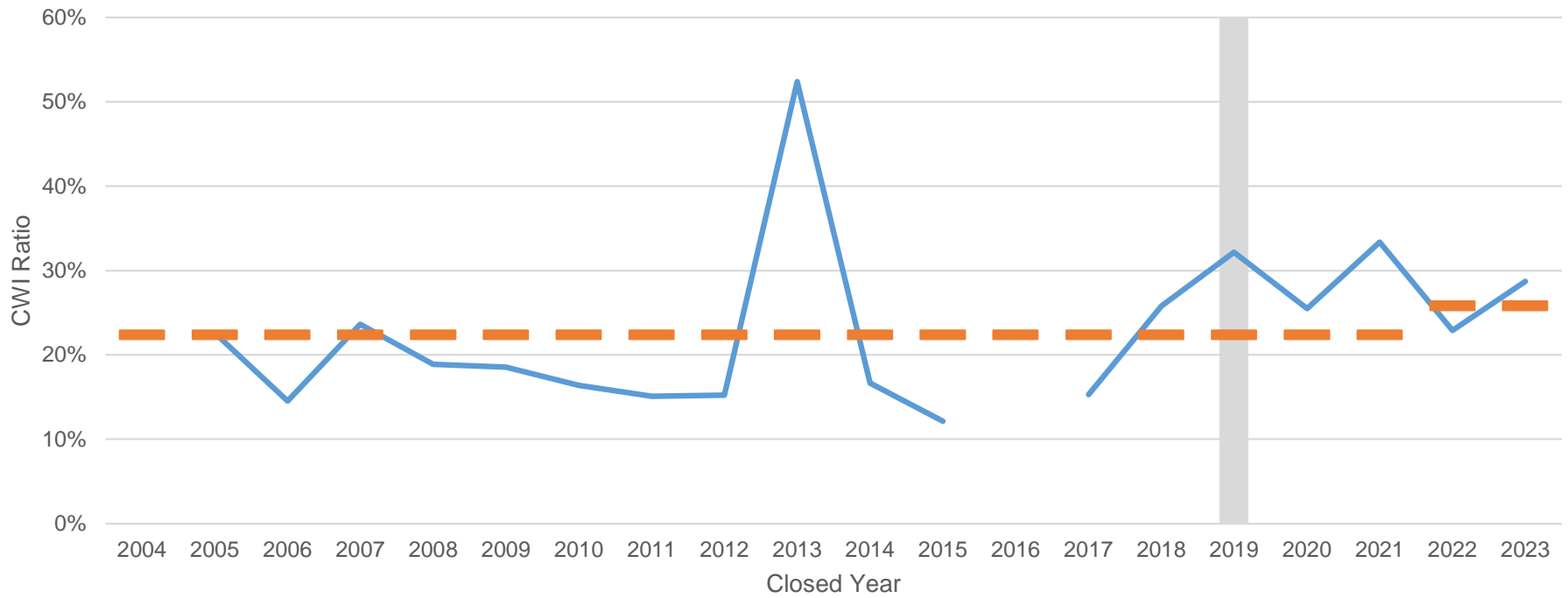


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MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages

Oklahoma
Review of PLICO MPL Claims-Made Annual Statement Data
Cap overturned in 2019
Previous Cap: 350k NonEcon



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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Physicians & Hospitals / Health Systems**

Claims per Occurrence by Closed Year

	(1)	(2)	(3) (1) / (2)
Closed Year	Closed Claims	Closed Occurrences	Closed Claims per Occurrence
2004	115	101	1.14
2005	181	161	1.12
2006	176	145	1.21
2007	188	156	1.21
2008	250	195	1.28
2009	256	183	1.40
2010	238	176	1.35
2011	241	189	1.28
2012	269	198	1.36
2013	278	191	1.46
2014	396	293	1.35
2015	774	624	1.24
2016	411	325	1.26
2017	433	356	1.22
2018	339	268	1.26
2019	412	333	1.24
2020	357	272	1.31
2021	381	273	1.40
2022	420	310	1.35
2023	376	282	1.33
Total (2004+):	6,491	5,031	1.29
Total (2009+):	5,581	4,273	1.31
Total (2014+):	4,299	3,336	1.29
Total (2019+):	1,946	1,470	1.32
Total (2004-2019):	4,957	3,894	1.27
	Selected:		1.30

Note: Indications are based on Virginia Closed Claim Data provided by carriers and facilities in the state

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Physicians & Hospitals / Health Systems**

Distribution of Claim Type Based on Total Claims per Occurrence
Data from the TDI Closed Claim Database

Closed Year	Claim Counts													
	1 Total Claim		2 Total Claims			3 Total Claims				4 Total Claims ¹				
	Phys	Hosp/Sys	2 Phys	2 Hosp/Sys	1 Phys, 1 Hosp/Sys	3 Phys	3 Hosp/Sys	2 Phys, 1 Hosp/Sys	1 Phys, 2 Hosp/Sys	4 Phys	3 Phys, 1 Hosp/Sys	2 Phys, 2 Hosp/Sys	1 Phys, 3 Hosp/Sys	
2014	71	148	12	5	42	4	0	6	2	0	1	0	0	
2015	313	198	33	0	57	3	0	11	1	1	0	3	0	
2016	126	135	16	0	34	2	0	2	5	0	1	2	0	
2017	140	152	16	1	37	1	0	4	2	0	0	3	0	
2018	114	106	2	2	29	1	0	5	4	0	0	2	0	
2019	127	138	15	2	44	0	0	3	1	0	1	1	0	
2020	105	111	7	0	34	0	0	5	5	1	0	1	0	
2021	71	149	1	1	27	0	0	6	8	0	0	2	1	
2022	79	160	8	2	43	1	0	5	4	0	0	2	0	
2023	76	150	3	0	35	0	0	6	3	0	2	2	0	
	Distribution of Claims													
2014	32%	68%	20%	8%	71%	33%	0%	50%	17%	0%	100%	0%	0%	
2015	61%	39%	37%	0%	63%	20%	0%	73%	7%	25%	0%	75%	0%	
2016	48%	52%	32%	0%	68%	22%	0%	22%	56%	0%	33%	67%	0%	
2017	48%	52%	30%	2%	69%	14%	0%	57%	29%	0%	0%	100%	0%	
2018	52%	48%	6%	6%	88%	10%	0%	50%	40%	0%	0%	100%	0%	
2019	48%	52%	25%	3%	72%	0%	0%	75%	25%	0%	50%	50%	0%	
2020	49%	51%	17%	0%	83%	0%	0%	50%	50%	50%	0%	50%	0%	
2021	32%	68%	3%	3%	93%	0%	0%	43%	57%	0%	0%	67%	33%	
2022	33%	67%	15%	4%	81%	10%	0%	50%	40%	0%	0%	100%	0%	
2023	34%	66%	8%	0%	92%	0%	0%	67%	33%	0%	50%	50%	0%	
Average	44%	56%	19%	3%	78%	11%	0%	54%	35%	8%	23%	66%	3%	
WA	46%	54%	22%	3%	75%	12%	0%	53%	35%	8%	19%	69%	4%	
WA L5	39%	61%	15%	2%	82%	2%	0%	53%	45%	8%	23%	62%	8%	
Select:	40%	60%	15%	5%	80%	5%	0%	50%	45%	5%	25%	70%	0%	

¹ This selected distribution is used for any occurrence with 4 or more total claims. Assumes 5% chance of all physicians claims, 25% chance of 1 hospital/health system and the remainder physicians claims, and 70% chance of 2 hospitals/health systems and the remainder physicians claims
Note: Indications are based on Virginia Closed Claim Data provided by carriers and facilities in the state

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Physicians**

CWI and CWE Frequency by Closed Year

	(1)	(2)	(3)	(4) (2) / (1)	(5) (3) / (1)
Closed Year	Closed Claims	CWI Claims	CWE Claims	Percent CWI	Percent CWE
2004	86	20	66	23%	77%
2005	154	44	110	29%	71%
2006	120	32	88	27%	73%
2007	109	32	77	29%	71%
2008	134	34	100	25%	75%
2009	150	44	106	29%	71%
2010	134	44	90	33%	67%
2011	139	41	98	29%	71%
2012	140	40	100	29%	71%
2013	171	38	133	22%	78%
2014	190	50	140	26%	74%
2015	267	56	211	21%	79%
2016	215	32	183	15%	85%
2017	224	38	186	17%	83%
2018	210	42	168	20%	80%
2019	266	48	218	18%	82%
2020	200	31	169	16%	85%
2021	197	39	158	20%	80%
2022	372	115	257	31%	69%
2023	400	104	296	26%	74%
Total (2004+):	3,878	924	2,954	24%	76%
Total (2009+):	3,275	762	2,513	23%	77%
Total (2014+):	2,541	555	1,986	22%	78%
Total (2019+):	1,435	337	1,098	23%	77%
Total (2004-2019):	2,709	635	2,074	23%	77%
				Selected: 22%	78%

Note: Indications are based on Virginia Closed Claim Data provided by carriers and facilities in the state

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Hospitals / Health Systems**

CWI and CWE Frequency by Closed Year

	(1)	(2)	(3)	(4) (2) / (1)	(5) (3) / (1)
Closed Year	Closed Claims	CWI Claims	CWE Claims	Percent CWI	Percent CWE
2004	27	6	21	22%	78%
2005	35	13	22	37%	63%
2006	60	23	37	38%	62%
2007	88	34	54	39%	61%
2008	114	42	72	37%	63%
2009	108	46	62	43%	57%
2010	103	50	53	49%	51%
2011	118	51	67	43%	57%
2012	129	55	74	43%	57%
2013	110	42	68	38%	62%
2014	164	66	98	40%	60%
2015	303	69	234	23%	77%
2016	185	82	103	44%	56%
2017	182	75	107	41%	59%
2018	172	72	100	42%	58%
2019	216	90	126	42%	58%
2020	180	77	103	43%	57%
2021	249	97	152	39%	61%
2022	364	133	231	37%	63%
2023	291	83	208	29%	71%
Total (2004+):	3,198	1,206	1,992	38%	62%
Total (2009+):	2,874	1,088	1,786	38%	62%
Total (2014+):	2,306	844	1,462	37%	63%
Total (2019+):	1,300	480	820	37%	63%
Total (2004-2019):	2,114	816	1,298	39%	61%
				Selected: 37%	63%

Note: Indications are based on Virginia Closed Claim Data provided by carriers and facilities in the state

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Physicians**

Trended Indemnity Severity by Closed Year

	(1)	(2)	(3) (2) / (1)	(4)
		Limited to \$1,000,000 per Claim		
Closed Year	CWI Claims	Indemnity Paid	Indemnity Severity	Indemnity Severity Trended to 7/1/2029 ¹
2004	20	3,940,000	197,000	412,466
2005	44	14,156,133	321,730	654,011
2006	32	10,070,294	314,697	621,094
2007	32	8,728,489	272,765	522,668
2008	34	16,360,512	481,192	895,140
2009	44	14,605,736	331,949	599,536
2010	44	19,329,576	439,309	770,346
2011	41	17,057,564	416,038	708,306
2012	40	18,630,045	465,751	769,800
2013	38	16,770,912	441,340	708,221
2014	50	19,304,845	386,097	601,539
2015	56	22,562,753	402,906	609,457
2016	32	12,493,617	390,426	573,341
2017	38	17,048,994	448,658	639,679
2018	42	20,139,900	479,521	663,783
2019	48	24,945,025	519,688	698,446
2020	31	14,738,394	475,432	620,318
2021	39	13,468,470	345,345	437,473
2022	115	47,005,641	408,745	502,715
2023	104	48,228,301	463,734	553,745
Total (2004+):	924	379,585,202	410,806	618,008
Total (2009+):	762	326,329,774	428,254	612,832
Total (2014+):	555	239,935,941	432,317	576,502
Total (2019+):	337	148,385,832	440,314	549,609
Total (2004-2019):	635	256,144,395	403,377	660,388
			Selected:	620,000

¹Trended at 3.0% per annum (see Exhibit C13); see Exhibit C17 for derivation of average closed date
Note: Indications are based on Virginia Closed Claim Data provided by carriers and facilities in the state

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Hospitals / Health Systems**

Trended Indemnity Severity by Closed Year

	(1)	(2)	(3) (2) / (1)	(4)
		Limited to \$1,000,000 per Claim		
Closed Year	CWI Claims	Indemnity Paid	Indemnity Severity	Indemnity Severity Trended to 11/1/2028 ¹
2004	7	213,000	30,429	125,645
2005	16	1,680,404	105,025	409,136
2006	29	4,402,852	151,822	557,984
2007	45	7,673,485	170,522	591,258
2008	56	11,127,269	198,701	649,890
2009	62	14,922,330	240,683	742,670
2010	66	12,563,972	190,363	554,173
2011	64	14,490,264	226,410	621,827
2012	70	17,935,499	256,221	663,791
2013	53	12,317,521	232,406	568,034
2014	78	15,874,744	203,522	469,300
2015	82	15,979,818	194,876	423,944
2016	98	28,290,568	288,679	592,390
2017	94	19,767,903	210,297	407,133
2018	89	19,076,377	214,341	391,490
2019	106	32,221,505	303,976	523,801
2020	91	17,723,736	194,766	316,579
2021	111	29,089,787	262,070	401,881
2022	153	51,283,035	335,183	484,924
2023	102	33,344,306	326,905	446,195
Total (2004+):	1,472	359,978,374	244,551	500,529
Total (2009+):	1,319	334,881,364	253,890	492,927
Total (2014+):	1,004	262,651,778	261,605	449,384
Total (2019+):	563	163,662,368	290,697	441,644
Total (2004-2019):	1,015	228,537,510	225,160	535,622

Selected:	500,000
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¹Trended at 6.0% per annum (see Exhibit C14); see Exhibit C18 for derivation of average closed date
Note: Indications are based on Virginia Closed Claim Data provided by carriers and facilities in the state

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Physicians**

Trended ALAE Severity on CWI Claims by Closed Year

	(1)	(2)	(3) (2) / (1)	(4)
Closed Year	CWI Claims	ALAE Paid on CWI Claims	ALAE Severity on CWI Claims	ALAE Severity on CWI Claims Trended to 7/1/2029 ¹
2004	20	1,181,439	59,072	123,681
2005	44	2,584,381	58,736	119,398
2006	32	2,915,939	91,123	179,843
2007	32	2,188,087	68,378	131,024
2008	34	2,487,716	73,168	136,111
2009	44	3,896,090	88,548	159,927
2010	44	4,304,967	97,840	171,567
2011	41	4,893,130	119,345	203,184
2012	40	4,051,699	101,292	167,418
2013	38	3,043,345	80,088	128,518
2014	50	4,163,805	83,276	129,744
2015	56	5,199,310	92,845	140,442
2016	32	3,719,821	116,244	170,705
2017	38	3,761,244	98,980	141,122
2018	42	5,867,265	139,697	193,377
2019	48	6,212,509	129,427	173,946
2020	31	3,510,558	113,244	147,755
2021	39	3,346,649	85,812	108,703
2022	115	12,024,245	104,559	128,597
2023	104	11,008,671	105,853	126,399
Total (2004+):	924	90,360,871	97,793	146,322
Total (2009+):	762	79,003,310	103,679	148,161
Total (2014+):	555	58,814,079	105,971	141,265
Total (2019+):	337	36,102,633	107,129	133,838
Total (2004-2019):	635	60,470,748	95,230	155,036

Selected:	150,000
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¹Trended at 3.0% per annum (see Exhibit C15); see Exhibit C17 for derivation of average closed date
Note: Indications are based on Virginia Closed Claim Data provided by carriers and facilities in the state

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Hospitals / Health Systems**

Trended ALAE Severity on CWI Claims by Closed Year

	(1)	(2)	(3) (2) / (1)	(4)
				ALAE Severity on CWI Claims Trended to 11/1/2028 ¹
Closed Year	CWI Claims	ALAE Paid on CWI Claims	ALAE Severity on CWI Claims	
2004	7	58,992	8,427	17,303
2005	16	118,666	7,417	14,784
2006	29	368,380	12,703	24,584
2007	45	1,300,365	28,897	54,298
2008	56	1,276,725	22,799	41,589
2009	62	1,978,903	31,918	56,529
2010	66	1,791,364	27,142	46,671
2011	64	2,222,138	34,721	57,966
2012	70	3,910,748	55,868	90,548
2013	53	2,205,802	41,619	65,491
2014	78	3,594,880	46,088	70,413
2015	82	3,875,878	47,267	70,112
2016	98	4,837,370	49,361	71,081
2017	94	3,783,930	40,255	56,280
2018	89	4,038,372	45,375	61,593
2019	106	5,148,179	48,568	64,008
2020	91	4,030,339	44,289	56,666
2021	111	5,271,101	47,487	58,989
2022	153	9,919,966	64,836	78,196
2023	102	6,645,541	65,152	76,290
Total (2004+):	1,472	66,377,641	45,094	63,289
Total (2009+):	1,319	63,254,513	47,956	66,200
Total (2014+):	1,004	51,145,557	50,942	66,946
Total (2019+):	563	31,015,127	55,089	67,912
Total (2004-2019):	1,015	40,510,693	39,912	60,800

Selected:	66,000
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¹Trended at 3.0% per annum (see Exhibit C16); see Exhibit C18 for derivation of average closed date
Note: Indications are based on Virginia Closed Claim Data provided by carriers and facilities in the state

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Physicians**

Trended ALAE Severity on CWE Claims by Closed Year

	(1)	(2)	(3) (2) / (1)	(4)
Closed Year	CWE Claims	ALAE Paid on CWE Claims	ALAE Severity on CWE Claims	ALAE Severity on CWE Claims Trended to 7/1/2028 ¹
2004	66	2,018,537	30,584	62,171
2005	110	3,150,423	28,640	56,525
2006	88	2,740,884	31,146	59,682
2007	77	3,923,682	50,957	94,801
2008	100	4,673,685	46,737	84,412
2009	106	4,334,087	40,888	71,698
2010	90	4,608,406	51,205	87,176
2011	98	7,066,709	72,109	119,193
2012	100	7,044,538	70,445	113,044
2013	133	6,457,540	48,553	75,645
2014	140	8,520,813	60,863	92,064
2015	211	10,410,881	49,341	72,463
2016	183	10,642,595	58,156	82,917
2017	186	8,360,619	44,950	62,222
2018	168	8,019,652	47,736	64,156
2019	218	11,274,807	51,719	67,486
2020	169	4,963,678	29,371	37,206
2021	158	4,918,451	31,129	38,286
2022	257	12,883,437	50,130	59,860
2023	296	17,035,614	57,553	66,723
Total (2004+):	2,954	143,049,038	48,426	70,309
Total (2009+):	2,513	126,541,827	50,355	70,187
Total (2014+):	1,986	97,030,547	48,857	64,394
Total (2019+):	1,098	51,075,987	46,517	56,633
Total (2004-2019):	2,074	103,247,857	49,782	77,253

Selected:	70,000
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¹Trended at 3.0% per annum (see Exhibit C15); see Exhibit C17 for derivation of average closed date
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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Hospitals / Health Systems**

Trended ALAE Severity on CWE Claims by Closed Year

	(1)	(2)	(3) (2) / (1)	(4)
Closed Year	CWE Claims	ALAE Paid on CWE Claims	ALAE Severity on CWE Claims	ALAE Severity on CWE Claims Trended to 11/1/2028 ¹
2004	21	343,821	16,372	33,615
2005	22	404,156	18,371	36,620
2006	37	500,975	13,540	26,204
2007	54	1,250,690	23,161	43,520
2008	72	1,847,100	25,654	46,798
2009	62	1,794,638	28,946	51,265
2010	53	1,624,246	30,646	52,697
2011	67	2,296,496	34,276	57,223
2012	74	3,021,878	40,836	66,186
2013	68	2,123,924	31,234	49,150
2014	98	4,319,120	44,073	67,333
2015	234	5,848,838	24,995	37,076
2016	103	3,795,208	36,847	53,060
2017	107	3,342,550	31,239	43,675
2018	100	3,600,160	36,002	48,869
2019	126	4,570,936	36,277	47,810
2020	103	2,552,460	24,781	31,706
2021	152	4,297,553	28,273	35,121
2022	231	6,746,801	29,207	35,225
2023	208	8,267,922	39,750	46,545
Total (2004+):	1,992	62,549,470	31,400	44,675
Total (2009+):	1,786	58,202,729	32,588	45,236
Total (2014+):	1,462	47,341,549	32,381	42,918
Total (2019+):	820	26,435,673	32,239	39,569
Total (2004-2019):	1,298	40,684,734	31,344	48,205

Selected:	45,000
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¹Trended at 3.0% per annum (see Exhibit C16); see Exhibit C18 for derivation of average closed date
Note: Indications are based on Virginia Closed Claim Data provided by carriers and facilities in the state

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Physicians**

Unlimited Indemnity Severity Trend by Closed Year

	(1)	(2)	(3) (2) / (1)	(4)	(5)	(6)	(7)
				Unlimited			
				Indicated Trend from Given Closed Year through 2023	Indicated Trend from Given Closed Year through 2019	R Squared 2023	R Squared through 2019
Closed Year	CWI Claims	Indemnity Paid	Indemnity Severity				
2004	20	3,940,000	197,000	3.3%	5.3%	42.6%	60.7%
2005	44	16,177,081	367,661	2.3%	4.0%	33.7%	55.1%
2006	32	11,120,294	347,509	2.3%	4.2%	28.9%	51.9%
2007	32	9,028,489	282,140	2.0%	4.0%	21.4%	44.7%
2008	34	18,005,512	529,574	1.0%	2.6%	8.1%	29.6%
2009	44	15,405,736	350,130	1.4%	3.7%	12.4%	45.4%
2010	44	22,654,020	514,864	0.5%	2.5%	2.1%	27.8%
2011	41	18,857,564	459,941	0.7%	3.3%	2.7%	36.5%
2012	40	22,849,618	571,240	0.3%	3.4%	0.6%	29.7%
2013	38	17,895,225	470,927	1.0%	6.3%	3.8%	69.5%
2014	50	23,618,792	472,376	0.7%	8.1%	1.6%	75.4%
2015	56	27,252,753	486,656	0.2%	10.6%	0.1%	81.9%
2016	32	14,088,617	440,269	(0.5)%	15.6%	0.4%	97.7%
2017	38	20,173,994	530,895	(3.3)%	13.0%	15.4%	97.5%
2018	42	26,052,844	620,306	(5.6)%	9.2%	28.7%	100.0%
2019	48	32,522,818	677,559	(6.0)%		21.0%	
2020	31	18,521,205	597,458	(0.1)%		0.0%	
2021	39	15,638,470	400,986	19.4%		96.5%	
2022	115	51,930,641	451,571	26.5%		100.0%	
2023	104	59,428,485	571,428				
				Indicated Trend (2004+):	3.3%	5.3%	
				Indicated Trend (2009+):	1.4%	3.7%	
				Indicated Trend (2014+):	0.7%	8.1%	
				Indicated Trend (2019+):	(6.0)%		
				Selected Trend:	4.0%		

Note: Indications are based on Virginia Closed Claim Data provided by carriers and facilities in the state

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Hospitals / Health Systems**

Unlimited Indemnity Severity Trend by Closed Year

	(1)	(2)	(3) (2) / (1)	(4)	(5)	(6)	(7)
				Unlimited			
Closed Year	CWI Claims	Indemnity Paid	Indemnity Severity	Indicated Trend from Given Closed Year through 2023	Indicated Trend from Given Closed Year through 2019	R Squared 2023	R Squared through 2019
2004	7	213,000	30,429	6.9%	9.0%	50.5%	50.6%
2005	16	1,680,404	105,025	4.4%	5.2%	59.2%	57.8%
2006	29	4,402,852	151,822	3.6%	3.9%	53.6%	49.9%
2007	45	8,248,485	183,300	3.1%	3.2%	45.2%	38.0%
2008	56	11,902,269	212,541	2.9%	2.7%	37.7%	27.4%
2009	62	15,147,330	244,312	2.9%	2.7%	33.7%	22.1%
2010	66	13,563,972	205,515	3.3%	3.4%	36.0%	26.4%
2011	64	14,490,264	226,410	3.2%	3.0%	28.9%	16.7%
2012	70	18,808,699	268,696	3.2%	2.8%	24.5%	11.3%
2013	53	14,117,521	266,368	4.0%	4.6%	29.9%	19.9%
2014	78	18,176,681	233,034	5.2%	7.9%	36.4%	35.4%
2015	82	16,687,783	203,510	5.6%	10.5%	33.4%	36.8%
2016	98	30,765,568	313,934	4.4%	6.8%	18.7%	11.9%
2017	94	21,479,153	228,502	7.7%	29.9%	37.2%	80.8%
2018	89	21,176,377	237,937	7.2%	62.0%	24.9%	100.0%
2019	106	40,867,571	385,543	5.1%		9.0%	
2020	91	18,646,345	204,905	21.5%		83.3%	
2021	111	34,002,287	306,327	9.9%		80.1%	
2022	153	55,885,035	365,262	1.3%		100.0%	
2023	102	37,744,306	370,042				
				Indicated Trend (2004+):	6.9%	9.0%	
				Indicated Trend (2009+):	2.9%	2.7%	
				Indicated Trend (2014+):	5.2%	7.9%	
				Indicated Trend (2019+):	5.1%		
				Selected Trend:	7.0%		

Note: Indications are based on Virginia Closed Claim Data provided by carriers and facilities in the state

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Physicians**

Indemnity Severity Trend by Closed Year

	(1)	(2)	(3) (2) / (1)	(4)	(5)	(6)	(7)
				Limited to \$1,000,000 per Claim			
				Indicated Trend from Given Closed Year through	Indicated Trend from Given Closed Year through	R Squared	R Squared
Closed Year	CWI Claims	Indemnity Paid	Indemnity Severity	2023	2019	2023	through 2019
2004	20	3,940,000	197,000	2.5%	4.0%	37.7%	54.1%
2005	44	14,156,133	321,730	1.7%	2.9%	27.8%	46.7%
2006	32	10,070,294	314,697	1.5%	2.8%	21.3%	40.3%
2007	32	8,728,489	272,765	1.2%	2.5%	13.2%	30.6%
2008	34	16,360,512	481,192	0.3%	1.2%	1.7%	12.5%
2009	44	14,605,736	331,949	0.7%	2.2%	7.3%	34.3%
2010	44	19,329,576	439,309	0.1%	1.2%	0.2%	15.0%
2011	41	17,057,564	416,038	0.2%	1.7%	0.5%	21.6%
2012	40	18,630,045	465,751	0.1%	1.9%	0.1%	19.6%
2013	38	16,770,912	441,340	0.5%	3.8%	2.0%	51.3%
2014	50	19,304,845	386,097	0.8%	6.3%	4.2%	89.1%
2015	56	22,562,753	402,906	0.3%	7.4%	0.4%	90.1%
2016	32	12,493,617	390,426	(0.4)%	9.7%	0.5%	97.2%
2017	38	17,048,994	448,658	(2.2)%	7.6%	13.2%	99.7%
2018	42	20,139,900	479,521	(3.4)%	8.4%	19.4%	100.0%
2019	48	24,945,025	519,688	(3.7)%		14.3%	
2020	31	14,738,394	475,432	0.9%		0.7%	
2021	39	13,468,470	345,345	15.9%		99.3%	
2022	115	47,005,641	408,745	13.5%		100.0%	
2023	104	48,228,301	463,734				
				Indicated Trend (2004+):	2.5%	4.0%	
				Indicated Trend (2009+):	0.7%	2.2%	
				Indicated Trend (2014+):	0.8%	6.3%	
				Indicated Trend (2019+):	(3.7)%		
				Selected Trend:	3.0%		

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Hospitals / Health Systems**

Indemnity Severity Trend by Closed Year

	(1)	(2)	(3) (2) / (1)	(4)	(5)	(6)	(7)
				Limited to \$1,000,000 per Claim			
Closed Year	CWI Claims	Indemnity Paid	Indemnity Severity	Indicated Trend from Given Closed Year through 2023	Indicated Trend from Given Closed Year through 2019	R Squared 2023	R Squared through 2019
2004	7	213,000	30,429	6.1%	7.9%	46.4%	45.0%
2005	16	1,680,404	105,025	3.7%	4.2%	55.0%	50.1%
2006	29	4,402,852	151,822	2.9%	2.9%	48.5%	39.9%
2007	45	7,673,485	170,522	2.6%	2.2%	39.8%	26.9%
2008	56	11,127,269	198,701	2.3%	1.6%	31.2%	14.5%
2009	62	14,922,330	240,683	2.2%	1.4%	26.5%	8.5%
2010	66	12,563,972	190,363	2.7%	2.1%	32.4%	15.5%
2011	64	14,490,264	226,410	2.5%	1.3%	24.5%	5.4%
2012	70	17,935,499	256,221	2.8%	1.5%	24.7%	5.1%
2013	53	12,317,521	232,406	3.9%	3.6%	35.8%	18.8%
2014	78	15,874,744	203,522	4.8%	5.8%	40.9%	30.2%
2015	82	15,979,818	194,876	4.9%	6.1%	34.5%	21.4%
2016	98	28,290,568	288,679	4.1%	1.8%	21.1%	1.3%
2017	94	19,767,903	210,297	7.7%	20.2%	49.8%	78.9%
2018	89	19,076,377	214,341	8.0%	41.8%	40.4%	100.0%
2019	106	32,221,505	303,976	7.1%		23.8%	
2020	91	17,723,736	194,766	19.7%		85.1%	
2021	111	29,089,787	262,070	11.7%		66.6%	
2022	153	51,283,035	335,183	(2.5)%		100.0%	
2023	102	33,344,306	326,905				
				Indicated Trend (2004+):	6.1%	7.9%	
				Indicated Trend (2009+):	2.2%	1.4%	
				Indicated Trend (2014+):	4.8%	5.8%	
				Indicated Trend (2019+):	7.1%		
				Selected Trend:	6.0%		

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Physicians**

ALAE Severity Trend by Closed Year

	(1)	(2)	(3) (2) / (1)	(4)	(5)	(6)	(7)
Closed Year	Closed With Payment Claims	ALAE Paid	ALAE Severity	Indicated Trend from Given Closed Year through 2023	Indicated Trend from Given Closed Year through 2019	R Squared through 2023	R Squared through 2019
2004	86	3,199,976	37,209	1.3%	3.0%	10.5%	37.1%
2005	154	5,734,804	37,239	0.8%	2.3%	3.7%	25.6%
2006	120	5,656,822	47,140	(0.0)%	1.3%	0.0%	10.9%
2007	109	6,111,769	56,071	(0.5)%	0.6%	2.0%	2.2%
2008	134	7,161,401	53,443	(0.8)%	0.2%	4.2%	0.2%
2009	150	8,230,177	54,868	(1.4)%	(0.7)%	9.9%	2.7%
2010	134	8,913,373	66,518	(2.1)%	(2.1)%	18.7%	19.0%
2011	139	11,959,839	86,042	(2.4)%	(2.7)%	19.2%	24.8%
2012	140	11,096,237	79,259	(1.5)%	(1.1)%	8.0%	4.9%
2013	171	9,500,885	55,561	(0.5)%	1.5%	0.8%	11.4%
2014	190	12,684,617	66,761	(1.0)%	0.2%	2.5%	0.2%
2015	267	15,610,191	58,465	(0.4)%	2.3%	0.3%	14.4%
2016	215	14,362,417	66,802	(0.5)%	1.5%	0.3%	3.8%
2017	224	12,121,864	54,115	1.3%	10.2%	1.5%	72.7%
2018	210	13,886,917	66,128	1.0%	(0.6)%	0.6%	100.0%
2019	266	17,487,316	65,742	6.0%		12.8%	
2020	200	8,474,236	42,371	21.9%		82.6%	
2021	197	8,265,101	41,955	29.3%		81.7%	
2022	372	24,907,682	66,956	4.7%		100.0%	
2023	400	28,044,286	70,111				
				Indicated Trend (2004+):	1.3%	3.0%	
				Indicated Trend (2009+):	(1.4)%	(0.7)%	
				Indicated Trend (2014+):	(1.0)%	0.2%	
				Indicated Trend (2019+):	6.0%		
				Selected Trend:	3.0%		

Note: Indications are based on Virginia Closed Claim Data provided by carriers and facilities in the state

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Hospitals / Health Systems**

ALAE Severity Trend by Closed Year

	(1)	(2)	(3) (2) / (1)	(4)	(5)	(6)	(7)
Closed Year	Closed With Payment Claims	ALAE Paid	ALAE Severity	Indicated Trend from Given Closed Year through 2023	Indicated Trend from Given Closed Year through 2019	R Squared through 2023	R Squared through 2019
2004	28	402,812	14,386	5.5%	7.6%	62.2%	68.8%
2005	38	522,822	13,758	5.0%	7.2%	56.0%	62.5%
2006	66	869,355	13,172	4.1%	6.0%	48.4%	53.9%
2007	99	2,551,055	25,768	2.8%	3.9%	43.7%	47.6%
2008	128	3,123,824	24,405	2.5%	3.5%	35.0%	37.8%
2009	124	3,773,541	30,432	1.8%	2.5%	22.4%	21.8%
2010	119	3,415,610	28,703	1.5%	1.9%	14.2%	11.9%
2011	131	4,518,634	34,493	0.7%	0.3%	3.5%	0.4%
2012	144	6,932,626	48,143	0.3%	(0.9)%	0.5%	2.2%
2013	121	4,329,726	35,783	1.4%	1.4%	11.4%	5.3%
2014	176	7,914,000	44,966	1.3%	0.8%	7.4%	1.0%
2015	316	9,724,716	30,774	2.9%	5.7%	29.8%	39.9%
2016	201	8,632,579	42,948	1.5%	0.6%	9.9%	0.7%
2017	201	7,126,481	35,455	3.3%	8.7%	32.3%	90.2%
2018	189	7,638,532	40,416	3.0%	3.7%	20.0%	100.0%
2019	232	9,719,114	41,893	5.4%		34.9%	
2020	194	6,582,799	33,932	13.0%		97.5%	
2021	263	9,568,655	36,383	15.0%		97.7%	
2022	384	16,666,767	43,403	10.8%		100.0%	
2023	310	14,913,463	48,108				
				Indicated Trend (2004+):	5.5%	7.6%	
				Indicated Trend (2009+):	1.8%	2.5%	
				Indicated Trend (2014+):	1.3%	0.8%	
				Indicated Trend (2019+):	5.4%		
				Selected Trend:	3.0%		

Note: Indications are based on Virginia Closed Claim Data provided by carriers and facilities in the state

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Physicians**

Years from Report Date to Closed Date by Closed Year

Closed Year	(1)		(2)		(3)		(4)	
	CWE Claims				CWI Claims			
	Count of Claims	Average Years From Report to Close	Count of Claims	Average Years From Report to Close	Count of Claims	Average Years From Report to Close	Count of Claims	Average Years From Report to Close
2004	66	1.88	20	2.55	20	2.55	20	2.55
2005	110	1.51	44	1.87	44	1.87	44	1.87
2006	88	1.51	32	2.38	32	2.38	32	2.38
2007	77	1.83	32	1.96	32	1.96	32	1.96
2008	100	1.60	34	1.83	34	1.83	34	1.83
2009	106	1.51	44	1.73	44	1.73	44	1.73
2010	90	1.83	44	1.60	44	1.60	44	1.60
2011	98	1.80	41	1.84	41	1.84	41	1.84
2012	100	1.93	40	1.84	40	1.84	40	1.84
2013	133	1.57	38	1.91	38	1.91	38	1.91
2014	140	1.77	50	1.75	50	1.75	50	1.75
2015	211	1.59	56	1.69	56	1.69	56	1.69
2016	183	1.38	32	1.91	32	1.91	32	1.91
2017	186	1.42	38	1.99	38	1.99	38	1.99
2018	168	1.14	42	2.24	42	2.24	42	2.24
2019	218	1.29	48	2.27	48	2.27	48	2.27
2020	169	1.34	31	2.40	31	2.40	31	2.40
2021	158	1.34	39	2.41	39	2.41	39	2.41
2022	257	1.69	115	2.67	115	2.67	115	2.67
2023	296	1.83	104	2.73	104	2.73	104	2.73
Total (2004+):	2,954	1.56	924	2.15	924	2.15	924	2.15
Total (2009+):	2,513	1.55	762	2.16	762	2.16	762	2.16
Total (2014+):	1,986	1.50	555	2.31	555	2.31	555	2.31
Total (2019+):	1,098	1.54	337	2.58	337	2.58	337	2.58
Total (2004-2019):	2,074	1.54	635	1.93	635	1.93	635	1.93
Selected:		1.55		2.50		2.50		2.50

Assumed Effective Date of Rates:	1/1/2026	1/1/2026
Average Report Date:	1/1/2027	1/1/2027
Average Close Date:	7/1/2028	7/1/2029

Note: Indications are based on Virginia Closed Claim Data provided by carriers and facilities in the state

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages
Hospitals / Health Systems**

Years from Report Date to Closed Date by Closed Year

Closed Year	(1)	(2)	(3)	(4)
	CWE Claims		CWI Claims	
	Count of Claims	Average Years From Report to Close	Count of Claims	Average Years From Report to Close
2004	21	1.46	7	0.89
2005	22	1.19	16	1.06
2006	37	1.18	29	1.19
2007	54	1.57	45	1.37
2008	72	1.54	56	1.57
2009	62	1.46	62	1.72
2010	53	1.84	66	1.61
2011	67	1.67	64	1.41
2012	74	1.95	70	1.88
2013	68	1.70	53	1.76
2014	98	2.07	78	1.87
2015	234	2.29	82	2.05
2016	103	1.77	98	1.58
2017	107	1.66	94	1.53
2018	100	1.74	89	1.68
2019	126	1.68	106	1.61
2020	103	1.54	91	1.58
2021	152	1.86	111	1.84
2022	231	1.95	153	1.97
2023	208	1.96	102	2.02
Total (2004+):	1,992	1.83	1,472	1.72
Total (2009+):	1,786	1.87	1,319	1.76
Total (2014+):	1,462	1.90	1,004	1.78
Total (2019+):	820	1.84	563	1.83
Total (2004-2019):	1,298	1.80	1,015	1.64
Selected:		1.85		1.85

Assumed Effective Date of Rates:	1/1/2026	1/1/2026
Average Report Date:	1/1/2027	1/1/2027
Average Close Date:	11/1/2028	11/1/2028

Note: Indications are based on Virginia Closed Claim Data provided by carriers and facilities in the state

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Goodness of Distribution Fit Tests

Indemnity Data Source:	Fit	Goodness of Fit Test					
		Kolmogorov-Smirnov		Anderson-Darling		Chi-Square	
		Distribution	Test Statistic	Distribution	Test Statistic	Distribution	Test Statistic
TX Closed Claim Database Economic Loss Only	Best	Lognormal	0.039	Lognormal	1.675	Lognormal	370.210
	Second	Gamma	0.153	Gamma	69.661	Weibull	763.885
	Third	Weibull	0.221	Weibull	118.115	Gamma	809.832
TX Closed Claim Database Non-Economic Loss Only	Best	Lognormal	0.021	Lognormal	0.730	Lognormal	230.333
	Second	Gamma	0.121	Gamma	45.163	Gamma	517.068
	Third	Weibull	0.137	Weibull	67.778	Weibull	542.519
VA Physicians Closed Claim Database Total Loss	Best	Gamma	0.046	Gamma	2.181	Gamma	39.169
	Second	Weibull	0.053	Weibull	5.360	Weibull	61.508
	Third	Exponential	0.062	Lognormal	7.201	Exponential	80.646
VA Hospitals/Health Systems Closed Claim Database Total Loss	Best	Gamma	0.040	Gamma	2.694	Gamma	66.694
	Second	Lognormal	0.079	Lognormal	16.706	Weibull	111.463
	Third	Weibull	0.084	Weibull	17.187	Lognormal	222.586
KY NPDB Data (2009-2023)	Best	Lognormal	0.045	Lognormal	5.173	Gamma	97.850
	Second	Gamma	0.049	Gamma	6.104	Lognormal	135.081
	Third	Weibull	0.091	Weibull	27.247	Exponential	164.700
NJ NPDB Data (2019-2023)	Best	Lognormal	0.071	Gamma	4.643	Lognormal	756.845
	Second	Gamma	0.079	Exponential	8.287	Exponential	818.448
	Third	Exponential	0.085	Lognormal	9.241	Gamma	825.509
CT, DE, NH, RI and VT NPDB Data (2014-2023)	Best	Lognormal	0.062	Gamma	6.016	Gamma	240.379
	Second	Exponential	0.063	Exponential	6.039	Exponential	244.518
	Third	Gamma	0.066	Lognormal	14.717	Lognormal	368.836

Selected Indemnity Distribution: Lognormal

Note: While the Texas data is used to fit distributions for economic and non-economic losses, the resulting losses are normalized to the Virginia distribution and average severity levels
 Underlying VA physicians indemnity has been trended at 4.0% per annum to an average closed date of 7/1/2029
 Underlying facilities indemnity has been trended at 7.0% per annum to an average closed date of 11/1/2028
 Several states were selected from the NPDB data to represent the distribution of uncapped losses. These states have not had caps on damages in recent history, do not have a state medical malpractice patient fund, and are geographically similar to Virginia. Years included are selected based on volume of available data.

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

*Based on all Closed With Indemnity Claims, Trended at 4.0% to July 1, 2029
Closed Years 2004-2023
Cumulative Distribution Function
Physicians*

Loss Increment (\$000's)	Actual Distribution	Lognormal Distribution Under Given Coefficient of Variation							
		1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50
0-5	3.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.2%
5-10	4.6%	0.0%	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%
10-15	5.4%	0.2%	0.3%	0.4%	0.6%	0.8%	1.0%	1.2%	1.4%
15-25	6.6%	0.6%	0.9%	1.3%	1.6%	2.0%	2.3%	2.7%	3.0%
25-50	11.4%	2.6%	3.4%	4.2%	5.0%	5.7%	6.3%	6.9%	7.4%
50-75	14.6%	5.4%	6.7%	7.8%	9.0%	9.6%	10.3%	11.0%	11.6%
75-100	17.4%	8.7%	10.1%	11.4%	12.4%	13.3%	14.1%	14.8%	15.4%
100-150	21.1%	15.4%	17.0%	18.3%	19.3%	20.2%	21.0%	21.6%	22.2%
150-200	25.1%	21.9%	23.3%	24.5%	25.4%	26.2%	26.9%	27.4%	27.9%
200-250	29.1%	27.8%	29.0%	30.0%	30.8%	31.4%	31.9%	32.3%	32.7%
250-300	32.6%	33.2%	34.2%	34.9%	35.5%	35.9%	36.3%	36.6%	36.9%
300-350	37.3%	38.0%	38.7%	39.2%	39.6%	39.9%	40.2%	40.4%	40.6%
350-400	41.4%	42.4%	42.8%	43.1%	43.3%	43.5%	43.6%	43.7%	43.8%
400-450	44.5%	46.3%	46.5%	46.6%	46.6%	46.7%	46.7%	46.7%	46.7%
450-500	47.3%	49.9%	49.8%	49.7%	49.6%	49.5%	49.5%	49.4%	49.3%
500-550	50.0%	53.1%	52.8%	52.5%	52.3%	52.1%	52.0%	51.8%	51.7%
550-600	53.0%	56.0%	55.5%	55.1%	54.8%	54.5%	54.2%	54.0%	53.9%
600-650	55.1%	58.6%	58.0%	57.4%	57.0%	56.6%	56.3%	56.1%	55.8%
650-700	58.6%	61.1%	60.2%	59.6%	59.1%	58.6%	58.2%	57.9%	57.6%
700-750	61.1%	63.3%	62.3%	61.6%	61.0%	60.4%	60.0%	59.6%	59.3%
750-800	64.0%	65.3%	64.2%	63.4%	62.7%	62.1%	61.6%	61.2%	60.9%
800-850	65.6%	67.2%	66.0%	65.1%	64.3%	63.7%	63.2%	62.7%	62.3%
850-900	67.0%	68.9%	67.6%	66.6%	65.8%	65.1%	64.6%	64.1%	63.7%
900-950	68.9%	70.5%	69.2%	68.1%	67.2%	66.5%	65.9%	65.4%	64.9%
950-1,000	71.0%	72.0%	70.6%	69.4%	68.5%	67.8%	67.1%	66.6%	66.1%
1,000-1,500	83.4%	82.2%	80.5%	79.1%	78.0%	77.0%	76.1%	75.4%	74.8%
1,500-10,000	100.0%	99.4%	99.1%	98.7%	98.3%	97.9%	97.5%	97.1%	96.8%
Based on Individual Data Points		Chi-Squared Statistic							
Total	100%	229491073%	11619638%	1361852%	275277%	81146%	31467%	14997%	8375%
Total \$35K to \$250K	33%	1827%	1086%	688%	456%	313%	222%	163%	124%
Total \$35K to \$1M	57%	1861%	1112%	715%	487%	351%	268%	216%	185%
		Kolmogorov-Smirnov Statistic							
Total	100%	9.6%	8.4%	7.4%	7.6%	8.7%	9.6%	10.3%	11.0%
Total \$35K to \$250K	33%	9.6%	8.4%	7.4%	6.8%	6.2%	5.7%	5.3%	4.8%
Total \$35K to \$1M	57%	9.6%	8.4%	7.4%	6.8%	6.2%	5.7%	5.3%	4.9%
		Anderson-Darling Statistic							
Total	100%	36	29	25	24	23	24	24	25
Total \$35K to \$250K	33%	1,107	1,036	984	943	911	885	863	844
Total \$35K to \$1M	57%	674	651	635	622	612	604	597	591

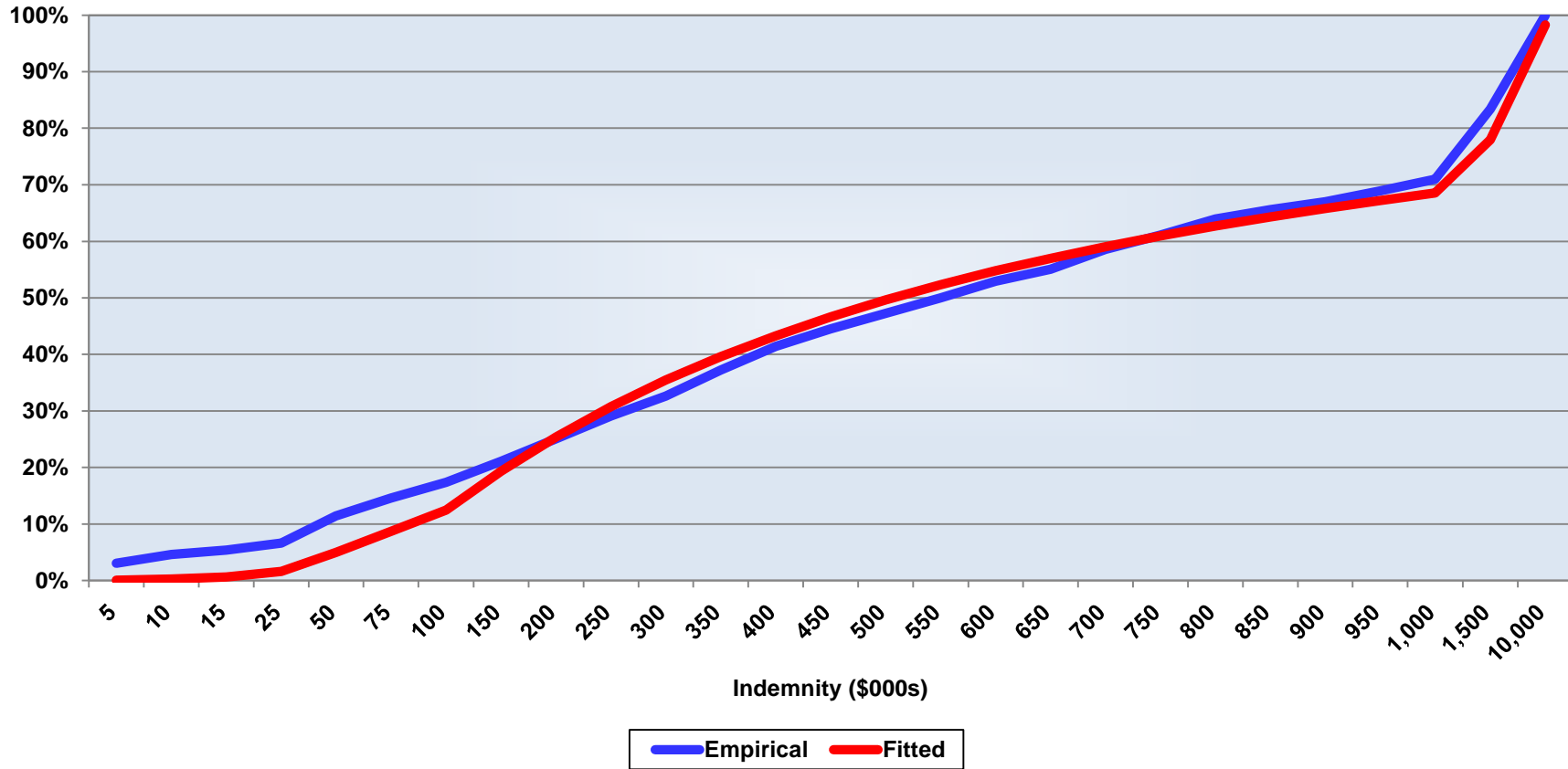
Note: Indications are based on Nevada Closed Claim Data provided by several carriers in the state.

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MSV, VHHA, and VHCA Analysis of a Modification to the Statutory Cap on Damages

Based on all Closed With Indemnity Claims, Trended at 4.0% to July 1, 2029
Closed Years 2004-2023
Cumulative Distribution Function



Note: Reference Exhibit D2 for the data points underlying the chart.
Indications are based on Nevada Closed Claim Data provided by several carriers in the state.

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

*Based on all Closed With Indemnity Claims, Trended at 7.0% to November 1, 2028
Closed Years 2004-2023
Cumulative Distribution Function
Hospitals / Health Systems*

Loss Increment (\$000's)	Actual Distribution	Lognormal Distribution Under Given Coefficient of Variation							
		4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25
0-5	5.2%	1.2%	1.3%	1.5%	1.6%	1.7%	1.9%	2.0%	2.1%
5-10	8.6%	3.2%	3.4%	3.7%	3.9%	4.1%	4.3%	4.6%	4.8%
10-15	12.3%	5.2%	5.5%	5.9%	6.2%	6.5%	6.7%	7.0%	7.3%
15-25	18.0%	9.1%	9.6%	10.0%	10.3%	10.7%	11.0%	11.4%	11.7%
25-50	25.5%	17.4%	18.0%	18.4%	18.9%	19.3%	19.6%	20.0%	20.3%
50-75	30.4%	24.0%	24.5%	25.0%	25.4%	25.8%	26.1%	26.5%	26.8%
75-100	34.0%	29.5%	29.9%	30.3%	30.7%	31.0%	31.4%	31.7%	31.9%
100-150	40.5%	37.9%	38.2%	38.6%	38.8%	39.1%	39.4%	39.6%	39.8%
150-200	45.0%	44.3%	44.5%	44.8%	45.0%	45.2%	45.3%	45.5%	45.7%
200-250	49.5%	49.4%	49.5%	49.7%	49.8%	50.0%	50.1%	50.2%	50.3%
250-300	52.4%	53.5%	53.6%	53.7%	53.8%	53.9%	53.9%	54.0%	54.1%
300-350	55.3%	57.0%	57.0%	57.1%	57.1%	57.2%	57.2%	57.2%	57.2%
350-400	58.4%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	59.9%	59.9%
400-450	60.1%	62.6%	62.5%	62.5%	62.4%	62.4%	62.4%	62.3%	62.3%
450-500	62.7%	64.8%	64.7%	64.7%	64.6%	64.5%	64.5%	64.4%	64.4%
500-550	64.7%	66.8%	66.7%	66.6%	66.5%	66.4%	66.3%	66.3%	66.2%
550-600	66.6%	68.6%	68.5%	68.3%	68.2%	68.1%	68.0%	67.9%	67.8%
600-650	68.5%	70.2%	70.0%	69.9%	69.8%	69.6%	69.5%	69.4%	69.3%
650-700	70.5%	71.7%	71.5%	71.3%	71.2%	71.0%	70.9%	70.8%	70.7%
700-750	71.8%	73.0%	72.8%	72.6%	72.4%	72.3%	72.1%	72.0%	71.9%
750-800	72.8%	74.2%	74.0%	73.8%	73.6%	73.4%	73.3%	73.1%	73.0%
800-850	74.6%	75.3%	75.1%	74.9%	74.7%	74.5%	74.3%	74.2%	74.0%
850-900	76.1%	76.3%	76.1%	75.9%	75.7%	75.5%	75.3%	75.1%	75.0%
900-950	77.3%	77.3%	77.0%	76.8%	76.6%	76.4%	76.2%	76.0%	75.9%
950-1,000	79.0%	78.1%	77.9%	77.6%	77.4%	77.2%	77.0%	76.9%	76.7%
1,000-1,500	88.5%	84.3%	84.0%	83.8%	83.5%	83.3%	83.0%	82.8%	82.6%
1,500-10,000	100.0%	98.2%	98.0%	97.9%	97.8%	97.7%	97.5%	97.4%	97.3%
Based on Individual Data Points		Chi-Squared Statistic							
Total	100%	7926%	6264%	5083%	4210%	3546%	3027%	2614%	2279%
Total \$35K to \$250K	35%	555%	467%	395%	335%	286%	244%	209%	179%
Total \$35K to \$1M	52%	571%	482%	409%	349%	300%	258%	223%	194%
		Kolmogorov-Smirnov Statistic							
Total	100%	9.0%	8.6%	8.1%	7.8%	7.4%	7.1%	6.8%	7.0%
Total \$35K to \$250K	35%	8.7%	8.2%	7.7%	7.3%	6.9%	6.6%	6.2%	5.9%
Total \$35K to \$1M	52%	8.7%	8.2%	7.7%	7.3%	6.9%	6.6%	6.2%	5.9%
		Anderson-Darling Statistic							
Total	100%	35	32	30	28	27	25	24	23
Total \$35K to \$250K	35%	1,840	1,824	1,808	1,795	1,782	1,771	1,760	1,750
Total \$35K to \$1M	52%	1,012	1,010	1,009	1,008	1,007	1,006	1,005	1,005

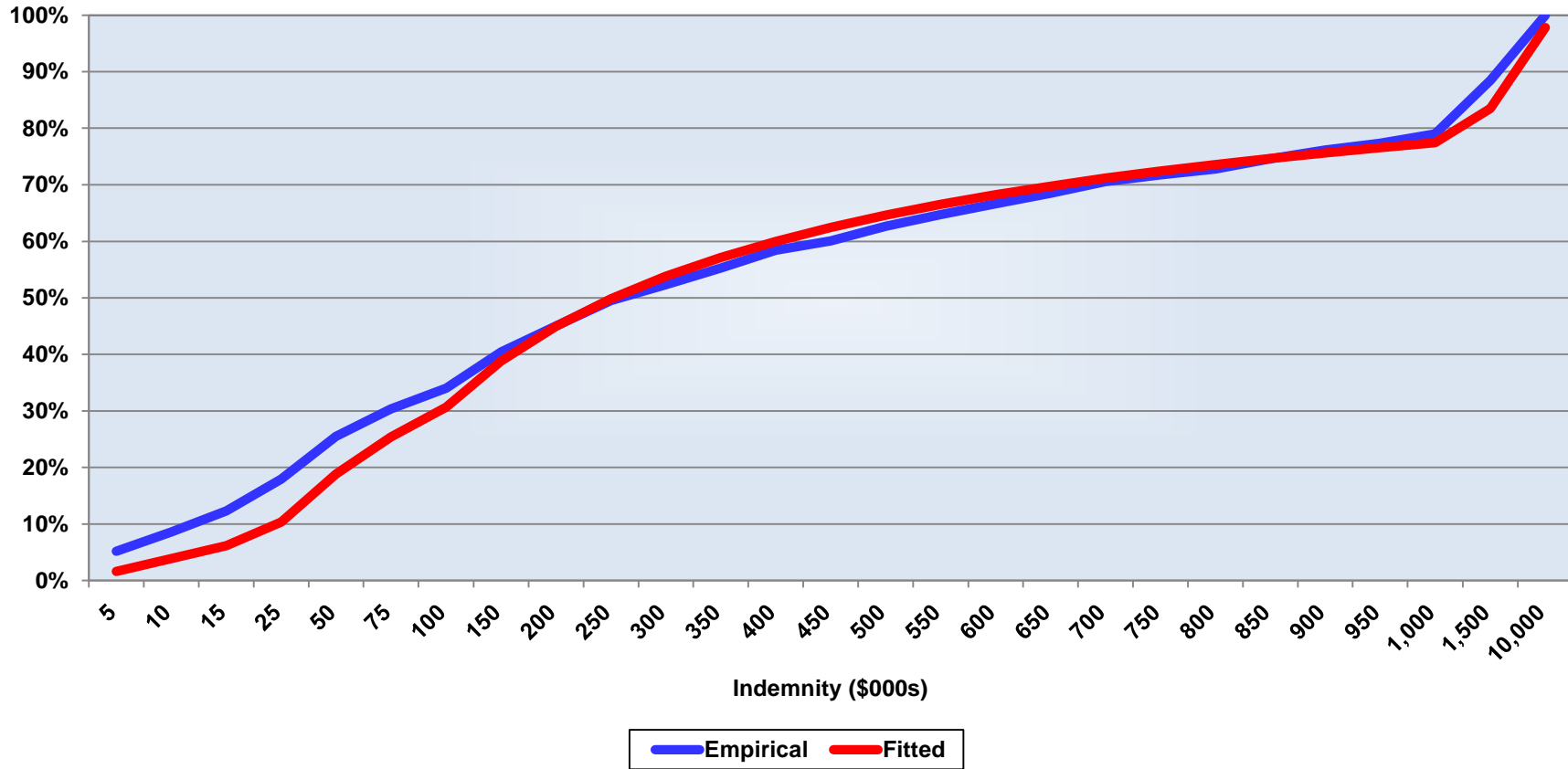
Note: Indications are based on Nevada Closed Claim Data provided by several carriers in the state.

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MSV, VHHA, and VHCA Analysis of a Modification to the Statutory Cap on Damages

*Based on all Closed With Indemnity Claims, Trended at 7.0% to November 1, 2028
Closed Years 2004-2023
Cumulative Distribution Function*



Note: Reference Exhibit D4 for the data points underlying the chart.
Indications are based on Nevada Closed Claim Data provided by several carriers in the state.

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Based on all Closed With Indemnity Claims, Trended at 0.0% to July 1, 2026
TDI Closed Claim Database - Closed Years 2000-2005 (Economic Losses Only)
Cumulative Distribution Function

Loss Increment (\$000's)	Actual Distribution	Lognormal Distribution Under Given Coefficient of Variation							
		3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25
0-5	5.7%	4.2%	4.7%	5.3%	5.8%	6.3%	6.8%	7.3%	7.7%
5-10	13.5%	9.7%	10.6%	11.4%	12.2%	12.9%	13.6%	14.2%	14.8%
10-15	18.8%	14.8%	15.8%	16.7%	17.6%	18.4%	19.2%	19.9%	20.5%
15-25	29.6%	23.3%	24.4%	25.4%	26.4%	27.2%	28.0%	28.7%	29.3%
25-35	34.9%	30.2%	31.3%	32.2%	33.1%	33.9%	34.6%	35.3%	35.9%
35-50	45.4%	38.3%	39.3%	40.2%	40.9%	41.7%	42.3%	42.9%	43.4%
50-75	51.9%	48.2%	49.0%	49.7%	50.3%	50.8%	51.4%	51.8%	52.2%
75-100	60.8%	55.3%	55.9%	56.5%	56.9%	57.4%	57.8%	58.1%	58.4%
100-125	64.3%	60.7%	61.2%	61.6%	62.0%	62.3%	62.6%	62.9%	63.1%
125-150	68.8%	65.0%	65.4%	65.7%	65.9%	66.2%	66.4%	66.6%	66.8%
150-175	70.5%	68.5%	68.7%	69.0%	69.2%	69.4%	69.5%	69.7%	69.8%
175-200	74.3%	71.4%	71.6%	71.7%	71.9%	72.0%	72.1%	72.2%	72.3%
200-225	76.5%	73.8%	73.9%	74.0%	74.1%	74.2%	74.3%	74.3%	74.4%
225-250	77.9%	75.9%	76.0%	76.0%	76.1%	76.1%	76.2%	76.2%	76.2%
250-300	80.2%	79.3%	79.3%	79.3%	79.2%	79.2%	79.2%	79.2%	79.2%
300-350	82.2%	81.9%	81.8%	81.8%	81.7%	81.7%	81.6%	81.6%	81.5%
350-400	84.9%	84.0%	83.9%	83.8%	83.7%	83.6%	83.5%	83.5%	83.4%
400-450	85.7%	85.7%	85.6%	85.5%	85.3%	85.2%	85.1%	85.0%	85.0%
450-500	87.2%	87.2%	87.0%	86.8%	86.7%	86.6%	86.5%	86.4%	86.3%
500-600	88.6%	89.4%	89.2%	89.0%	88.8%	88.7%	88.6%	88.4%	88.3%
600-700	89.6%	91.1%	90.8%	90.6%	90.5%	90.3%	90.2%	90.0%	89.9%
700-800	91.0%	92.3%	92.1%	91.9%	91.7%	91.5%	91.4%	91.3%	91.1%
800-900	91.6%	93.3%	93.1%	92.9%	92.7%	92.5%	92.4%	92.3%	92.1%
900-1,000	93.4%	94.1%	93.9%	93.7%	93.5%	93.4%	93.2%	93.1%	92.9%
1,000-1,250	94.5%	95.6%	95.4%	95.2%	95.0%	94.9%	94.7%	94.6%	94.4%
1,250-1,500	95.5%	96.5%	96.4%	96.2%	96.0%	95.9%	95.7%	95.6%	95.5%
1,500-35,000	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Based on Individual Data Points		Chi-Squared Statistic							
Total	100%	520%	295%	183%	150%	169%	226%	308%	408%
Total \$35K to \$250K	43%	207%	130%	80%	49%	32%	25%	26%	31%
Total \$35K to \$1M	59%	210%	132%	82%	51%	34%	27%	27%	33%
		Kolmogorov-Smirnov Statistic							
Total	100%	7.1%	6.1%	5.2%	4.4%	3.7%	4.4%	5.0%	5.6%
Total \$35K to \$250K	43%	7.1%	6.1%	5.2%	4.4%	3.7%	3.2%	2.9%	3.4%
Total \$35K to \$1M	59%	7.1%	6.1%	5.2%	4.4%	3.7%	3.2%	2.9%	3.4%
		Anderson-Darling Statistic							
Total	100%	8	5	3	3	3	3	4	6
Total \$35K to \$250K	43%	1,412	1,416	1,421	1,426	1,431	1,436	1,441	1,446
Total \$35K to \$1M	59%	823	836	849	861	872	883	894	904

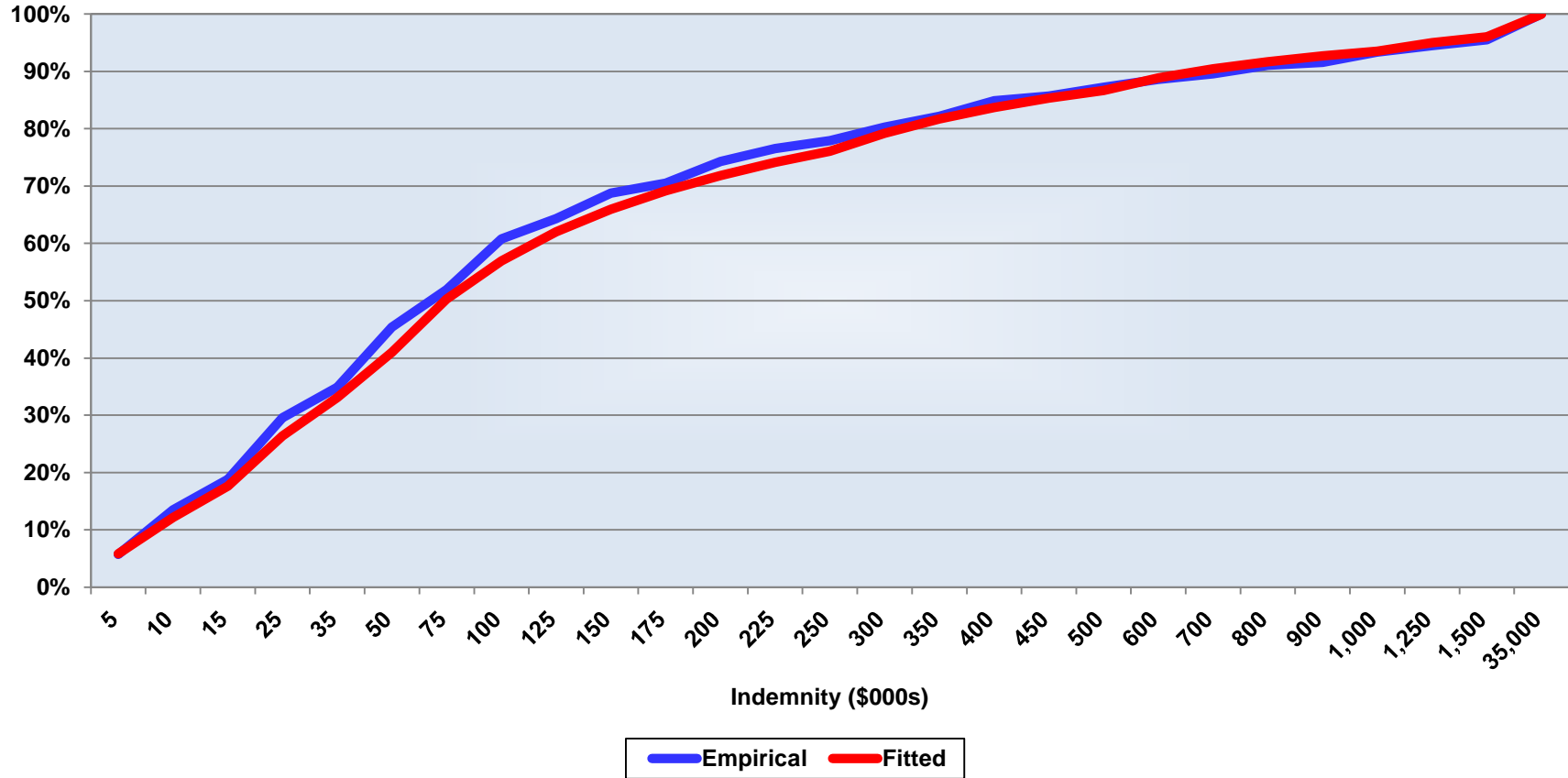
Note: Indications are based on Texas Closed Claim Data

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Based on all Closed With Indemnity Claims, Trended at 0.0% to July 1, 2026
TDI Closed Claim Database - Closed Years 2000-2005 (Economic Losses Only)
Cumulative Distribution Function



Note: Reference Exhibit D6 for the data points underlying the chart.
Indications are based on Texas Closed Claim Data

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Based on all Closed With Indemnity Claims, Trended at 0.0% to July 1, 2026
TDI Closed Claim Database - Closed Years 2000-2005 (Non-Economic Losses Only)
Cumulative Distribution Function

Loss Increment (\$000's)	Cumulative Percent of Claims in Increment	Lognormal Distribution Under Given Coefficient of Variation							
		2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75
0-5	0.9%	0.3%	0.5%	0.8%	1.1%	1.4%	1.8%	2.1%	2.4%
5-10	3.7%	1.4%	2.1%	2.8%	3.5%	4.2%	4.8%	5.5%	6.1%
10-15	7.1%	3.1%	4.2%	5.2%	6.2%	7.1%	8.0%	8.8%	9.6%
15-25	13.8%	7.2%	8.8%	10.4%	11.7%	13.0%	14.1%	15.1%	16.0%
25-35	17.8%	11.6%	13.6%	15.3%	16.9%	18.2%	19.4%	20.5%	21.5%
35-50	25.9%	18.0%	20.2%	22.1%	23.7%	25.1%	26.3%	27.4%	28.3%
50-75	34.0%	27.5%	29.7%	31.5%	33.0%	34.3%	35.4%	36.4%	37.2%
75-100	43.1%	35.6%	37.5%	39.1%	40.4%	41.5%	42.4%	43.2%	44.0%
100-125	47.6%	42.3%	44.0%	45.3%	46.4%	47.3%	48.1%	48.8%	49.3%
125-150	51.7%	48.0%	49.4%	50.5%	51.4%	52.1%	52.7%	53.3%	53.7%
150-175	55.3%	52.8%	53.9%	54.8%	55.5%	56.1%	56.6%	57.1%	57.4%
175-200	61.6%	57.0%	57.9%	58.6%	59.1%	59.6%	60.0%	60.3%	60.6%
200-225	63.6%	60.6%	61.3%	61.8%	62.2%	62.5%	62.8%	63.1%	63.3%
225-250	66.6%	63.8%	64.2%	64.6%	64.9%	65.1%	65.4%	65.5%	65.7%
250-300	71.3%	69.0%	69.2%	69.3%	69.4%	69.5%	69.6%	69.6%	69.7%
300-350	73.5%	73.2%	73.1%	73.0%	73.0%	72.9%	72.9%	72.9%	72.9%
350-400	76.8%	76.5%	76.3%	76.1%	75.9%	75.8%	75.7%	75.6%	75.5%
400-450	78.7%	79.3%	78.9%	78.6%	78.3%	78.1%	78.0%	77.8%	77.7%
450-500	81.5%	81.6%	81.1%	80.7%	80.4%	80.1%	79.9%	79.7%	79.5%
500-600	83.8%	85.1%	84.5%	84.1%	83.6%	83.3%	83.0%	82.8%	82.5%
600-700	86.1%	87.8%	87.1%	86.6%	86.1%	85.7%	85.4%	85.1%	84.8%
700-800	87.8%	89.8%	89.1%	88.5%	88.0%	87.6%	87.3%	86.9%	86.7%
800-900	89.2%	91.3%	90.6%	90.1%	89.6%	89.1%	88.8%	88.4%	88.1%
900-1,000	91.5%	92.6%	91.9%	91.3%	90.8%	90.4%	90.0%	89.7%	89.4%
1,000-1,250	93.3%	94.7%	94.1%	93.6%	93.1%	92.6%	92.3%	91.9%	91.6%
1,250-1,500	94.9%	96.1%	95.5%	95.0%	94.6%	94.2%	93.8%	93.5%	93.2%
1,500-35,000	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Based on Individual Data Points		Chi-Squared Statistic							
Total	100%	2155%	794%	226%	53%	87%	234%	442%	682%
Total \$35K to \$250K	49%	986%	366%	102%	22%	39%	110%	209%	323%
Total \$35K to \$1M	74%	1003%	375%	108%	26%	42%	113%	213%	328%
		Kolmogorov-Smirnov Statistic							
Total	100%	8.0%	5.7%	4.0%	2.7%	2.6%	3.8%	4.9%	5.8%
Total \$35K to \$250K	49%	8.0%	5.7%	4.0%	2.7%	2.6%	3.8%	4.9%	5.8%
Total \$35K to \$1M	74%	8.0%	5.7%	4.0%	2.7%	2.6%	3.8%	4.9%	5.8%
		Anderson-Darling Statistic							
Total	100%	24	10	3	1	1	4	7	11
Total \$35K to \$250K	49%	1,975	1,924	1,887	1,859	1,837	1,819	1,805	1,792
Total \$35K to \$1M	74%	888	886	890	895	902	910	917	925

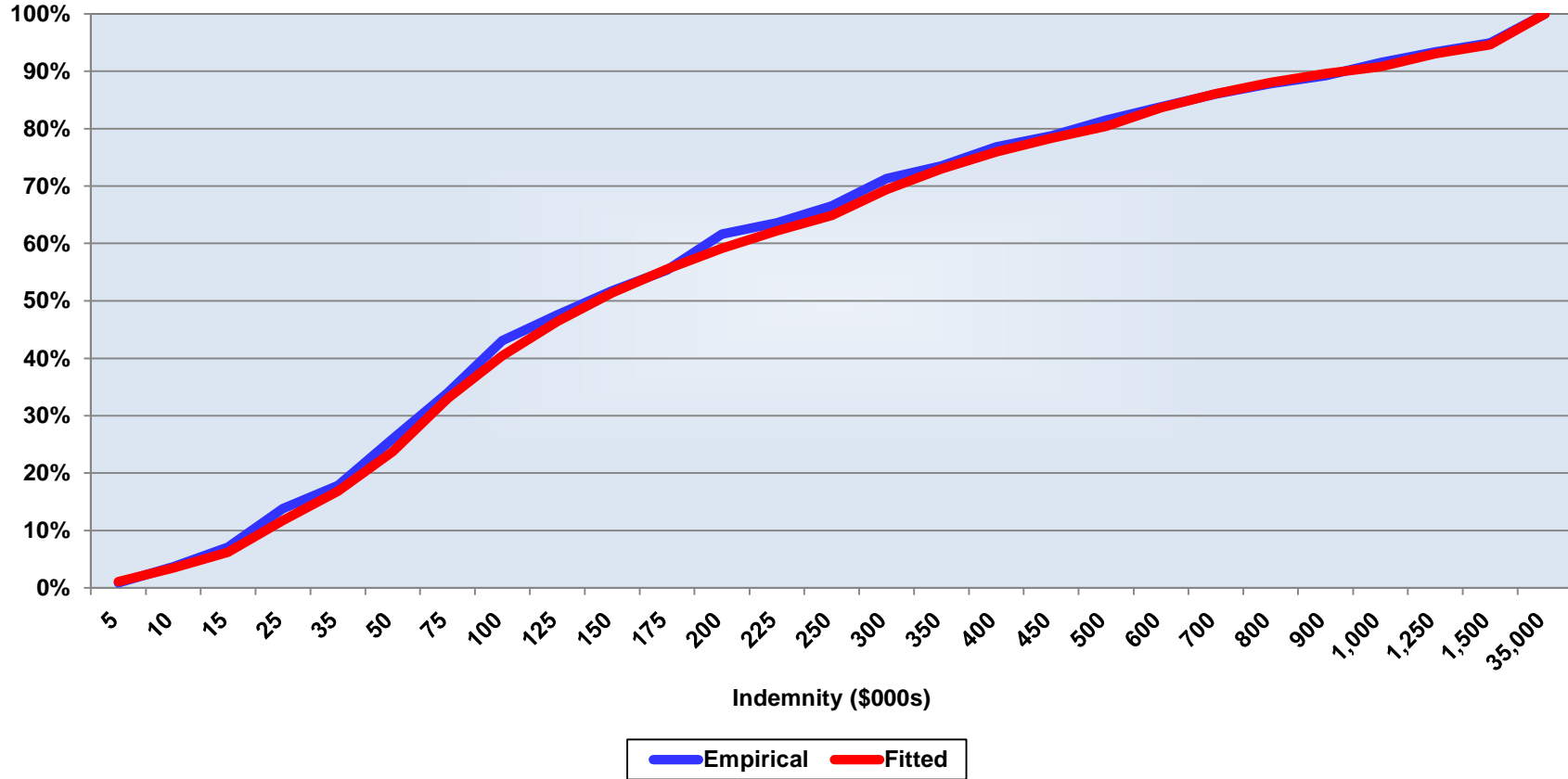
Note: Indications are based on Texas Closed Claim Data

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Based on all Closed With Indemnity Claims, Trended at 0.0% to July 1, 2026
TDI Closed Claim Database - Closed Years 2000-2005 (Non-Economic Losses Only)
Cumulative Distribution Function



Note: Reference Exhibit D8 for the data points underlying the chart.
Indications are based on Texas Closed Claim Data

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

*Relationship Between ALAE and Non-Zero Indemnity
Physicians*

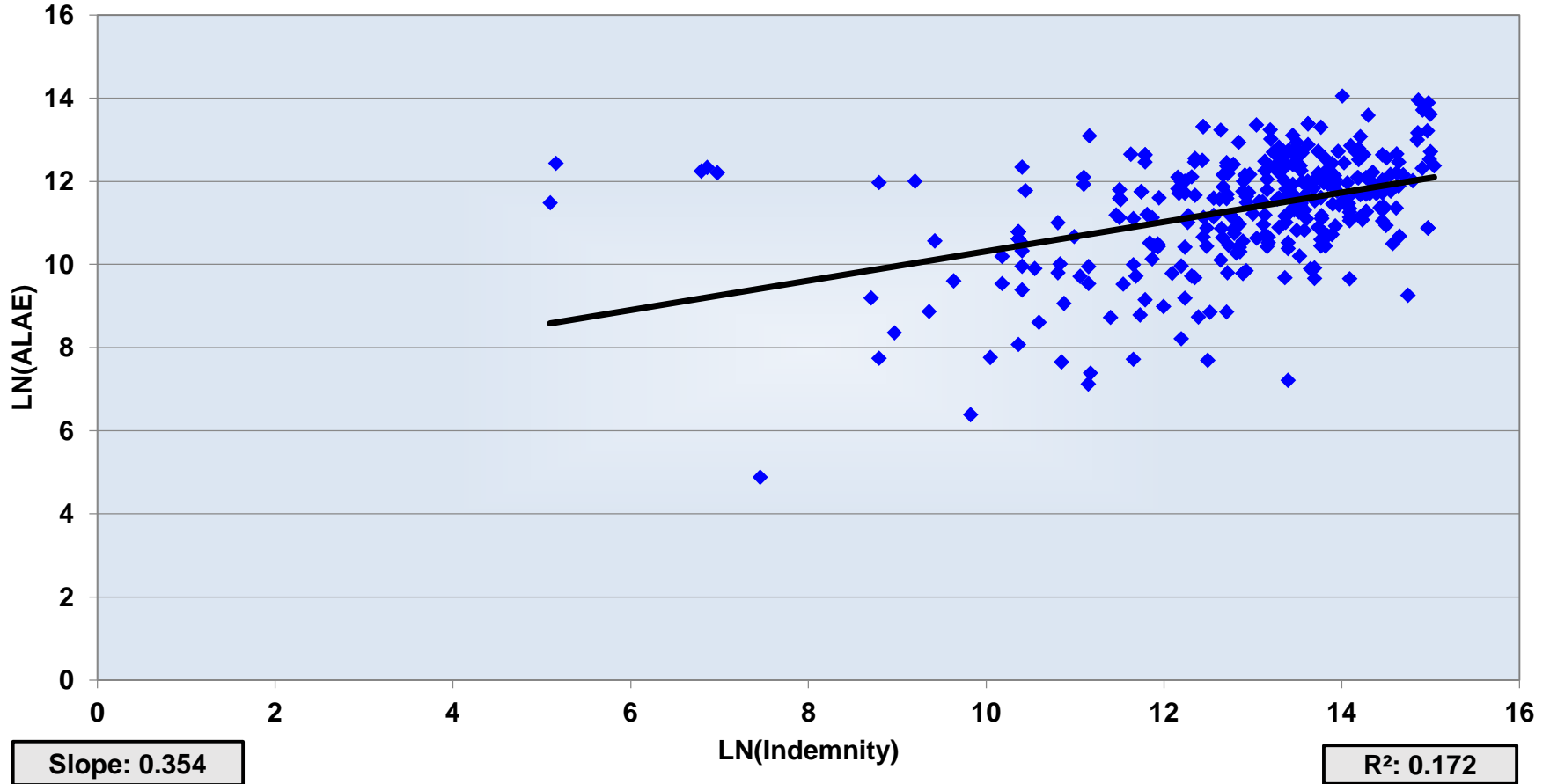
Database ¹	Years Used	Assumption	Claim Count	Slope	Intercept	R Squared	Indicated Correlation Coefficient	
							Pearson's R	Spearman's Rank Order
Virginia	2004-2023	Linear Relationship	837	0.071	100,819.922	0.127	0.356	0.402
		Log-Linear Relationship	837	0.434	5.666	0.186	0.432	0.402
Virginia	2008-2023	Linear Relationship	715	0.072	101,996.441	0.120	0.347	0.409
		Log-Linear Relationship	715	0.430	5.733	0.195	0.442	0.409
Virginia	2013-2023	Linear Relationship	531	0.076	95,231.162	0.123	0.350	0.411
		Log-Linear Relationship	531	0.416	5.947	0.211	0.460	0.411
Virginia	2018-2023	Linear Relationship	341	0.088	88,111.325	0.140	0.375	0.409
		Log-Linear Relationship	341	0.354	6.781	0.172	0.414	0.409
Log-Linear Relationship				0.354				

¹ Indemnity and ALAE adjusted for inflation under the parameters selected on Exhibit C11, Exhibit C15 and Exhibit C17.

Note: Indications are based on Virginia Closed Claim Data provided by several carriers in the state

MSV, VHHA, and VHCA Analysis of a Modification to the Statutory Cap on Damages

*Log-Linear Relationship Between Non-Zero Indemnity and Non-Zero ALAE
Closed Years 2018 - 2023
Physicians*



Note: Indications are based on Virginia Closed Claim Data provided by several carriers in the state

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

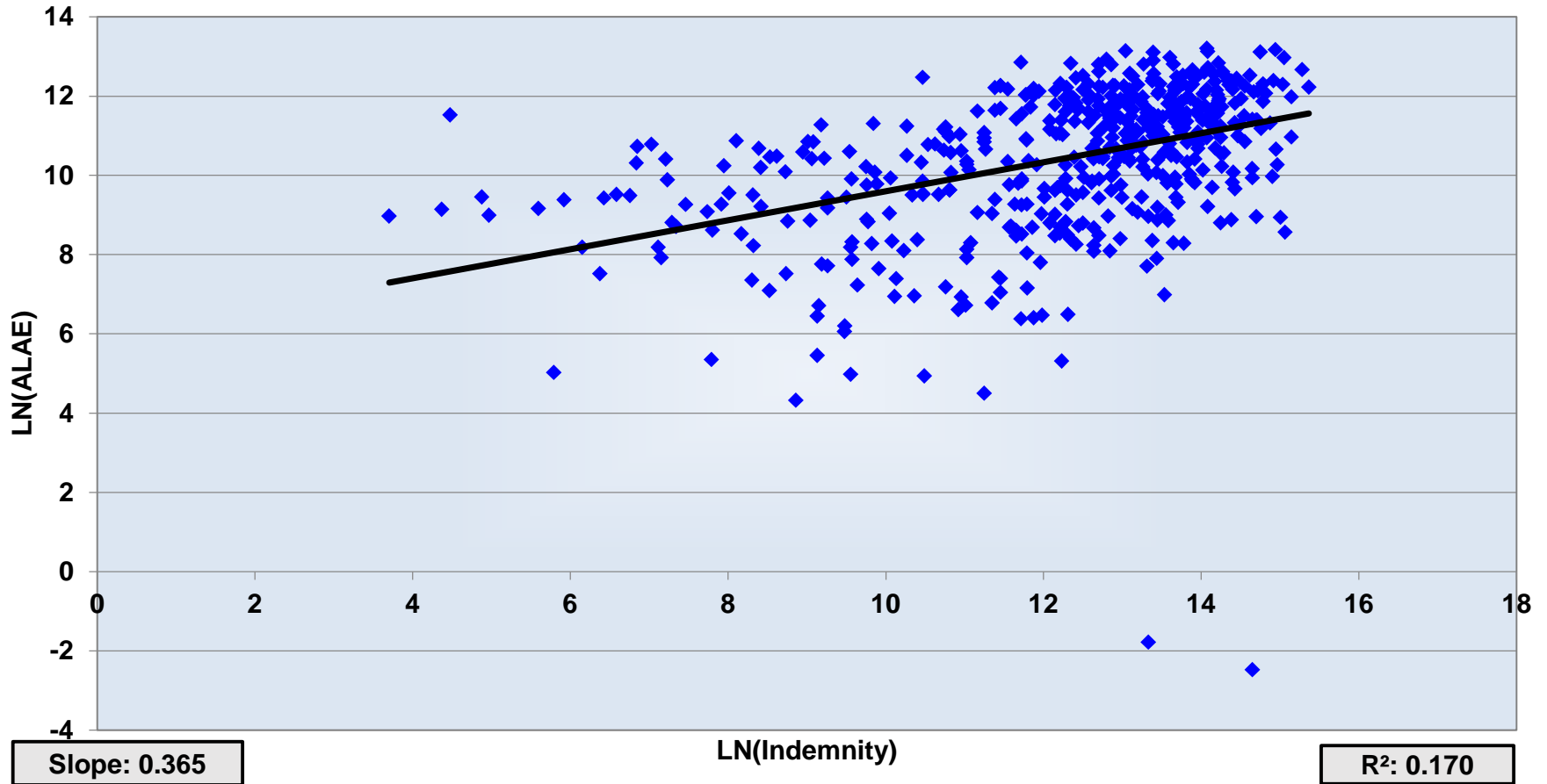
*Relationship Between ALAE and Non-Zero Indemnity
Hospitals / Health Systems*

Database ¹	Years Used	Assumption	Claim Count	Slope	Intercept	R Squared	Indicated Correlation Coefficient	
							Pearson's R	Spearman's Rank Order
Virginia	2004-2023	Linear Relationship	1,106	0.035	57,418.730	0.094	0.307	0.443
		Log-Linear Relationship	1,106	0.421	4.977	0.161	0.401	0.443
Virginia	2008-2023	Linear Relationship	1,043	0.036	58,760.528	0.092	0.303	0.437
		Log-Linear Relationship	1,043	0.408	5.186	0.157	0.397	0.437
Virginia	2013-2023	Linear Relationship	812	0.033	64,167.134	0.073	0.271	0.441
		Log-Linear Relationship	812	0.388	5.539	0.156	0.395	0.441
Virginia	2018-2023	Linear Relationship	513	0.045	58,402.845	0.115	0.339	0.487
		Log-Linear Relationship	513	0.365	5.958	0.170	0.412	0.487
Log-Linear Relationship				0.365				

¹ Indemnity and ALAE adjusted for inflation under the parameters selected on Exhibit C12, Exhibit C16 and Exhibit C18.
Note: Indications are based on Virginia Closed Claim Data provided by several carriers in the state

MSV, VHHA, and VHCA Analysis of a Modification to the Statutory Cap on Damages

*Log-Linear Relationship Between Non-Zero Indemnity and Non-Zero ALAE
Closed Years 2018 - 2023
Hospitals / Health Systems*



Note: Indications are based on Virginia Closed Claim Data provided by several carriers in the state

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Relationship Between Economic and Non-Economic Indemnity Severity
Data from the TDI Closed Claim Database

Closed Year	Average Indemnity Payment ¹		Severity Ratio, Economic to Non-Economic
	Economic	Non-Economic	
2000	343,628	499,981	68.7%
2001	331,863	443,797	74.8%
2002	376,831	424,272	88.8%
2003	299,415	309,708	96.7%
2004	372,742	413,597	90.1%
2005	221,920	275,758	80.5%
2006	318,909	283,925	112.3%
2007	86,834	156,951	55.3%
2008	126,031	290,627	43.4%
2009	154,041	160,355	96.1%
2010	194,322	157,803	123.1%
2011	241,539	171,343	141.0%
2012	162,272	178,593	90.9%
All Years	278,035	333,653	83.3%
2000-2007	311,702	374,045	83.3%
2000-2005	327,044	395,539	82.7%
2000-2003	336,984	418,634	80.5%

Selected	82.5%
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¹ Includes only claims for which an amount was paid for the given loss type
 Note: Texas House Bill 4, which caps non-economic damages at \$250,000 became effective in September, 2003. Therefore, the selected ratios rely on earlier closed years, prior to this law change.

**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Economic and Non-Economic Indemnity Claim Type Distribution
Data from the TDI Closed Claim Database

Closed Year	Economic Only	Non-Economic Only	Economic and Non-Economic
2000	5.2%	18.2%	76.6%
2001	3.2%	23.6%	73.2%
2002	3.0%	18.1%	78.9%
2003	3.3%	16.4%	80.3%
2004	1.7%	17.1%	81.2%
2005	2.4%	22.4%	75.2%
2006	0.5%	13.3%	86.2%
2007	0.8%	4.6%	94.6%
2008	1.8%	8.8%	89.5%
2009	0.6%	10.1%	89.2%
2010	0.8%	6.5%	92.7%
2011	0.0%	5.1%	94.9%
2012	1.6%	12.2%	86.2%
Total	2.4%	15.9%	81.8%
2000-2007	2.8%	18.0%	79.2%
2000-2005	3.1%	19.2%	77.7%
2000-2003	3.7%	19.0%	77.3%
Selected	3.0%	19.0%	78.0%

Note: Texas House Bill 4, which caps non-economic damages at \$250,000 became effective in September, 2003. Therefore, the selected ratios rely on earlier closed years, prior to this law change.

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**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Relationship Between Non-Zero Economic Indemnity and Non-Zero Non-Economic Indemnity
Data from the TDI Closed Claim Database

Database ¹	Years Used	Assumption	R Squared	Indicated Correlation Coefficient	
				Pearson's R	Spearman's Rank Order
Texas	All	Linear Relationship	0.250	0.500	0.592
		Log-Linear Relationship	0.362	0.601	0.592
Texas	2000-2007	Linear Relationship	0.295	0.543	0.603
		Log-Linear Relationship	0.378	0.615	0.603
Texas	2000-2005	Linear Relationship	0.302	0.549	0.613
		Log-Linear Relationship	0.390	0.625	0.613
Texas	2000-2003	Linear Relationship	0.320	0.566	0.618
		Log-Linear Relationship	0.399	0.632	0.618
Log-Linear Relationship					0.600

¹ Indemnity adjusted for inflation at 0.0% per annum to an average closed date of July 1, 2026.

**MSV, VHHA, and VHCA
Analysis of a Modification to the Statutory Cap on Damages**

Severity Trend Indications
Data from the TDI Closed Claim Database

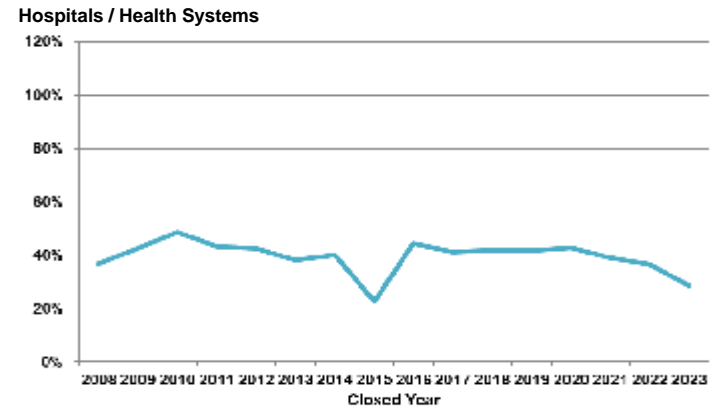
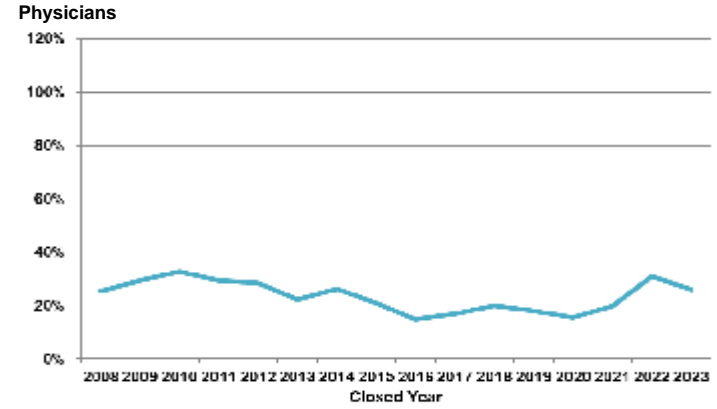
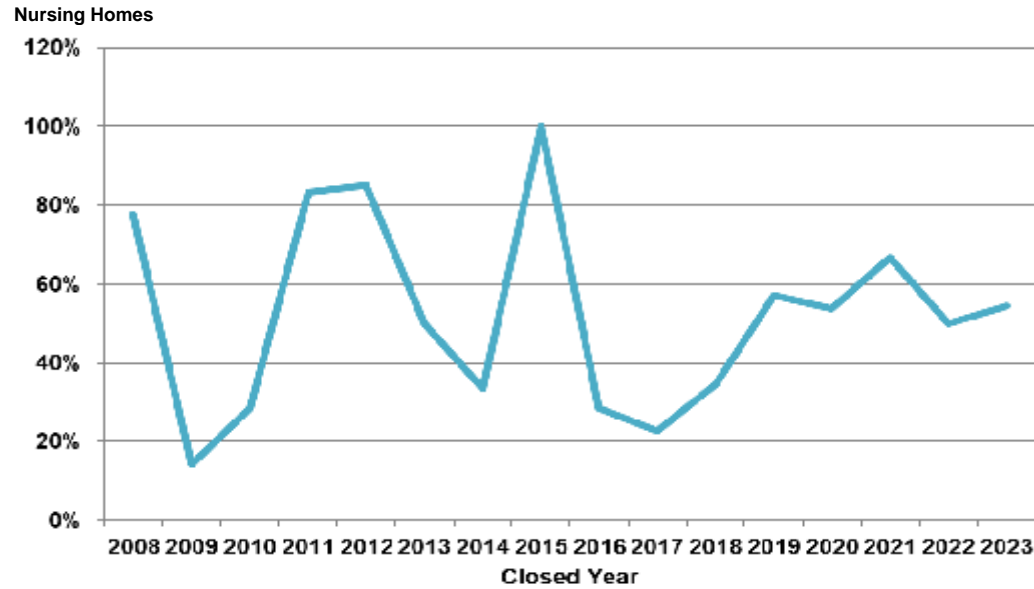
Closed Year	Loss Severity	LN of loss Severity
2000	755,233	13.535
2001	683,058	13.434
2002	720,222	13.487
2003	549,884	13.217
2004	715,421	13.481
2005	441,400	12.998
2006	558,916	13.234
2007	238,569	12.382
2008	400,504	12.900
2009	297,782	12.604
2010	338,316	12.732
2011	400,540	12.901
2012	318,172	12.670
Trend Indications		
2000+		-7.7%
2003+		-6.8%
2008+		-1.6%
R-Squared for Trend Indications		
2000+		65.6%
2003+		41.6%
2008+		3.7%
Selected Trend Rate		0.0%

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MSV, VHHA, and VHCA
 Analysis of a Modification to the Statutory Cap on Damages
 Nursing Homes

CWI Frequency by Closed Year - Comparison of Nursing Homes, Physicians, and Hospitals

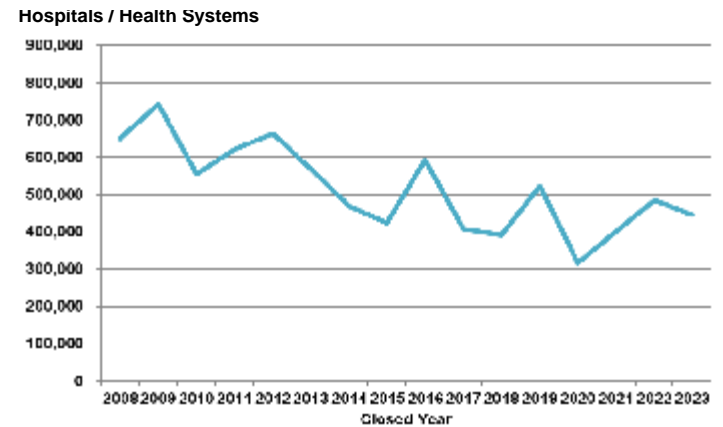
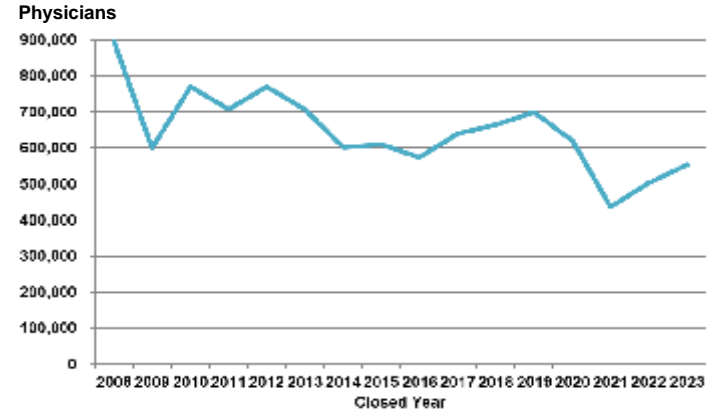
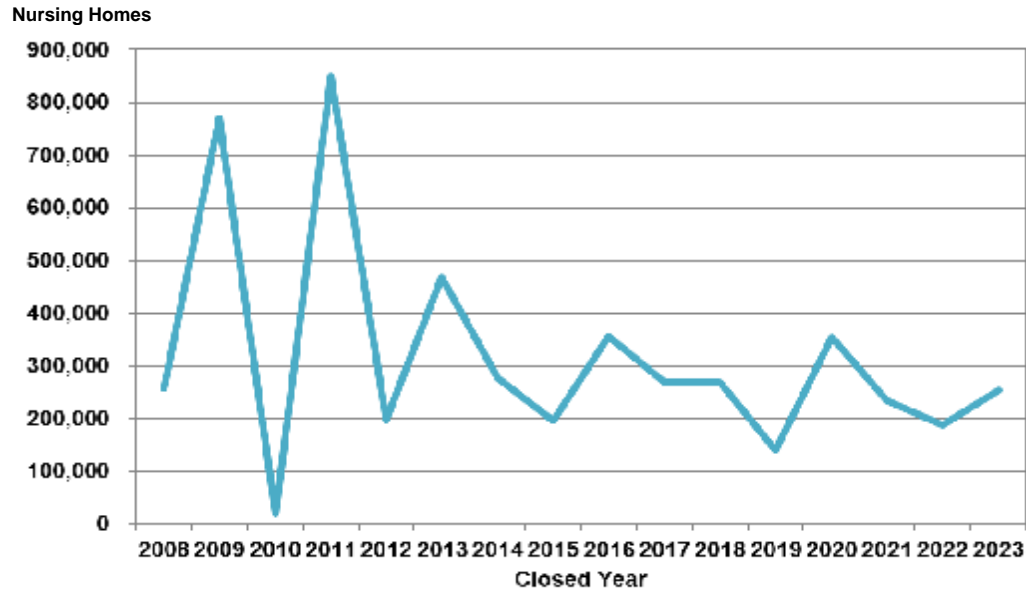


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 Analysis of a Modification to the Statutory Cap on Damages
 Nursing Homes

Loss Severity Limited to \$1M by Closed Year - Comparison of Nursing Homes, Physicians, and Hospitals

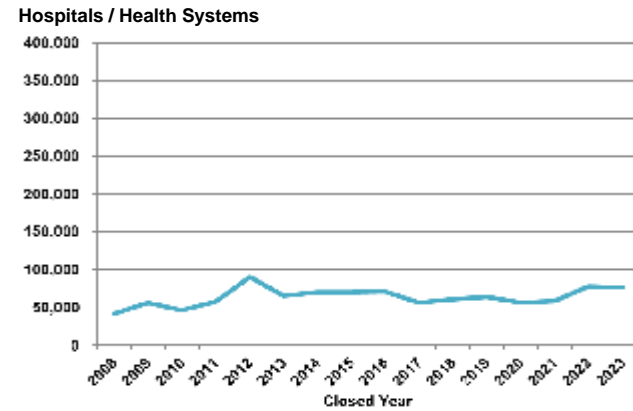
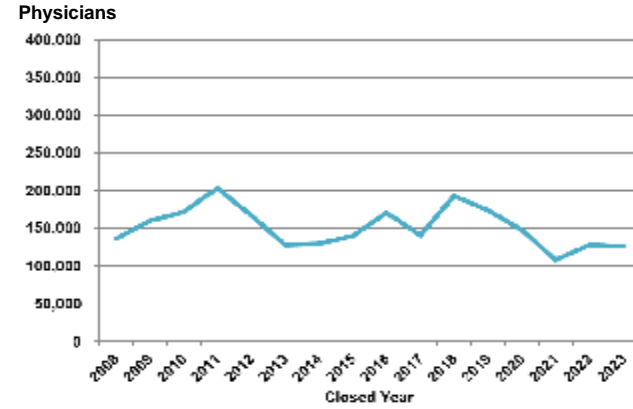
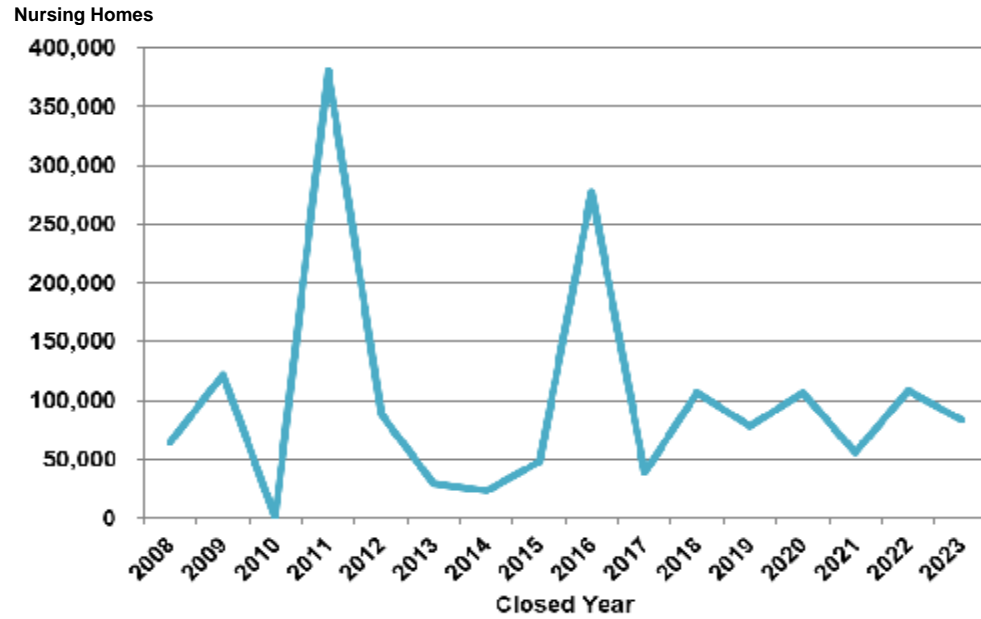


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 Nursing Homes

CWI ALAE by Closed Year - Comparison of Nursing Homes, Physicians, and Hospitals

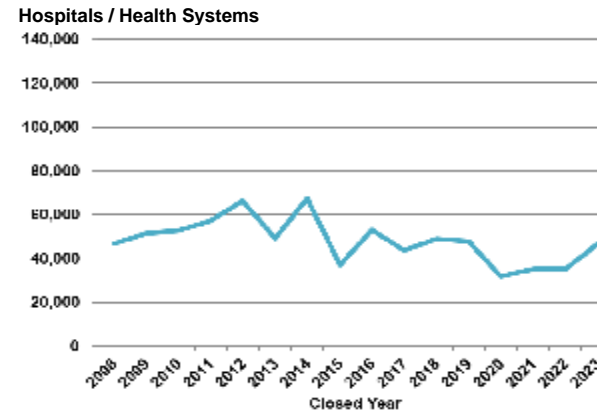
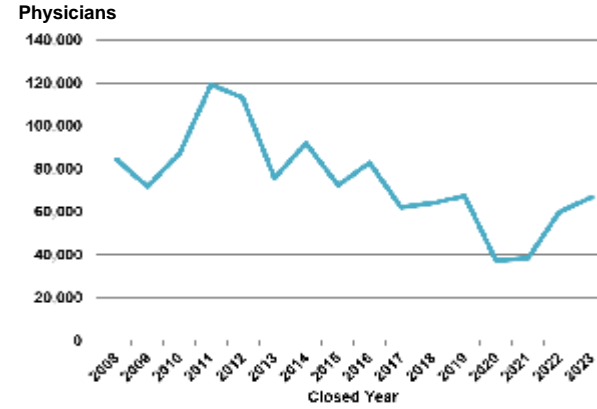
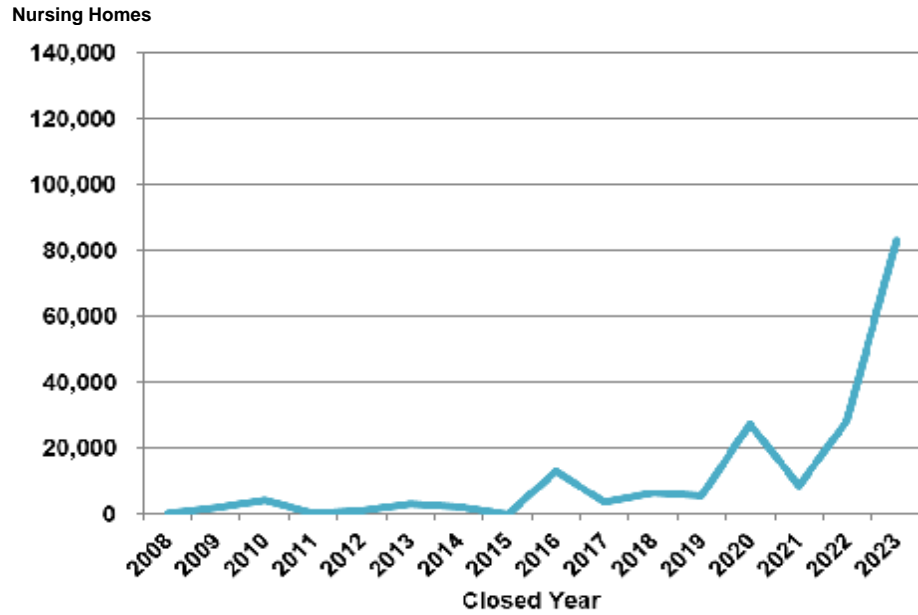


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CWE ALAE by Closed Year - Comparison of Nursing Homes, Physicians, and Hospitals

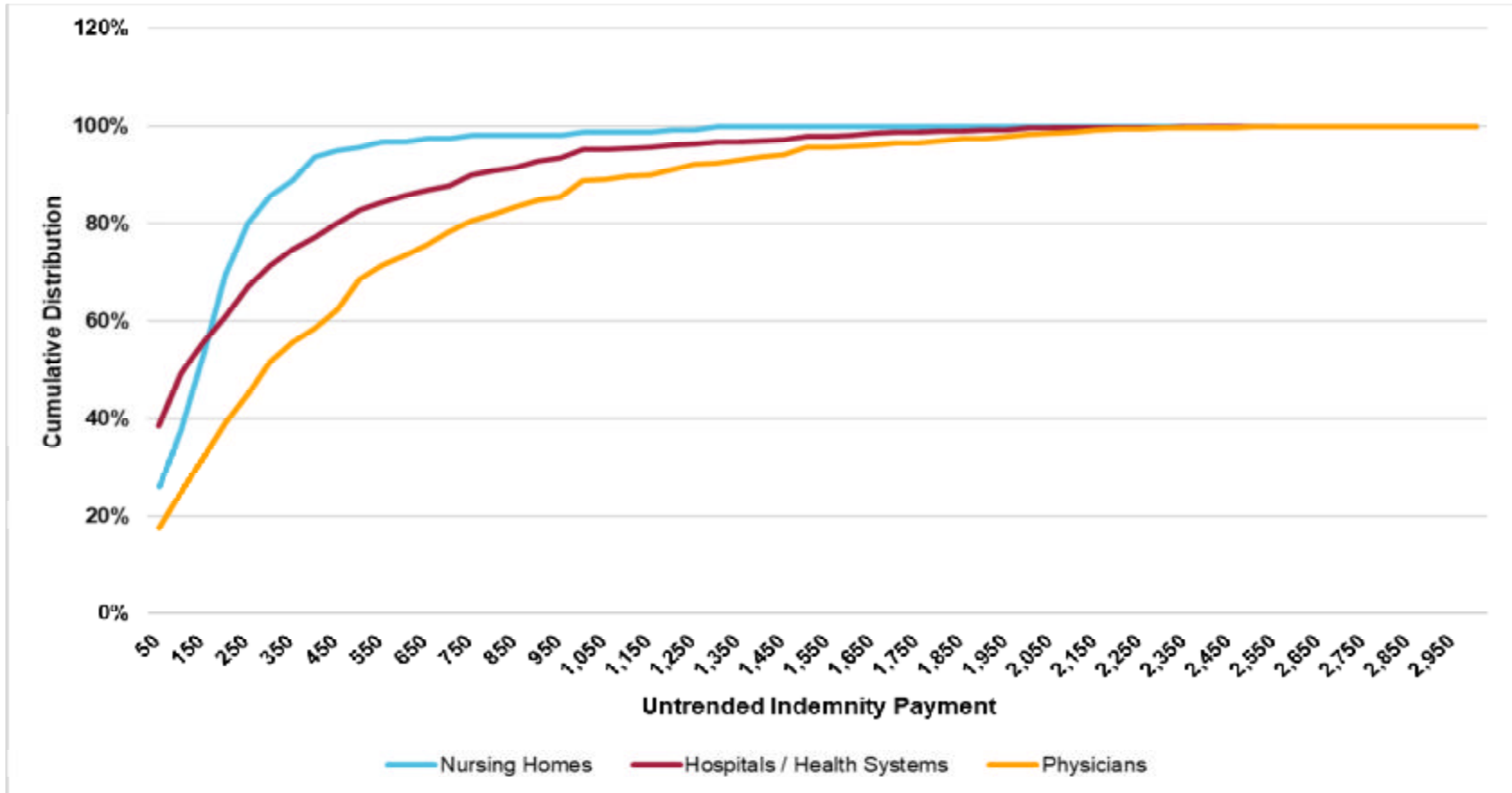


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Analysis of a Modification to the Statutory Cap on Damages
Nursing Homes**

Cumulative Distribution of Untrended Indemnity Payments - Comparison of Nursing Homes, Physicians, and Hospitals



Note: Claims without an indemnity payment are excluded.

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