# ACTUARIAL ANALYSIS OF LOSS AND LOSS ADJUSTMENT EXPENSE RESERVES AS OF DECEMBER 31, 2015

BASED ON DATA AS OF SEPTEMBER 30, 2015

## REPORT TO THE ACTUARIAL COMMITTEE

Prepared for: The Underwriting & Actuarial Committee of the

Wisconsin Health Care Liability Insurance Plan

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# WISCONSIN HEALTH CARE LIABILITY INSURANCE PLAN ACTUARIAL ANALYSIS AS OF SEPTEMBER 30, 2015

## **Executive Summary**

Through a review and analysis of a significant amount of data and information, Pinnacle Actuarial Resources, Inc. (Pinnacle) has come to a number of key conclusions regarding the Wisconsin Health Care Liability Insurance Plan (Plan). This report summarizes Pinnacle's annual actuarial analysis based on data valued as of September 30, 2015.

We are making five recommendations for the Committee's consideration.

Our first recommendation deals with the Plan's financial reporting requirements as of December 31, 2015. Specifically, we recommend that the Plan establish their loss and loss adjustment expense reserves as of December 31, 2015 at \$9,163,561 consistent with the results of our analysis. The table below presents a summary of the recommended reserve levels by coverage.

Undiscoun	ted Reserves as of Dece	ember 31, 2015	
Coverage	Loss Reserves	LAE Reserves	Total Reserves
Physicians & Surgeons	3,091,525	3,011,839	6,103,364
Hospital Professional Liability	1,327,235	1,421,854	2,749,089
Hospital General Liability	162,173	148,934	311,107
Total Plan	4,580,933	4,582,628	9,163,561

To place the recommended reserve levels in perspective, the Plan recorded \$10.5 million as its unpaid claim liabilities as of December 31, 2014.

Our current analysis indicates that the loss and LAE reserves held as of December 31, 2014 may ultimately prove to be redundant by about \$3.2 million. This favorable development is predominantly due to favorable loss experience for all three programs. On a percentage basis, this change translates to an indicated favorable development of 30.2% of the prior reserve estimate which is displayed in the following table.

	Reserve for Unpaid Losses		
	and LAE		
	Published Reserve as	Subsequent	Percentage
	of December 31, 2014	Reserve Change	Change
Losses	5,058,644	-1,575,158	-31.1%
DCC	3,476,274	-1,116,642	-32.1%
A&O	1,963,031	-483,580	-24.6%
Total	10,497,949	-3,175,380	-30.2%

<sup>\*</sup> For claims occurring prior to December 31, 2014

If the Committee and Board adopt our recommendations, we have estimated that the Plan's 2015 income statement will reflect a net gain of \$2.345 million, largely due to a combination of positive investment and underwriting income. This estimate is detailed in Exhibit D1. This estimate is contingent on underwriting and investment results for the fourth quarter.

The Plan's statutory surplus as of year-end 2014 was \$34.0 million. The estimated \$2.345 million of statutory net gain implicit in our recommendations would increase statutory surplus to \$36.4 million by year-end 2015. This assumes no further unexpected claims development, unusual investment income results, or actions by the Board before year-end 2015 that materially impacts surplus levels.

The second recommendation for the Committee's consideration deals with establishing the rate levels for the July 1, 2016 fiscal year. We recommend that the Plan adopt an overall base rate level increase of 0.0% to be effective July 1, 2016, despite indications suggesting the need for more significant rate increases. The table below presents a summary of our recommended rate level changes by major class/coverage.

	Indicated	Recommended
Coverage	Rate Level Change	Rate Level Change
Physicians & Surgeons	20.7%	0.0%
Hospital Professional Liability	12.3%	0.0%
Hospital General Liability	17.2%	0.0%
Total Plan	19.3%	0.0%

The primary driver of these indicated rate needs continues to be high underwriting expense ratios due to the spreading of fixed underwriting and claims expenses across a smaller premium base. Given the Plan's current surplus position and the current competitive position of the Plan's rates, we believe the rate increases, while actuarially sound are not appropriate for meeting the goals and objectives of the Plan. Instead, we propose to keep rates at current levels.

The third recommendation deals with the distribution of excess surplus by policy year. In prior years, when the Board approved a return of excess surplus, the Board adopted the Committee's recommendation that the policy year return of excess surplus amount be determined in proportion to the contribution each policy year had to overall surplus. We recommend that the allocation of any distribution of excess surplus to policy year be consistent with previously approved methods.

The fourth recommendation deals with the appropriate target surplus for the Plan which serves as a minimum standard for any distributions of excess surplus. We recommend that the Plan maintain the Board's December 15, 2011 recommendation as their current threshold for a minimum target surplus. That is:

"The target surplus for the Plan will be the largest of the following:

- 1. 250% of the NAIC RBC requirement (or 500% of Authorized Control Level (ACL)), or
- 2. 50% of the sum of net loss and LAE reserves and net earned premium, or
- 3. Twenty five times the maximum per occurrence coverage limit retained by the Plan."

In the past, dividends have typically been declared when more than \$15 million was available for distribution (see Exhibit D2). Based on the estimated surplus amount of \$36.3 million and a target surplus of \$25 million, we suggest that it may not be appropriate for the Plan to declare a dividend at this time.

The fifth recommendation deals with the introduction of either a transaction fee for short term policies or an expense constant for all policies. Due to the ongoing issues associated with spreading underwriting expenses across a small amount of premium and the expenses associated with small short term policies, we recommend that either a \$100 transaction fee be charged to all short term policies or that a \$200 expense constant be applied to all policies.

If the \$100 transaction fee were approved, this would result in approximately \$72,000 of revenue. We would propose that rates in the Physicians & Surgeons program be reduced by 7.0% to offset this change, therefore making the overall change revenue neutral.

If the \$200 expense constant were approved, this would result in \$199,000 of revenue. We would propose that rates in all programs be reduced by 15.5% to offset this change, therefore making the overall change revenue neutral.

## Introduction & Background

This report summarizes Pinnacle Actuarial Resources, Inc.'s (Pinnacle's) annual actuarial analysis of the Wisconsin Health Care Liability Insurance Plan (Plan). This actuarial report has several objectives:

- To provide estimates of the Plan's ultimate costs for claims, including indemnity payments, defense and cost containment expenses (DCC) and adjusting and other expenses (AOE) that occurred on or before December 31, 2015. These estimates then serve as the basis for establishing the Plan's unpaid claim liabilities for year-end 2015 statutory financial reporting;
- To review the indicated rate level for policies to be issued during the July 1, 2016-2017 Plan year, including the introduction of an alternate expense allocation program;
- To review the current minimum capital and dividend requirements and make appropriate recommendations regarding potential changes; and
- To discuss the possible manner of distribution of any excess surplus by policy year.

Pinnacle's analysis is organized according to the Plan's three classes/coverages of business:

- Professional Liability coverage for Physicians, Surgeons, and Other Health Care Professionals;
- Professional Liability coverage for Hospitals and Other Health Care Facilities; and
- General Liability coverage for Hospitals and Other Health Care Facilities.

This actuarial report summarizes our analysis and recommendations. The exhibits and analysis supporting our recommendations are contained in separate technical appendices. The appendices detail our methodologies, assumptions, selections and findings. As such, the technical appendices should be considered an integral part of this report.

The Wisconsin Health Care Liability Insurance Plan serves as the insurer of last resort to provide primary medical professional liability insurance for licensed health care providers and hospitals in the state. The Plan is overseen by a 13-member Board of Governors, which also serves in the same capacity for the Wisconsin Injured Patients & Families Compensation Fund. The Plan is currently administered by Wausau MedMal Management Services, LLC.

Pinnacle has been retained by the Plan to perform analyses of their unpaid loss and loss adjustment expense liabilities as of December 31, 2015. This unpaid claim estimate was based on data evaluated as of September 30, 2015. In some cases, this information and our analysis were used to evaluate financial statements with accounting dates of both December 31, 2014 and December 31, 2015. Pinnacle is also expected to produce estimates of the indicated rate level changes for the Plan's three

coverages. Based on the results of the loss reserve analysis, Pinnacle may also recommend changes in the Plan's capital requirements and any potential dividends to policyholders that may be indicated.

Pinnacle is an Illinois corporation that has been in property and casualty actuarial consulting since 1984. Our consultants make Pinnacle one of the largest property/casualty actuarial consulting firms in the U.S. We specialize in insurance pricing, loss reserving, alternative markets, legislative costing, market analysis and financial risk modeling. Our headquarters are located in Bloomington, IL. Pinnacle has provided actuarial services to the Plan since 2007.

Pinnacle has established a reputation as a provider of unbiased, independent, actuarially sound analyses and reports. This reputation is demonstrated in the variety of clients that have engaged us for projects similar to this one. Clients that have engaged Pinnacle in similar assignments include patient compensation funds, birth-related neurological injury funds, joint underwriting associations and state insurance regulators in a wide variety of states including Connecticut, Florida, Illinois, Indiana, Iowa, Kentucky, Maine, Michigan, New Mexico, New York, Ohio, Oregon, Texas, Vermont, Virginia and Wisconsin.

#### **Data Sources**

Pinnacle was provided a significant amount of material from the Plan's administrator, Wausau MedMal Management Services, LLC. The data provided included:

- Summary sheets of written premium by program by fund year (policy year),
- Detailed claim information including:
  - Accident Date
  - Report Date
  - Closed Date
  - Claim status (Open, closed with payment, closed without payment)
  - Case Reserves
  - Paid Losses
  - Paid Defense and Cost Containment (DCC)
- Quarterly trial balances for the Plan
- Annual statements of the Plan for all recent years.
- WHCLIP Production Reports for recent years

There were no additional records that Pinnacle required to complete its analysis and issue this report.

## **Methods and Assumptions**

Pinnacle develops separate estimates of unpaid liabilities for losses, defense and cost containment expenses (DCCE), and adjusting and other expenses (AOE). Different methods and assumptions are used to develop each of these estimates; however, comparable approaches are used for all three coverage categories (Physicians Professional, General Liability, Hospital Professional). They are described in the following section.

#### **Loss Reserves**

Four methods were used to develop estimates of ultimate losses within a per occurrence limit of \$200,000. Increased limits factors are then used to increase these ultimate loss estimates to the Plan's full coverage limits. These methods are among the most common in the actuarial literature. The first method, known as incurred loss development, uses actual incurred loss experience that has emerged, subject to loss limitations, to forecast ultimate losses. The loss development pattern used is based on actual Plan experience.

The next method, known as a Frequency & Severity or Counts and Averages method, separately develops estimates of ultimate claim counts and average claims severities by year. The advantage of this method is that claim counts are generally estimable with a high degree of accuracy fairly quickly, which focuses the variability in this method on variances in claims severities. Claim counts are estimated using four methods: incurred claim count development, extrapolating the ratio of incurred to reported claim counts, incurred claim frequency per unit of exposure, and an incurred B-F method (described later in this section).

The third method, known as a Bornhuetter-Ferguson (B-F) method, estimates ultimate losses using a combination of expected losses (Premium x Expected Loss Ratio) and loss development techniques.

If we define:

A = Incurred Losses

B = Expected Percentage of Ultimate Losses Reported

C = Premium

D = Expected Loss Ratio

then the estimated ultimate losses using the B-F technique is:  $A + [(C \times D) \times (1 - B)]$ . The loss ratios used in this method are based on an analysis of historical loss ratios for the Plan and trends in these loss ratios. Premiums used in this method have been adjusted to current Plan rate levels and for the impact of the most recent caps on non-economic damages, based on a previous analysis.

The final method used, known as an Expected Loss Method, is simply the on-level Plan premiums times the same expected loss ratio as the B-F method. This method is only used for the most recent years where very little loss experience has emerged.

#### **Defense and Cost Containment Expense (DCCE) Reserves**

Four methods were also used to develop estimate ultimate DCCE amounts. The first method is paid DCCE development and is similar to the incurred development method described earlier. The second method develops the ratio of paid DCCE to paid loss to an ultimate basis and then multiplies this ratio times estimated ultimate losses. The third method estimates the average ultimate DCCE per ultimate claim. This method is akin to the Frequency and Severity method described in the loss section. The final method estimates the long term average ratio of ultimate DCCE to ultimate loss and applies this long term average to the ultimate losses for each year. This is similar to the expected loss method described in the loss section.

## Adjusting and Other Expense (AOE) Reserves

Ultimate adjusting and other expenses are estimated using a single method. We find the use of a single method to be reasonable since we are using a commonly accepted methodology and AOE reserves tend to be more stable over time. Known as a paid to paid method, this method estimates the ultimate ratio of AOE to loss and DCCE. This ratio has increased in recent years as there have been fewer losses to spread the fixed cost elements of AOE across. Our estimated ultimate ratio of AOE to loss and DCCE is 27%, up from the 23% used in our 2014 analysis.

## **Discussion and Analysis**

#### Financial Reporting as of December 31, 2014

The attached Exhibit C1 shows a streamlined version of the Plan's statutory balance sheet as of December 31, 2014. The Plan had total assets of \$50.1 million and liabilities totaling \$16.0 million. Therefore, the Plan's statutory surplus as of December 31, 2014 was approximately \$34.0 million.

Note that the Plan's liabilities are dominated by two items: its reserves for unpaid losses and its reserves for unpaid loss adjustment expense (LAE). These items represent \$10.5 million at year-end 2014, or 65.5% of the Plan's total liabilities. Consistent with statutory financial reporting requirements for property-casualty insurance companies in Wisconsin, the Plan presents its unpaid claims liabilities on a nominal, or undiscounted, basis. This means that instead of discounting these liabilities and loading them with an explicit risk margin, as is done with the PCF, the nominal reserves contain an implicit risk margin.

Exhibit C2 provides a summary of the indicated changes from the Plan's year-end 2014 unpaid claims liabilities by policy year based on our current analysis and our previous study.

We have updated the projections of the Plan's ultimate losses and loss adjustment expenses, based on the reported claims experience of the Plan valued as of September 30, 2015. Based on our current projections, we estimate that the Plan's recorded reserves for unpaid losses and loss adjustment expenses of \$10.5 million as of year-end 2014 may ultimately prove to be redundant by \$3.2 million. On a percentage basis, this translates to an indicated potential favorable development of 30.2% on held reserves as of year-end 2014.

	R	Reserve for Unpaid Losses		
		and LAE		
	Published Reserve as	Subsequent	Percentage	
	of December 31, 2014	Reserve Change	Change	
Losses	5,058,644	-1,575,158	-31.1%	
DCC	3,476,274	-1,116,642	-32.1%	
A&O	1,963,031	-483,580	-24.6%	
Total	10,497,949	-3,175,380	-30.2%	

<sup>\*</sup> For claims occurring prior to December 31, 2014

The favorable development indicated by our current analysis is due to better than expected loss experience. For reference, Exhibit C3 provides a similar history of subsequent one-year reserve changes based on the actuarial recommendations presented to the Committee in the past.

### Plan's 2015 Operating Results

We have estimated the impact of our current recommendations on the Plan's 2015 statement of income. Exhibit D1 develops an estimate of the Plan's 2015 pre-tax net gain of \$2.345 million based on the results of our current analysis and the Plan's operating experience during the current period. We also estimate that the Plan's statutory balance sheet as of year-end 2015 will reflect surplus of \$36.4 million. For reference, Exhibits D2 through D4 provide the Plan's historical distribution of excess surplus declared, net income and surplus levels, respectively. We understand the Plan's financial statements have incorporated an asset and corresponding liability for uncashed distributions of excess surplus. Due to uncertainties regarding the proper treatment of this item, we have excluded it from our estimate of year end 2015 surplus. That is, we have not reflected any changes to the financial statements due to this item.

It should be emphasized that our estimates of the Plan's after-tax net income are preliminary, and subject to adjustment based on the Plan's claim, expense, and investment experience in the fourth quarter as well as clarification of the accounting treatment of the item above. It should also be noted that as of the third quarter of 2015, the Plan had a net deferred tax asset to offset future taxable income. The operating results shown in the attached exhibits assume federal income taxes consistent with those paid in 2014 as a percentage of income. We should also emphasize that Pinnacle does not profess to have the requisite expertise to properly interpret all aspects of the federal or state tax codes. The Plan's tax advisors will assist in determining the Plan's actual tax liability after the close of the year.

#### 2016-2017 Rate Level Indications

This section of the report discusses the development of our estimates of the indicated base rate level changes for the 2016-2017 Plan year consistent with the following objectives:

- The rate levels be sufficient to fund the expected costs of claims and expenses for policies to be written by the Plan during the 2016-2017 period; and
- The only provision in the rate levels for further addition to the Plan's statutory surplus, is a target rate of return on surplus of 3%. The underwriting profit provision is adjusted to produce this target rate of return and any additional investment income earned on the assets supporting the Plan's loss reserves is used to offset expected losses.

The initial step in estimating the Plan's indicated rate levels is to compare the projected costs for claims and operating expenses with the provision for these costs in the current rate levels. This step was performed separately for each of the following classes/coverages:

Professional Liability for Physicians, Surgeons, and Other Health Care Professionals;

- Professional Liability for Hospitals and Other Health Care Facilities; and
- General Liability for Hospitals and Other Health Care Facilities.

Our analysis began with our projections as of September 30, 2015 of the Plan's ultimate claim costs for policy years 1990 through 2014. The adjustments discussed in the following sections were then made to the Plan's historical experience to reflect conditions anticipated to exist during the July 1, 2016-2017 period.

## Premiums at Current (July 1, 2015) Manual Rate Levels

Exhibit E1, Pages 1 through 3, provide a summary of the manual rate level changes since inception by provider type and coverage. For each class/coverage type the effects of the annual rate level changes were used to bring each policy year's actual collected premiums to the Plan's current rate level. In effect, this step of the analysis restates each policy year's premiums to the July 1, 2015 manual rate level. Premiums used in this analysis have also been adjusted for the impact of the most recent caps on non-economic damages, based on a previous analysis.

## **Incurred Losses and Loss Adjustment Expenses**

The projected ultimate losses and loss adjustment expenses (LAE) for the policy years 1990 through 2013 used in this report are consistent with our recommendations presented in the *Financial Reporting* as of December 31, 2015 part of the **Discussion & Analysis** section of this report.

These historical claim costs are then adjusted to the anticipated cost level at the average accident date for policies written during July 1, 2016-2017. This adjustment is achieved through the application of trend factors. Exhibit E2 shows the long-term history of average claim costs for the Plan's Physicians and Surgeons experience over the period. We selected 5.0% as the annual trend to bring policy years 1990 to 2013 incurred losses and LAE to the projected average loss date for the 2016-2017 policy year. In the final indications calculations, ten years of experience (2004-2013) were relied upon.

For Hospital Professional Liability, we assumed a 5.0% annual rate of trend for claim costs based on historical experience. This selection reflects a dampening of the long-term trend in the Plan's experience (see Hospital Professional Liability Exhibit 6, Page 2 for details).

For Hospital General Liability, we assumed a 5.0% annual increase in loss costs.

#### **Underwriting Expenses**

The Plan's Underwriting Expenses are divided into four main items:

- Management Fees;
- Commissions;
- Premium Taxes; and
- Other Underwriting Expenses.

A summary of the Plan's historical cost levels for each of these components for the 2010-2014 years is shown on Exhibit E4. As you can see, these expenses as a percentage of premiums have increased dramatically as premiums have decreased, though appear to be leveling off since the peak in the 2011 year. We have selected a 38.8% provision for Management Fees and Other Underwriting Expenses, a decrease from last year's assumption of 40.1%. This change is based on the average of the years 2013-2014 and reflects the impact of the Plan's stabilizing written premium during these more recent years. Some caution needs to be exercised regarding this provision in the future with the potential increase in premium volume as the market hardens. The market hardening may result in greater premium to spread these costs across.

With respect to Commissions, for Physicians and Other Professionals the Commission rate is 1.5% for premiums up to \$1,000, at which point a \$150 cap is applied. Under the current rate levels and the current \$1,000,000/\$3,000,000 limits, none of the health care professionals have premiums under \$1,000. We assumed that the \$150 cap will apply for each health care professional. For Physicians and Other Professionals, we have assumed an average Commission rate of 1.5% which is unchanged from last year.

The Commission rate for Hospitals is 5% for premiums up to \$50,000, at which point a \$2,500 cap is applied. We considered the premium distribution of the July 1, 2005 through July 1, 2006 Production Reports, from which an overall average Commission rate of 1.3% was obtained. This assumption is unchanged from last year.

Finally, with respect to Premium Taxes, since July 2, 1983, the Plan has been subject to a 2% state franchise tax. The budgeted underwriting expenses for the 2016-2017 Plan year continue to include a variable expense provision for this cost item.

### **Present Value of Incurred Losses and LAE**

The expected claim payment pattern by coverage type is shown on Exhibit E5. This payment distribution is based on the Plan's historical experience. The present value factors shown by provider on Exhibit E5 are based on the assumed payment pattern and pre-tax investment yields of:

- 4.0% for Physicians & Surgeons;
- 4.0% for Hospital Professional Liability; and
- 4.0% for Hospital General Liability.

This is a change from the 4.5% assumption used in the 2014 analysis, and reflects lower expected investment returns in the immediate future due to current economic conditions.

## **Profit, Contingencies and Federal Income Taxes**

A provision for profit, contingencies, and federal income taxes has been incorporated into the expense structure. This provision has been selected to generate a target rate of return on the surplus which the Plan holds to support the business it intends to write from July 1, 2016 to July 1, 2017. We measured the rate of return with a cash flow model, which relates the initial commitment of surplus supporting the writing of premium to the subsequent underwriting results, investment results, federal income taxes and release of surplus as losses are paid. This provision was unchanged from last year's analysis.

The following table presents the indicated July 1, 2016 manual rate level changes by coverage based on current projected loss costs and expense assumptions:

	Indicated	Recommended
Coverage	Rate Level Change	Rate Level Change
Physicians & Surgeons	20.7%	0.0%
Hospital Professional Liability	12.3%	0.0%
Hospital General Liability	17.2%	0.0%
Total Plan	19.3%	0.0%

The details of the estimated changes underlying the indicated rate levels are presented on Exhibit E6, Pages 1 through 3. These indications contemplate that all of the investment income derived from policies written during July 1, 2016-2017 will be used to offset the rate levels, and a target return on surplus of 3.0%. Note that under these assumptions, the policies written during July 1, 2016-2017 are not expected to produce an underwriting profit.

However, due to the current surplus position of the Plan, its minimal premium writings and its competitive position relative to the admitted market, we do not recommend implementing these rate increases. Instead, we propose to keep rates at current levels.

For reference, the table below compares the target combined ratio by provider type and coverage implicit in the recommended July 1, 2016 levels with those in our prior rate review:

	Target Combined Ratio	
	July 1, 2015	July 1, 2016
Physician Classes	121.2%	118.9%
Hospital Classes	118.7%	117.1%
General Liability	118.2%	116.8%

The "combined ratio" for an insurance company measures its underwriting results (i.e., claim costs and operating expenses relative to premium income). For the Physician Classes, these results indicate that one should expect to pay out \$1.19 in losses and expenses for every \$1.00 in premium collected at the July 1, 2016 indicated rate level. Offsetting this underwriting loss is the investment income we expect the Plan to earn on its assets. This includes both those supporting underwriting operations as unearned premium and loss and LAE reserve and also those reflected as surplus. However, a provision for a target return on surplus is included in the rate level indication.

#### **Capital Requirements**

At its meeting of December 21, 1994, the Board adopted a target surplus requirement of 50% of its risk-based capital (RBC) requirements, as measured by the RBC model developed by the National Association of Insurance Commissioners (NAIC). Under the NAIC RBC model law, this is the level at which the regulator is authorized, but not required, to take a company under supervision. As long as surplus is maintained above 50% of RBC, the regulator is only authorized to examine a company.

The Board discussed and approved revising the target surplus level to be 100% of the NAIC RBC requirement at their September 23, 1998 meeting. Under the NAIC RBC model law, this is the level at which a company is required to prepare and submit an RBC plan with the appropriate regulator.

The Board discussed and approved revising the target surplus level to be 250% of the NAIC RBC requirement (or 500% of Authorized Control Level (ACL)) at their May 21, 2007 meeting.

At the December 15, 2009 Board meeting, the Plan's target surplus level was again revised. The new three-pronged test was stated as follows:

"The target surplus for the Plan will be the largest of the following:

- 1. 250% of the NAIC RBC requirement (or 500% of Authorized Control Level (ACL)), or
- 2. 50% of the sum of net loss and LAE reserves and net earned premium, or
- 3. Twenty five times the maximum per occurrence coverage limit retained by the Plan."

The three pronged approach addresses some of the limitations of the NAIC's RBC model when applied to an insurer of last resort, such as the Plan, particularly in periods of very low premium volume and times when premium levels are materially greater or less than recent history.

If we assume that the Plan's target surplus requirements as of December 31, 2015 is maintained consistent with our current recommendation and the Board's approved 2009 threshold, then the target level of surplus set by the Board would be \$25.0 million. Our projected surplus of \$36.4 million as of year-end 2015 would be more than \$11 million above the target surplus. In the past, dividends have typically been declared when more than \$15 million was available for distribution (see Exhibit D 2). This would suggest that a dividend would not be recommended at this time.

### **Expense Constant**

During 2015, Pinnacle was asked by the Plan's Board to investigate alternative approaches to allocate underwriting expenses within the Plan due to the large number of small short term policies and the impact of allocating fixed expenses across a small premium base. The results of this analysis are shown in Exhibit E-7. The analysis shows an estimate of fixed versus variable underwriting expenses and develops estimates of indicated transaction fees for just short term policies as well as an indicated expense constant applied to all policies.

We recommend that either a \$100 transaction fee be charged to all short term policies or that a \$200 expense constant be applied to all policies.

If the \$100 transaction fee were approved, this would result in approximately \$72,000 of revenue. We would propose that rates in the Physicians & Surgeons program be reduced by 7.0% to offset this change, therefore making the overall change revenue neutral.

If the \$200 expense constant were approved, this would result in \$199,000 of revenue. We would propose that rates in all programs be reduced by 15.5% to offset this change, therefore making the overall change revenue neutral.

## **Legal Disclosures**

#### **Distribution and Use**

Pinnacle's actuarial report and supporting work papers are prepared solely for the internal business use of the Plan, its administrators and the State of Wisconsin Office of the Commissioner of Insurance (OCI). It is understood that this report may also be distributed to a variety of interested parties. In the event our report is distributed to other parties due to statute or regulations, or by agreement of Pinnacle and the Plan, we require that the report and supporting exhibits be distributed in their entirety, and that any recipient be advised to have their own actuary review the work. Pinnacle does not intend to benefit any third party recipient of its work product or create any legal duty from Pinnacle to a third party even if Pinnacle consents to the release of its work product to such third party.

In addition, the Plan may desire to distribute the Executive Summary separately to summarize key findings. This distribution is also granted. Individual findings may also be referenced in press releases and other public communications along with proper citation of the report.

Third party users of any of the elements of this report should recognize that the furnishing of this report is not a substitute for their own due diligence and should place no reliance on this report or the data, computations, interpretations contained herein that would result in the creation of any duty or liability by Pinnacle to the third party.

#### **Reliances and Limitations**

Loss and loss adjustment expense (LAE) reserve estimates are subject to potential errors of estimation due to the fact that the ultimate liability for claims is subject to the outcome of events yet to occur, e.g., jury decisions and attitudes of claimants with respect to settlements. Thus, no assurance can be given as to the adequacy of any recommended reserve or rate level.

In performing this analysis, we have relied on data and other information provided to us by Plan management and their service providers. This experience base includes detailed historical data listings of losses, claim counts and loss adjustment expenses by accident year. This data was supplemented by appropriate industry benchmark data. We have relied upon all of this information without audit or verification. Pinnacle reviewed as many elements of this data and information as practical for reasonableness and consistency. We have not anticipated any extraordinary changes to the legal, social, and economic environment that might affect the cost or frequency of claims.

We have employed techniques and assumptions that we believe are appropriate, and we believe the conclusions presented herein are reasonable and represent our best professional judgment, given the information currently available. However, it should be recognized that future loss emergence will likely deviate, perhaps substantially, from our estimates. Medical professional liability exposures, in

particular, are typically characterized by low frequency and high severity claims which result in extremely volatile claims experience. Consequently, actual results are expected to vary, sometimes significantly, from the point estimates presented in this report.

The reserve estimates for incurred but not reported (IBNR) claims liabilities contained in this report are limited to the Plan's retained loss exposure within its coverage limits of liability. Throughout this report, we have used the term IBNR to include all indicated changes to case reserves, including defense and cost containment expense (DCC), whether such changes are for "pure" IBNR (i.e., incurred but not reported claims) or for case reserve deficiencies/redundancies. Furthermore, the term losses, throughout this report, unless indicated otherwise, refers to both losses and DCC.

Pinnacle has not examined the Plan's assets and is not expressing any opinion as to their validity or value. We have assumed that the Plan's unpaid claims liabilities are backed by valid assets which have suitably scheduled maturities and an adequate liquidity to meet cash flow requirements. We have not examined the Plan's current investment portfolio or investment philosophy. We did not review and are not expressing any opinion as to the overall financial condition of the Plan.

Judgments as to conclusions, recommendations, methods, and data contained in this report should be made only after studying the report in its entirety. Further reliances and limitations are contained in the report text and the exhibits accompanying the report. Furthermore, Pinnacle is available to explain any matter presented herein, and it is assumed that the user of this report will seek such explanation as to any matter in question. The exhibits should be considered an integral part of this report.

## **Index of Exhibits**

Exhibit	Description
C1	Balance Sheet as of December 31, 2014
C2	Projected Ultimate Loss and DCC
C3	Summary of Previous Recommended Reserve Changes
D1	Statement of Income
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E2	Severity Trend Selection - Physicians & Surgeons
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E7	Transaction Fee and Expense Constant Analysis

\$34,040,766

Funding Liabilities as of December 31, 2014

**WHCLIP Statutory Surplus** 

## WISCONSIN HEALTH CARE LIABILITY INSURANCE PLAN

# Reserves as of 9/30/2015 Balance Sheet as of 12/31/14

Fund Assets as of Dec	ember 31. 2014	ļ
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·		<u> </u>	•
		Unpaid Losses	5,058,644
Bonds (market value)	47,332,230	Unpaid LAE	5,439,305
Cash	2,238,806	Unearned Premiums	670,735
Receivables for securities	0	Advance Premiums	167,844
Premiums Receivable	106,547	Drafts Outstanding	398,623
Accrued Income (Bond Investment Income, Other)	396,178	Reserve for escheat items	1,907,117
Income tax recoverable	0	Policyholder Dividends Declared	1,097,358
		Other liabilities	1,293,369
Total Assets	\$50,073,761	Total Liabilities	\$16,032,995

# WISCONSIN HEALTH CARE LIABILITY INSURANCE PLAN Reserves as of 9/30/2015

#### ALL LINES COMBINED

Accident Year	Projected Ultimate 2014 Estimate	2015 Estimate
(1)	(2)	(3)
1975	2,617,742	2,617,742
1976	4,697,909	4,697,909
1977	8,613,703	8,613,703
1978	9,165,899	9,165,899
1979	11,461,953	11,461,953
1980	10,876,386	10,876,386
1981	16,972,232	16,972,232
1982	14,550,891	14,550,891
1983	12,867,836	12,867,836
1984	10,482,522	10,483,619
1985	7,294,964	7,294,964
1986	6,571,651	6,571,651
1987	8,057,269	8,057,269
1988	7,802,668	7,802,668
1989	7,537,111	7,537,111
1990	8,013,640	8,013,640
1991	5,686,468	5,686,468
1992	1,659,475	1,659,475
1993	3,896,452	3,896,452
1994	1,868,183	1,867,690
1995	2,012,120	2,011,053
1996	105,530	105,491
1997	357,621	356,443
1998	411,745	410,253
1999	1,330,756	1,328,208
2000	214,825	214,825
2001	1,207,262	1,201,292
2001	22,836	22,836
	•	•
2003	2,306,749	2,287,700
2004	2,518,391	2,450,532
2005	1,053,404	977,492
2006	1,179,679	1,055,673
2007	2,172,051	2,018,065
2008	1,238,399	1,107,637
2009	1,647,044	1,296,153
2010	1,358,258	811,216
2011	1,487,175	1,264,883
2012	1,448,705	1,017,415
2013	1,577,313	1,207,144
2014	1,804,056	1,617,201
Total	186,148,872	183,457,072
Indicated Change in 12/31	./14 unpaid loss and DCC liability	-2,691,801
•	•	·
Indicated Change in 12/31	/14 unnaid A&() liability	-483,580

<u>Column</u> <u>No</u>	<u>te</u>
(2) From	m 9/30/2014 Reserve Report
(3) From	m Supplemental Exhibit 1
(4) Tota	al Col (3) - Total Col (2)
(5) 9/3	0/2015 Total A&O Reserve - AY 2015 A&O Reserve - 9/30/2014 A&O Reserve
(6) Col	(4) + Col (5)

## **Reserves as of 9/30/2015**

## **Summary of Previous Recommended Reserve Changes**

	WHCLIP Published Reserve	Subsequent Recommended	Reserve Changes*
Financial Statement Date	For Unpaid Losses and LAE	\$	% of (2)
(1)	(2)	(3)	(4)
December 31, 1996	135,146,736	(12,244,978)	(9.1)
December 31, 1997	126,083,829	(14,649,178)	(11.6)
December 31, 1998	115,775,887	(16,213,767)	(14.0)
December 31, 1999	102,030,194	(19,827,601)	(19.4)
December 31, 2000	84,027,832	(19,315,125)	(23.0)
December 31, 2001	67,211,589	(18,891,197)	(28.1)
December 31, 2002	51,680,070	(12,894,891)	(25.0)
December 31, 2003	43,760,206	(16,018,755)	(36.6)
December 31, 2004	33,901,311	(12,341,101)	(36.4)
December 31, 2005	32,167,410	(9,782,229)	(30.4)
December 31, 2006	29,806,399	(8,602,162)	(28.9)
December 31, 2007	37,121,757	(9,537,152)	(25.7)
December 31, 2008	17,612,485	1,021,990	5.8
December 31, 2009	21,605,882	(4,692,358)	(21.7)
December 31, 2010	20,486,738	(3,037,703)	(14.8)
December 31, 2011	19,349,544	(5,151,484)	(26.6)
December 31, 2012	14,840,091	(2,807,085)	(18.9)
December 31, 2013	13,525,981	(4,150,234)	(30.7)
December 31, 2014	10,497,949	(3,175,380)	(30.2)

<sup>\*</sup> Based on one year of development

## Reserves as of 9/30/2015

Statement of Income

	Actual	Estimated
UNDERWRITING OPERATIONS	2014	2015
Premiums Earned	\$1,712,651	\$1,283,727
Underwriting Deductions Incurred:		
Loss and LAE Incurred	(1,270,580)	(595,691)
Underwriting Expenses	791,594	498,401
Undam wiking Cain	2 404 627	1 201 017
Underwriting Gain	2,191,637	1,381,017
INVESTMENT AND OTHER INCOME		
Investment Income Earned	1,216,780	1,003,824
Net realized Capital Gains	168,683	0
Other Income	15,741	0
Investment and Other Income	1,401,204	1,003,824
Net income before dividends to policyholders and		
federal income taxes	3,592,841	2,384,841
Dividends to Policyholders	0	0
Dividends to Folicyholders	Ŭ	O
Net Income Before Federal Income Taxes	3,592,841	2,384,841
Federal Income Tax Expense	60,722	40,306
Net Income	\$3,532,119	\$2,344,535

## **Reserves as of 9/30/2015**

## **History of Declared Distribution of Excess Surplus**

	Declared Distribution of
Financial Statement Date	Excess Surplus
(1)	(2)
December 31, 1990	0
December 31, 1991	0
December 31, 1992	0
December 31, 1993	0
December 31, 1994	0
December 31, 1995	0
December 31, 1996	11,000,000
December 31, 1997	22,041,000
December 31, 1998	14,646,000
December 31, 1999	19,943,000
December 31, 2000	35,353,000
December 31, 2001	28,755,000
December 31, 2002	25,717,000
December 31, 2003	16,219,000
December 31, 2004	16,415,000
December 31, 2005	0
December 31, 2006	13,500,000
December 31, 2007	0
December 31, 2008	0
December 31, 2009	15,000,000
December 31, 2010	0
December 31, 2011	0
December 31, 2012	20,000,000
December 31, 2013	0
December 31, 2014	0

## Reserves as of 9/30/2015

History of Statutory Net Income/(Loss)

	Statutory Net
Calendar Year	Income/(Loss)
(1)	(2)
1981	(7,414,000)
1982	(5,091,000)
1983	(20,567,000)
1984	(13,408,000)
1985	(4,621,000)
1986	(1,950,000)
1987	4,175,000
1988	2,735,000
1989	5,934,000
1990	2,217,000
1991	5,553,000
1992	5,921,000
1993	6,212,000
1994	6,549,000
1995	8,013,000
1996	(2,455,000)
1997	(2,696,000)
1998	6,208,000
1999	3,227,000
2000	(6,656,000)
2001	(5,590,000)
2002	(4,034,000)
2003	(535,000)
2004	(321,000)
2005	9,659,000
2006	9,528,139
2007	(14,298,422)
2008	25,014,713
2009	(11,920,758)
2010	6,154,465
2011	8,458,804
2012	(13,581,661)
2013	2,420,727
2014	3,532,119
2015	2,344,535

<sup>\*</sup> Estimated

## **Reserves as of 9/30/2015**

**History of Statutory Surplus/(Deficit)** 

	Statutory Plan
Financial Statement Date	Surplus/(Deficit)
(1)	(2)
December 31, 1993	8,513,000
December 31, 1994	15,158,000
December 31, 1995	23,181,000
December 31, 1996	20,727,000
December 31, 1997	18,027,000
December 31, 1998	24,212,000
December 31, 1999	26,622,000
December 31, 2000	19,966,000
December 31, 2001	14,307,000
December 31, 2002	10,396,000
December 31, 2003	9,544,000
December 31, 2004	9,223,000
December 31, 2005	18,830,000
December 31, 2006	28,306,000
December 31, 2007	14,112,358
December 31, 2008	39,107,371
December 31, 2009	27,357,451
December 31, 2010	33,497,641
December 31, 2011	41,904,590
December 31, 2012	28,368,444
December 31, 2013	30,508,648
December 31, 2014	34,040,767
Estimated December 31, 2015	36,385,302

Reserves as of 9/30/2015

Rate Level History (Expressed as Index with 1975 as Base)

PHYSICIANS, SURGEONS AND OTHER HEALTH CARE PROFESSIONALS

Actual Effect

				Actua	l Effect			
Effective	Physicians a	nd Surgeons	Nurse An	urse Anesthetists Non-Surgical Podiatrists		Surgical F	Podiatrists	
Date	Amt.	Cum.	Amt.	Cum.	Amt.	Cum.	Amt.	Cum.
(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)	(5a)
1975	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
7/1/1976	0.968	0.968	1.000	1.000	1.000	1.000	1.000	1.000
7/1/1977	0.846	0.819	0.846	0.846	1.000	1.000	1.000	1.000
7/1/1978	0.800	0.655	0.800	0.677	0.800	0.800	0.800	0.800
7/1/1979	0.990	0.649	1.000	0.677	1.000	0.800	1.000	0.800
7/1/1980 *	0.850	0.551	0.850	0.575	1.250	1.000	1.250	1.000
7/1/1981	0.529	0.292	0.529	0.304	1.000	1.000	1.000	1.000
7/1/1982	1.740	0.507	1.250	0.380	1.250	1.250	2.500	2.500
7/1/1983	1.275	0.647	1.301	0.495	1.301	1.626	2.335	5.838
7/1/1984	1.350	0.873	1.294	0.640	1.350	2.195	1.187	6.929
7/1/1985	1.696	1.481	1.696	1.086	1.696	3.723	1.696	11.752
7/1/1986	1.320	1.955	1.396	1.516	1.322	4.922	1.321	15.524
7/1/1987	1.085	2.122	1.802	2.732	0.614	3.022	0.899	13.956
7/1/1988	1.007	2.136	1.573	4.298	1.007	3.044	1.007	14.054
7/1/1989	1.083	2.314	1.043	4.483	1.077	3.278	1.077	15.136
7/1/1990	1.080	2.499	1.052	4.716	1.091	3.576	1.073	16.241
7/1/1991	1.068	2.669	1.036	4.886	1.076	3.848	1.064	17.280
7/1/1992	1.115	2.976	1.044	5.100	1.131	4.352	1.131	19.544
7/1/1993	1.000	2.976	1.023	5.218	1.023	4.452	1.023	19.994
7/1/1994	0.970	2.886	0.903	4.712	0.985	4.385	0.985	19.694
7/1/1995	0.859	2.479	0.791	3.727	0.783	3.434	0.822	16.188
7/1/1996	1.362	3.377	1.250	4.659	1.235	4.241	1.307	21.158
7/1/1997	1.015	3.428	0.912	4.249	0.898	3.808	0.962	20.354
7/1/1998	1.000	3.428	0.850	3.611	0.850	3.237	1.000	20.354
7/1/1999	0.971	3.328	0.970	3.503	0.970	3.140	0.970	19.743
7/1/2000	0.973	3.238	0.970	3.398	0.970	3.046	0.970	19.151
7/1/2001	0.979	3.170	0.979	3.327	0.979	2.982	0.979	18.749
7/1/2002	1.000	3.170	1.000	3.327	1.000	2.982	1.000	18.749
7/1/2003	1.040	3.297	1.040	3.460	1.040	3.101	1.040	19.499
7/1/2004	0.946	3.119	0.946	3.273	0.946	2.933	0.946	18.446
7/1/2005	0.990	3.088	0.990	3.240	0.990	2.904	0.990	18.261
7/1/2006	1.000	3.088	1.000	3.240	1.000	2.904	1.000	18.261
7/1/2007	1.000	3.088	1.000	3.240	1.000	2.904	1.000	18.261
7/1/2008	1.190	3.675	1.190	3.856	1.190	3.456	1.190	21.731
7/1/2009	0.930	3.417	0.930	3.586	0.930	3.214	0.930	20.210
7/1/2010	0.924	3.158	0.924	3.313	0.924	2.970	0.924	18.674
7/1/2011	0.941	2.971	0.941	3.118	0.941	2.795	0.941	17.572
7/1/2012	1.069	3.176	1.069	3.333	1.069	2.987	1.069	18.785
7/1/2013	0.920	2.922	0.920	3.066	0.920	2.748	0.920	17.282
7/1/2014	1.000	2.922	1.000	3.066	1.000	2.748	1.000	17.282
7/1/2015	1.000	2.922	1.000	3.066	1.000	2.748	1.000	17.282

<sup>\*</sup> Excludes consideration of 30% premium refund for Physicians and Surgeons and Nurse Anesthetist:

### Reserves as of 9/30/2015

Rate Level History (Expressed as Index with 1975 as Base)

HOSPITALS AND OTHER HEALTH CARE FACILITIES

Effective	Actua	al Effect
Date	Amount	Cumulative
(1)	(2)	(2a)
1975	1.000	1.000
7/1/1976	0.888	0.888
7/1/1977	1.014	0.900
7/1/1978	0.831	0.748
7/1/1979	1.000	0.748
7/1/1980 *	0.600	0.449
7/1/1981	0.868	0.390
7/1/1982	1.540	0.600
7/1/1983	0.877	0.526
7/1/1984	1.490	0.784
7/1/1985	1.524	1.195
7/1/1986	1.514	1.809
7/1/1987	1.231	2.227
7/1/1988	1.238	2.758
7/1/1989	1.132	3.122
7/1/1990	1.182	3.690
7/1/1991	1.129	4.166
7/1/1992	1.126	4.690
7/1/1993	1.000	4.690
7/1/1994	1.205	5.652
7/1/1995	0.881	4.979
7/1/1996	1.131	5.632
7/1/1997	0.950	5.350
7/1/1998	0.890	4.762
7/1/1999	0.957	4.557
7/1/2000	1.001	4.561
7/1/2001	0.960	4.379
7/1/2002	1.000	4.379
7/1/2003	1.030	4.510
7/1/2004	1.029	4.641
7/1/2005	0.960	4.455
7/1/2006	1.000	4.455
7/1/2007	1.000	4.455
7/1/2008	1.072	4.776
7/1/2009	0.845	4.036
7/1/2010	0.928	3.745
7/1/2011	0.964	3.611
7/1/2012	1.109	4.004
7/1/2013	1.000	4.004
7/1/2014	1.000	4.004
7/1/2015	1.000	4.004

<sup>\*</sup> Excludes consideration of 7% premium refund

## Reserves as of 9/30/2015

Rate Level History (Expressed as Index with 1975 as Base)

HOSPITAL GENERAL LIABILITY

Effective	Actua	l Effect
Date	Amount	Cumulative
(1)	(2)	(2a)
1975	1.000	1.000
7/1/1976	1.000	1.000
7/1/1977	0.900	0.900
7/1/1978	0.881	0.793
7/1/1979	0.619	0.491
7/1/1980	0.700	0.344
7/1/1981	1.000	0.344
7/1/1982	1.440	0.495
7/1/1983	0.698	0.345
7/1/1984	1.170	0.404
7/1/1985	0.836	0.338
7/1/1986	1.380	0.466
7/1/1987	1.127	0.525
7/1/1988	1.516	0.796
7/1/1989	1.000	0.796
7/1/1990	1.000	0.796
7/1/1991	1.115	0.888
7/1/1992	1.058	0.939
7/1/1993	1.000	0.939
7/1/1994	1.074	1.009
7/1/1995	0.854	0.862
7/1/1996	1.411	1.216
7/1/1997	0.989	1.202
7/1/1998	0.960	1.154
7/1/1999	0.943	1.089
7/1/2000	1.031	1.122
7/1/2001	1.013	1.137
7/1/2002	1.000	1.137
7/1/2003	1.060	1.205
7/1/2004	1.022	1.232
7/1/2005	0.980	1.207
7/1/2006	1.000	1.207
7/1/2007	1.000	1.207
7/1/2008	1.194	1.441
7/1/2009	0.954	1.375
7/1/2010	0.986	1.356
7/1/2011	1.013	1.373
7/1/2012	1.000	1.373
7/1/2013	1.000	1.373
7/1/2014	1.000	1.373
7/1/2015	1.000	1.373

#### Reserves as of 9/30/2015

**Severity Trend Selection** 

PHYSICIANS, SURGEONS AND OTHER HEALTH CARE PROFESSIONALS

			Average			
Accident	Ultimate	Ultimate Losses	Ultimate Severity	Ultimate		Average
Year	Incurred Claims	Limited to \$200k	Limited to \$200k	Reported Claims	Ultimate DCC	Ultimate DCC
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1975	36	1,565,302	43,481	91	567,740	6,239
1976	62	2,182,297	35,198	226	577,015	2,553
1977	118	5,808,501	49,225	373	1,353,175	3,628
1978	121	5,051,241	41,746	374	2,028,812	5,425
1979	134	6,592,279	49,196	434	2,527,499	5,824
1980	130	5,779,900	44,461	477	2,479,453	5,198
1981	162	9,657,474	59,614	694	4,454,868	6,419
1982	152	7,618,901	50,124	728	4,164,670	5,721
1983	122	6,625,566	54,308	577	3,780,141	6,551
1984	90	6,066,828	67,409	482	2,703,666	5,609
1985	30	2,121,354	70,712	210	1,412,394	6,726
1986	33	2,876,800	87,176	223	1,968,981	8,830
1987	39	2,741,395	70,292	242	1,899,183	7,848
1988	24	1,763,618	73,484	190	2,144,396	11,286
1989	27	2,150,503	79,648	179	2,009,627	11,227
1990	26	1,595,259	61,356	160	2,243,552	14,022
1991	14	1,564,866	111,776	114	1,543,248	13,537
1992	5	293,167	58,633	91	519,842	5,713
1993	11	1,312,000	119,273	96	1,516,159	15,793
1994	10	811,500	81,150	76	636,287	8,372
1995	8	882,500	110,313	54	642,646	11,901
1996	2	26,000	13,000	19	60,246	3,171
1997	2	213,125	106,563	21	89,057	4,241
1998	1	190,000	190,000	9	215,258	23,918
1999	2	214,045	107,022	18	238,803	13,267
2000	0	0	N/A	10	214,825	21,483
2001	2	390,000	195,000	6	42,992	7,165
2002	0	0	N/A	11	22,836	2,076
2003	2	400,000	200,000	13	286,757	22,058
2004	5	663,207	132,641	24	631,179	26,299
2005	1	4,000	4,000	13	39,168	3,013
2006	1	90,000	90,000	21	864,382	41,161
2007	7	185,278	26,468	38	1,336,961	35,183
2008	2	206,681	103,340	10	301,635	30,163
2009	2	210,814	105,407	10	298,121	29,812
2010	2	159,361	79,681	7	190,695	27,242
2011	5	215,637	43,127	13	344,731	26,518
2012	6	180,766	30,128	10	277,946	27,795
2013	5	190,534	38,107	11	317,696	28,881
2014	3	248,524	82,841	11	358,912	32,628
		3)	Selected Loss and	DCC Severity Trend		5.0%
		(9	) Selected Frequence	y Trend		0.0%
		(1	.0) Resulting Pure Pre	mium Trend		5.0%

 Column
 Note

 (2), (3), (5), (6)
 From Supplemental Exhibits

 (4)
 Col (3) / Col (2)

 (7)
 Col (6) / Col (5)

 (8), (9)
 Judgment

 (10)
 [1 + Col (8)] x [1 + Col (9)] - 1

#### Reserves as of 9/30/2015

**Severity Trend Selection** 

HOSPITALS AND OTHER HEALTH CARE FACILITIES

				Average			
Accident	Ultimate	Ultimate Losses		Ultimate Severity	Ultimate		Average
Year	Incurred Claims	Limited to \$200	<	Limited to \$200k	Reported Claims	Ultimate DCC	Ultimate DCC
(1)	(2)	(3)		(4)	(5)	(6)	(7)
1975	16	296,526		18,533	56	84,813	1,515
1976	95	1,162,049		12,232	405	532,959	1,316
1977	69	769,538		11,153	336	575,686	1,713
1978	67	1,043,052		15,568	338	807,869	2,390
1979	54	1,453,757		26,921	299	797,170	2,666
1980	70	1,648,329		23,548	357	914,066	2,560
1981	62	1,668,608		26,913	378	1,070,277	2,831
1982	50	1,670,461		33,409	309	764,432	2,474
1983	45	1,447,185		32,160	269	812,888	3,022
1984	37	792,000		21,405	236	806,356	3,417
1985	37	2,266,417		61,255	270	1,095,309	4,057
1986	28	822,671		29,381	219	767,048	3,503
1987	31	1,099,486		35,467	234	1,191,258	5,091
1988	26	1,013,498		38,981	224	1,115,603	4,980
1989	19	765,237		40,276	191	859,587	4,500
1990	32	1,445,539		45,173	183	1,039,867	5,682
1991	11	186,321		16,938	156	287,051	1,840
1992	18	450,792		25,044	81	376,464	4,648
1993	1	45,000		45,000	8	46,277	5,785
1994	2	2,500		1,250	12	17,404	1,450
1995	0	0		N/A	9	1,580	176
1996	1	0		0	12	19,198	1,600
1997	0	0		N/A	2	27,401	13,701
1998	0	0		N/A	3	2,287	762
1999	1	30,000		30,000	4	130,202	32,551
2000	0	0		N/A	2	0	0
2001	0	0		N/A	1	0	0
2002	0	0		N/A	1	0	0
2003	1	40,000		40,000	2	29,423	14,711
2004	1	118,000		118,000	7	79,093	11,288
2005	5	430,367		86,073	28	136,175	4,863
2006	2	51,211		25,606	41	20,882	509
2007	2	40,000		20,000	35	398,333	11,381
2008	4	77,842		19,461	17	35,516	2,089
2009	2	44,770		22,385	16	60,982	3,811
2010	2	75,000		37,500	13	211,264	16,251
2011	3	95,775		31,925	8	323,003	40,375
2012	3	107,717		35,906	15	142,974	9,532
2013	3	111,365		37,122	10	176,274	17,627
2014	4	174,584		43,646	12	224,221	18,685
			(8)		DCC Severity Trend		5.0%
			(9)	Selected Frequenc			0.0%
			(10)	Resulting Pure Pre	mium Trend		5.0%

Column	Note
(2), (3), (5), (6)	From Supplemental Exhibits
(4)	Col (3) / Col (2)
(7)	Col (6) / Col (5)
(8), (9)	Judgment
(10)	[1 + Col (8)] x [1 + Col (9)] - 1

## WISCONSIN HEALTH CARE LIABILITY INSURANCE PLAN Historical Incurred Underwriting Expenses

			Management				Other Underwriting		Premium		Total Underwriting	
Year	Pren	niums	Fees		Fees Commissions		Expenses		Taxes		Expenses	
Ending	Written	Earned	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
12/31/2010	3,978,000	4,210,000	832,000	20.9	42,000	1.1	156,000	3.9	80,000	2.0	1,110,000	27.9
12/31/2011	2,004,000	2,282,000	884,000	44.1	32,000	1.6	159,000	7.9	40,000	2.0	1,115,000	55.6
12/31/2012	1,789,387	1,837,126	667,240	37.3	30,539	1.7	128,258	7.2	36,725	2.1	862,762	48.2
12/31/2013	1,844,597	1,772,815	524,716	28.4	31,466	1.7	136,260	7.4	35,938	1.9	728,380	39.5
12/31/2014	1,735,602	1,712,651	571,710	32.9	31,122	1.8	154,050	8.9	34,712	2.0	791,594	45.6

38.8

5 Year Average	32.7	7.1
2 Year Average	30.7	8.1

Selected Provision for Management Fees & Other Underwriting Expenses

Note: All ratios are expressed as a percentage of written premium.

## Reserves as of 9/30/2015

## **Assumed Underlying Loss Payment Patterns**

Accident Year	Physicians		
Months of	and	Hospital	Hospital
Development	Surgeons	Professional	Premises
(1)	(2)	(3)	(4)
12	0.2%	0.6%	3.1%
24	2.1%	4.4%	13.6%
36	9.4%	16.4%	28.4%
48	23.8%	36.8%	47.5%
60	43.3%	52.8%	59.8%
72	61.6%	67.2%	75.1%
84	76.5%	78.6%	85.3%
96	84.6%	85.5%	92.7%
108	88.9%	89.7%	96.8%
120	91.9%	94.0%	99.3%
132	94.1%	97.1%	100.0%
144	95.8%	98.5%	100.0%
156	97.0%	99.3%	100.0%
168	97.9%	99.8%	100.0%
180	98.5%	100.0%	100.0%
192	99.0%	100.0%	100.0%
204	99.4%	100.0%	100.0%
216	99.7%	100.0%	100.0%
228	99.8%	100.0%	100.0%
240	99.9%	100.0%	100.0%
252	100.0%	100.0%	100.0%
264	100.0%	100.0%	100.0%
276	100.0%	100.0%	100.0%
December 1	0.703	0.705	0.705
Present Value Factor	0.782	0.795	0.795
	<u>Column</u>	<u>Note</u>	
	(2), (3), (4)	From Supplemental Exhibits	

# WISCONSIN HEALTH CARE LIABILITY INSURANCE PLAN PHYSICIANS, SURGEONS AND OTHER HEALTH CARE PROFESSIONALS

**Development of Indicated Assessment Income for 2016** 

Accident Year	Manual Premiums at 7/1/15 Rate Level at \$1M/\$3M Limits	Projected Ultimate Losses and DCC  @ \$1M Limits	Factor to Current Cost Level	Incurred Losses and LAE at Current Cost Level and Retention	Loss and LAE Ratio
(1)	(2)	(3)	(4)	(5)	(6)
1990	16,503,247	6,188,844	3.556	27,946,991	169.3%
1991	12,998,825	5,433,101	3.386	23,365,980	179.8%
1992	10,335,065	1,241,658	3.225	5,085,677	49.2%
1993	8,471,625	4,770,784	3.072	18,610,041	219.7%
1994	6,734,045	2,658,386	2.925	9,876,121	146.7%
1995	4,738,756	2,843,143	2.786	10,059,530	212.3%
1996	3,216,192	123,837	2.653	417,292	13.0%
1997	2,184,643	622,464	2.527	1,997,629	91.4%
1998	1,491,243	686,713	2.407	2,098,874	140.7%
1999	1,289,118	770,031	2.292	2,036,874	173.9%
2000	1,171,658	208,381	2.183	577,683	49.3%
			2.183		
2001	1,124,417	1,022,680		2,700,118	240.1%
2002	1,316,975	22,151	1.980	55,699	4.2%
2003	1,725,912	1,284,285	1.886	3,075,573	178.2%
2004	2,163,925	2,280,426	1.796	5,201,053	240.4%
2005	2,133,962	48,054	1.710	104,380	4.9%
2006	2,133,962	1,097,763	1.629	2,270,939	106.4%
2007	2,192,240	1,817,409	1.551	3,580,636	163.3%
2008	2,215,726	837,583	1.477	1,571,614	70.9%
2009	2,234,910	844,788	1.407	1,509,652	67.5%
2010	2,134,784	603,938	1.340	1,027,855	48.1%
2011	1,612,889	903,904	1.276	1,465,118	90.8%
2012	1,260,672	746,695	1.216	1,152,667	91.4%
2013	1,184,101	811,773	1.158	1,193,455	100.8%
Total	92,568,894	37,868,791		127,186,032	137.4%
004 - 2013	19,267,173	9,992,333		19,077,368	99.0%
	(7) Number of clain	ns			32
	(8) Credibility				21.6%
	(9) a priori Loss Rat	io Adjusted for Inflation			103.8%
	(10) Credibility Wei	ghted Loss and LAE Ratio			102.7%
	(11) Present Value F	Factor for Loss and LAE			0.782
	(12) Present Value of	of Projected Loss and LAE			0.803
		remium for Management Fees and Other Un	derwriting Expenses		0.388
	(14) Provision for Co	ommissions and State Premium Taxes			0.035
	(15) Provision for Pr	ofit and Contingency and Federal Income Ta	xes		-0.022
		rience Rating Modification			1.000
		ired Rate Level Change			20.7%
	. ,	Rate Level Change			0.0%
	Column / Row	Note	Column / Row	Note	
	(2), (7)	From data provided by client	(9)	a'priori loss ratio based on target con	nbined ratio and expense
	(3)	Policy years prior to 06 adjusted	1-1	used in prior pricing analysis	
	(5)	for 3% savings due to damages cap	(10)	Total of Col (6) x Row (8) + Row (9) x	[ 1 - Row (8) ]
	(4)	Based on 5.0% trend	(11)	From Exhibit E5	(0/)
	(5)	Col (3) x Col (4) x [ 1 + A&O %]	(12)	Row (10) x Row (11)	
	(6)	Col (5) / Col (2)	(13), (14), (15)	From Report	
	(0)	COI (3) / COI (2)	(±3), (±4), (±3)	i rom neport	

# WISCONSIN HEALTH CARE LIABILITY INSURANCE PLAN HOSPITALS AND OTHER HEALTH CARE FACILITIES

**Development of Indicated Assessment Income for 2016** 

Accident Year	Manual Premiums at 7/1/15 Rate Level at \$1M/\$3M Limits	Projected Ultimate Losses and DCC at \$1M Limits	Factor to Current Cost Level	Incurred Losses and LAE at Current Cost Level and Retention	Loss and LAE Ratio
(1)	(2)	(3)	(4)	(5)	(6)
1990	6,403,673	3,851,290	3.556	17,391,286	271.6%
1991	5,729,959	644,836	3.386	2,773,226	48.4%
1992	2,816,005	1,251,643	3.225	5,126,575	182.1%
1993	421,992	133,380	3.072	520,293	123.3%
1994	263,748	21,798	2.925	80,980	30.7%
1995	270,241	1,532	2.786	5,421	2.0%
1996	276,126	18,622	2.653	62,749	22.7%
1997	149,773	26,579	2.527	85,299	57.0%
1998	121,812	2,218	2.407	6,780	5.6%
1999	130,320	155,811	2.292	453,544	348.0%
2000	161,247	0	2.183	0	0.0%
2001	157,361	0	2.079	0	0.0%
2001		0	1.980	0	
	349,328				0.0%
2003	474,692	69,574	1.886	166,615	35.1%
2004	553,482	199,572	1.796	455,171	82.2%
2005	2,657,255	882,101	1.710	1,916,040	72.1%
2006	2,827,895	79,125	1.629	163,685	5.8%
2007	2,738,887	445,359	1.551	877,440	32.0%
2008	2,554,567	129,280	1.477	242,577	9.5%
2009	2,729,324	117,589	1.407	210,133	7.7%
2010	1,552,633	314,678	1.340	535,557	34.5%
2011	408,796	468,646	1.276	759,617	185.8%
2012	381,655	324,996	1.216	501,694	131.5%
2013	476,433	384,838	1.158	565,783	118.8%
Total	34,607,203	9,523,466		32,900,466	95.1%
004 - 2013	16,880,926	3,346,183		6,227,697	36.9%
	(7) Number of clair	ns			21
	(8) Credibility				17.5%
	(9) a priori Loss Rat	io Adjusted for Inflation			101.5%
	(10) Credibility Wei	ghted Loss and LAE Ratio			90.2%
	(11) Present Value I	Factor for Loss and LAE			0.795
	(12) Present Value	of Projected Loss and LAE			0.717
	(13) Proportion of F	Premium for Management Fees and Other Und	derwriting Expenses		0.388
	(14) Provision for Co	ommissions and State Premium Taxes			0.033
	(15) Provision for Pr	rofit and Contingency and Federal Income Tax	es		-0.017
	(16) Projected Expe	rience Rating Modification			1.000
		ired Rate Level Change			12.3%
		Rate Level Change			0.0%
	Column / Row	Note	Column / Row	Note	
	(2), (7)	From data provided by client	(9)	a'priori loss ratio based on target com	bined ratio and expense
	(3)	Policy years prior to 06 adjusted	1-7	used in prior pricing analysis	
	(5)	for 3% savings due to damages cap	(10)	Total of Col (6) x Row (8) + Row (9) x [	1 - Row (8) ]
	(4)	Based on 5.0% trend	(11)	From Exhibit E5	/=/ 1
	(5)	Col (3) x Col (4) x [ 1 + A&O %]	(12)	Row (10) x Row (11)	
	(6)	Col (5) / Col (2)	(13), (14), (15)	From Report	
	(0)	CO1 (3) / CO1 (2)	(13), (14), (13)	rrom neport	

# WISCONSIN HEALTH CARE LIABILITY INSURANCE PLAN HOSPITAL PREMISES LIABILITY

**Development of Indicated Assessment Income for 2016** 

Accident Year	Manual Premiums at 7/1/15 Rate Level at \$1M/\$3M Limits	Projected Ultimate Losses and DCC @ \$25K Limits	Factor to Current Cost Level	Incurred Losses and LAE at Current Cost Level and Retention	Loss and LAE Ratio
(1)	(2)	(3)	(4)	(5)	(6)
1990	354,079	151,813	3.556	685,544	193.6%
1991	324,136	236,999	3.386	1,019,255	314.5%
1992	152,993	18,634	3.225	76,322	49.9%
1993	37,373	1,956	3.072	7,629	20.4%
1993	37,373 25,344	1,956	2.925	7,629	0.0%
1995	25,360	0	2.786	0	0.0%
1996	25,521	0	2.653	0	0.0%
1997	18,282	0	2.527	0	0.0%
1997	,	0	2.407	0	
1998	12,852	0	2.407	0	0.0%
	13,180				0.0%
2000	14,363	0	2.183	0	0.0%
2001	19,097	0	2.079	0	0.0%
2002	16,376	0	1.980	0	0.0%
2003	25,770	202,247	1.886	484,336	1879.4%
2004	30,572	0	1.796	0	0.0%
2005	166,310	23,594	1.710	51,249	30.8%
2006	170,460	3,000	1.629	6,207	3.6%
2007	173,531	0	1.551	0	0.0%
2008	171,706	79,482	1.477	149,138	86.9%
2009	184,553	33,187	1.407	59,305	32.1%
2010	106,896	52,855	1.340	89,955	84.2%
2011	33,797	61,750	1.276	100,090	296.2%
2012	34,443	40,331	1.216	62,259	180.8%
2013	34,792	56,184	1.158	82,600	237.4%
Total	2,171,785	962,033		2,873,890	132.3%
004 - 2013	1,107,060	350,384		600,804	54.3%
	(7) Number of clain	ns			8
	(8) Credibility				10.8%
	(9) a priori Loss Rat	io Adjusted for Inflation			101.0%
	(10) Credibility Weig	ghted Loss and LAE Ratio			95.9%
	(11) Present Value F	Factor for Loss and LAE			0.795
	(12) Present Value of	of Projected Loss and LAE			0.763
	(13) Proportion of P	remium for Management Fees and Other Uni	derwriting Expenses		0.388
	(14) Provision for Co	ommissions and State Premium Taxes			0.033
	(15) Provision for Pr	ofit and Contingency and Federal Income Tax	es		-0.015
	(16) Projected Expe	rience Rating Modification			1.000
		ired Rate Level Change			17.2%
		Rate Level Change			0.0%
	Column / Row	<u>Note</u>	Column / Row	<u>Note</u>	
	(2), (7)	From data provided by client	(9)	a'priori loss ratio based on target com	bined ratio and expenses
	(3)	Policy years prior to 06 adjusted		used in prior pricing analysis	·
		for 3% savings due to damages cap	(10)	Total of Col (6) x Row (8) + Row (9) x [	1 - Row (8) ]
	(4)	Based on 5.0% trend	(11)	From Exhibit E5	
	(5)	Col (3) x Col (4) x [ 1 + A&O %]	(12)	Row (10) x Row (11)	
	(6)	Col (5) / Col (2)	(13), (14), (15)	From Report	
	(8)	[ Row (7) / 683 ] ^ ( 1/2 )	(17)	[Row (12) + Row (13)] / {[1 - Row (14)	

Indicated Short Term Transaction Fees and Expense Constants

Exhibit E7 Page 1

	Projected 2015/16 <u>Fiscal Year</u>
Written Premium	1,760,000
Short Term Policy Transaction Fee Approach	
Number of Short Term Policies	720
Proposed Transaction Fee	100
Total Transaction Fee Revenue	72,000
Remaining Fixed Expenses	288,000
Revised Provision for Management Fees &	
Other Underwriting Expenses	16.4%
Fixed Expense Provision Approach	_
Number of Short Term Policies	720
Number of Long Term Policies	275
Proposed Fixed Expense per Policy Charge	200
Total Fixed Expense Charge Revenue	199,000
Remaining Fixed Expenses	161,000
Revised Provision for Management Fees &	
Other Underwriting Expenses	9.1%

HCLIP - Expense Constant - v2 10/29/2015

Development of Proposed Short Term Policy Fees and Expense Constant

Exhibit E7 Page 2

	Projected 2015/16	Calendar Year		
	<u>Fiscal Year</u>	2014	<u>2013</u>	2012
Written Premium	1,760,000	1,735,602	1,844,597	1,789,387
Fixed Expenses				
Management Fees		296,499	262,358	333,620
Other Underwriting Expenses		65,799	68,130	64,129
Total Fixed Expenses	360,000	362,298	330,488	397,749
Percentage of Written Premium	20.5%	20.9%	17.9%	22.2%
Variable Expenses				
One Half of Management and Other Underwriting		362,298	330,488	397,749
Commissions		30,847	31,466	30,539
Premium Taxes		36,150	35,938	36,725
Total Variable Expenses	440,000	429,295	397,892	465,013
Percentage of Written Premium	25.0%	24.7%	21.6%	26.0%
Total Underwriting Expenses	800,000	791,593	728,380	862,762
Short Term Policies				
Number of Policies Written	720	669	588	546
Total Written Premium	324,000	309,770	244,134	152,076
Average Written Premium	450	463	415	279
Long Term Policies				
Number of Policies Written	275	274	270	294
Total Written Premium	1,650,000	1,500,216	1,779,687	2,643,372
Average Written Premium	6,000	5,475	6,591	8,991
Short Term Policy Transaction Fee Approach				
Estimated Percentage of Total Fixed Expenses				
Attributable to Short Term Polices	72.4%			
Indicated Transaction Fee per Short Term Policy	362	392	407	527
PROPOSED TRANSACTION FEE	100			
Percentage of Average Written Premium	22.2%			
Fixed Expense Provision Approach - All Policies				
Indicated Fixed Expense per Policy	362	384	385	474
PROPOSED FIXED EXPENSE PER POLICY CHARGE	200			
% of Avg. Short Term Policy Written Premium	44.4%			
% of Avg. Long Term Policy Written Premium	3.3%			

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