

# **Osborn, Carreiro & Associates, Inc.**

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April 14, 2014

State and Public School Life and Health  
Insurance Program Legislative Task Force  
c/o Bureau of Legislative Research  
State Capitol Building  
Little Rock, AR 72201

RE: Actuarial Review of Public School Employees portion of the State and Public  
School Life and Health Insurance Program

Ladies and Gentlemen:

This report presents the results of our actuarial review of the Public School Employees portion of the State and Public School Life and Health Insurance Program. Our review consisted of an analysis of past claims and premiums, development of possible changes, evaluation of the impact of changes, and assistance with the development of recommendations and projections to be presented by Collier Insurance.

## **BACKGROUND**

The State and Public School Life and Health Insurance Program is divided into two components. One component is the fund for Public School Employees (“PSE Fund”), and the other fund is for state employees (“ASE Fund”).

Over the past several years both funds had more assets than liabilities. This excess was used to offset cost increases each year, and to keep premium increases to employees at a reasonable level. The PSE Fund ran out of surplus in 2012. In addition, 2012 had an unusual number of large claims, which depleted the PSE “catastrophic reserve”. As a result, PSE employee premiums for 2014 were scheduled to increase about 44% over 2013 rates.

A special legislative session was called in October 2013 to deal with the program. The General Assembly concluded (among other things) that:

- (1) The program was in a state of crisis; and
- (2) The General Assembly needed to take an active role in crafting a long-term solution to ensure the stability of the program.

As a temporary solution, the General Assembly allocated \$43 million in funding to reduce the proposed 2014 premium increase to 10%. In addition, the State and Public School Life and Health Insurance Program Legislative Task Force was created to study, develop, and recommend fundamental restructuring of the program.

### **SUMMARY OF FINDINGS**

Both PSE and ASE offer employees a choice of three “tiers” of health coverage. The “Gold” plan is the most expensive, and generally provides the best coverage. The “Bronze” plan is the least expensive (and is the most subsidized by the state), and provides the lowest level of coverage. The “Silver” plan is theoretically between the Gold and Bronze plans; but as Collier Insurance will discuss, is not much different than the Bronze plan.

Our findings include:

- (1) A significant part of the 2014 increase in premiums was due to “migration”. That is, healthy employees moving out of the Gold plan into the Bronze plan, or less healthy employees moving from Bronze to Gold.
- (2) With the current structure/strategy, migration is likely to continue.
- (3) When employees migrate, there is a change in claims paid, but a larger change in the amount of premium paid. For example, a 25% migration of healthy lives from Gold to Bronze would likely result in about \$3 million fewer claims, but about \$16 million in lower employee premiums, resulting in a net loss of \$13 million. In other words, the primary structural issue appears to be premium income and not claim outgo.
- (4) Non-Medicare Retirees (i.e., those who retire before age 65) cost about \$132 per retiree per month more than active members, but pay the gross active member rates. This subsidy was about \$5.2 million in 2013.
- (5) We project that claims for 2014 will be around \$300 million. But actual 2014 claims could be different. We estimate a 5% chance that actual claims could be \$8 million more than this amount, and a 5% chance that actual claims could be \$8 million less than this amount.
- (6) In prior years the PSE had a “catastrophic reserve” to help with large claims. Although commercial reinsurance could be used for this risk, we don’t see a significant advantage to either reinsurance or the reserve.
- (7) There appear to be some changes that could save money. The Preferred Provider Access fee seems large, given the size of this fund. Centers of Excellence have provided better outcomes and are expected to save money over the long term for other large groups.

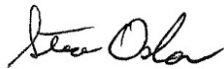
**REMAINDER OF REPORT**

The rest of this report consists of several exhibits, covering various topics. A Table of Contents follows this summary.

We appreciate the assistance and data provided by Employee Benefits Division. We have relied upon the data supplied to us (which was primarily enrollment information for 2013 and 2014, and claims data for 2013). We did not audit this data, although we did review it for reasonableness and consistency. If any of the data provided to us is incorrect, or incomplete, the results of our calculations could be materially different. The purpose of this report is to help the State and Public School Life and Health Insurance Program Legislative Task Force evaluate the program. This report is not intended for any other purpose or for use by persons who are not familiar with such matters.

We are available to discuss this report with you at your convenience. If you have any questions or comments about this report, please let us know.

Sincerely,



Steve Osborn, F.S.A., M.A.A.A.  
Actuary



Jody B. Carreiro, A.S.A., M.A.A.A.  
Actuary

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## Exhibit 1

### Review of 2013 Claims and Effects of Migration

We were provided 2013 claims data for PSE. This claims data was separate for medical claims and pharmacy claims. Both files included the plan/tier information and the total claims paid for the year. The medical claim file also included the submitted and allowed amounts (that is, the gross claims submitted and paid). These were total claims paid in 2013. Some of the claims paid in 2013 were actually incurred before 2013. And some claims incurred in 2013 are actually paid after 2013. At this point, claims incurred in 2013 but paid later, can only be estimated. In order to use the most recent claim data available, without having to make additional estimates, we used the paid claim data.

	Medical Paid	Pharmacy Paid	Total Paid	Employees	Medical PEPM	Pharm PEPM	Total PEPM
<b>Actives (include COBRA)</b>							
Gold	\$128,681,171	47,333,365	176,014,536	27,463	\$390.47	143.63	534.10
Silver	19,800,605	4,760,688	24,561,293	4,474	368.81	88.67	457.48
Bronze	31,751,479	4,053,064	35,804,543	14,746	179.44	22.90	202.34
Subtotal	180,233,254	56,147,117	236,380,371	46,683	321.73	100.23	421.96
<b>Non-Medicare Eligible Retirees</b>							
Gold	12,588,269	5,804,472	18,392,742	2,377	441.32	203.49	644.82
Silver	332,335	108,342	440,677	50	553.89	180.57	734.46
Bronze	2,445,656	579,396	3,025,052	859	237.26	56.21	293.47
Subtotal	15,366,260	6,492,211	21,858,471	3,286	389.69	164.64	554.33
<b>Medicare Eligible Retirees</b>							
	15,460,273	1,372,887	16,833,160	7,820	164.75	14.63	179.38
<b>PSE Grand Total</b>							
	\$211,059,788	64,012,214	275,072,002	57,789	\$304.35	92.31	396.66

The costs calculated above are before expenses. The expenses, which are mostly administrative, equate to about \$42 PEPM (Per Employee Per Month).

The Non-Medicare Eligible (NME) Retirees pay the same total premium (before state offsets) that the regular active pay. This creates an implied subsidy. The total PEPM for the NME Retirees is \$554.33 and the PEPM for actives is \$421.96. The implied subsidy for this group is then \$132.37 PEPM. This was about \$5.2 million for calendar year 2013. The number in this category is likely to grow because of the overall age of the actives and changes implemented by Teacher Retirement System that makes it harder to work after retirement (in which case they are still counted as active).

## Exhibit 1 (Continued)

### **Effects of Migration**

Migration is a term to describe the movement from one tier to another. There has been movement between all the tiers. However the most significant migration since 2012 has been from the Gold tier to the Bronze tier. A majority of the migration can be attributed to price sensitivity. That is, as total costs have increased, the state and local portions had remained the same and so a disproportionate increase was being born by the employee. During the 2013 special session there was additional state money added to the system. The \$131 per month per covered employee local amount that had not changed in several years, increased to \$150 per month per covered employee in 2014.

We took the 2013 claims and sorted by claim size. Based on the assumption that the Gold tier members with the lowest claims are the most likely to want to migrate to Bronze tier, we looked at the employees with the lowest 25% of the claims. We then re-priced these costs using the Bronze provisions and added them to the Bronze group. The resulting Gold group had a \$173.81 increase in PEPM costs while the Bronze group only saw a decrease in PEPM of \$66.22.

The net effect of the 25% lowest Gold claims moving to Bronze is about a \$3 million reduction in claims cost. The other side of this equation is the premium collected. If these 6,900 employees move from Gold to Bronze under the 2014 premium structure the total premium would be reduced by about \$16 million. The net result is that premiums for the system as a whole would need to be increased by \$13 million.

The primary takeaway of this discussion is that the move to push more employees to the Bronze tier by artificially holding down the employee portion of the Bronze premium is migrating employees to the Bronze tier, but is also pushing Gold premiums up.

## Exhibit 2

### Estimate of Impact of Employees Working Less than 30 Hours per Week

Because of the prevalence of the 30-hour coverage requirement present in the Affordable Care Act, much attention has been focused on employees in the state under that threshold. Using the data collected from school districts, aligned with claims data provided by the Employee Benefits Division, we were able to estimate the relative cost of employees working under 30 hours a week versus over 30 hours a week. We associated all spouses and dependents whose primary member was listed as under 30 hours with the same group.

We recommend looking at the data on a relative basis (e.g. the fact that the under-30 hour claimants were, on average, 16% more expensive than an over-30 hour counterpart) rather than on an absolute basis, because of the non-uniform nature of the data collection and reporting, and the fact that some of the data were incomplete.

<b>Bronze Active</b>	2013 Total Claims Paid	2013 Claimants	Average Cost/year	Relative to Over 30 Hour Group
Over 30 hours	\$33,113,693	22,476	\$1,473.29	100.0%
Under 30 hours	2,347,432	1,124	2,088.46	141.8%
Total	35,461,125	23,600	1,502.59	

<b>Silver Active</b>	2013 Total Claims Paid	2013 Claimants	Average Cost/year	Relative to Over 30 Hour Group
Over 30 hours	24,625,839	7,365	3,343.63	100.0%
Under 30 hours	1,173,771	269	4,363.46	130.5%
Total	25,799,610	7,634	3,379.57	

<b>Gold Active</b>	2013 Total Claims Paid	2013 Claimants	Average Cost/year	Relative to Over 30 Hour Group
Over 30 hours	159,884,517	34,658	4,613.21	100.0%
Under 30 hours	7,848,729	1,503	5,222.04	113.2%
Total	167,733,247	36,161	4,638.51	

Exhibit 2 (Continued)

<b>All Active</b>	2013 Total Claims Paid	2013 Claimants	Average Cost/year	Relative to Over 30 Hour Group
Over 30 hours	\$217,624,050	64,499	\$3,374.07	100.0%
Under 30 hours	11,369,932	2,896	3,926.08	116.4%
Total	228,993,982	67,395	3,397.79	
<b>Proportion Under 30 Hrs.</b>	4.97%	4.30%		

Looking at the bottom chart, which groups all actives regardless of plan, we see that despite employees working under 30 hours a week making up just 4.3% of the total claimant population, they were responsible for 5.0% of the claims paid. This may not seem like a large difference—but in reality, this means that a typical under-30 hour a week employee was 16.4% more expensive to the plan than a typical over-30 hour a week employee. This phenomenon seems to be concentrated in medical claims cost, as the under-30 hours members were actually slightly less expensive than average with regard to pharmacy claims.

Although we did not analyze compensation data in conjunction with these figures, we would suspect that many employees working less than 30 hours a week have lower-than-typical household incomes. If they were to lose coverage, many would likely be eligible for subsidies under the Affordable Care Act, and their premiums might actually be less expensive than those available under the PSE plan. This idea will likely be discussed by other consultants—however, the data appears to suggest that these employees are driving premiums up for the general covered population.



## **Exhibit 3**

### **Projection of Premiums for Multi-Tier Program Used By Collier Insurance**

One significant element of the Collier Insurance presentation is the strategic costs of the plan. This is determined by the relative costs of various plan choices as well as the premiums that are associated with those plan choices. The primary metric used to determine the value of various plans is the “Actuarial Value” of various sets of plan provisions. One can use these actuarial values to model strategic plan changes.

[An “actuarial value” of 75.0%, for example, means that the particular plan design would pay an average of 75.0% of covered charges for an average population.]

#### **Actuarial Value and Minimum Value Calculators**

Under the Patient Protection and Affordable Care Act (PPACA), the Department of Health and Human Services (“HHS”) and the Center for Medicare & Medicaid Services (“CMS”), have developed a standard to compare health insurance programs. CMS has produced two on-line “calculators” that can be used: The Actuarial Value and the Minimum Value Calculator. The Actuarial Value Calculator (AV) calculator is used by HHS to determine whether a plan is “platinum”, “gold”, “silver”, or “bronze”. The Minimum Value Calculator (MV Calculator) is used by HHS to determine if a plan is providing “minimum value” to employees. Both are designed to give an estimate of network liability for a given plan design.

This MV Calculator uses data from a large national commercial database to build continuance tables for Employer-Sponsored Health Plans. The MV Calculator uses 2009 data, where enrollees are either continuously enrolled for 12 months, exit the dataset due to death (as identified by inpatient discharge), or enter the dataset due to birth. Only enrollees with identifiable plan structures are included; the dataset is limited to PPO employer-sponsored health plans. Plans with incomplete drug or medical claims are excluded (defined as drug cost comprising under 7.5% of total claims cost, or over 50% of total claims cost). This data is then projected forward to 2014 values at a growth rate of 6.5% per year.

The Actuarial Value (AV) calculator is very similar, but uses data that has a more narrow representation than the MV calculator. In a review of the various data sets, we found that the MV Calculator has a data set that is larger and includes larger groups (similar to our ASE and PSE plans). It was also found that the MV Calculator data set was more heavily represented with experience from the south and is therefore more geographically appropriate for what we were calculating. Therefore, for our comparisons we chose the MV Calculator to provide the Actuarial Costs of the various plans.

Exhibit 3 (continued)

**Actuarial Cost of Current Plans**

The next task is to find the Actuarial Value of the current (2014) PSE tiers, named as Gold, Silver and Bronze. This includes reviewing the various provisions of the different tiers, using the MV Calculator to determine Actuarial Value of each tier and then validating the results with Collier Insurance. We were able to do that and a one-page summary of each tier's calculation it is included as part of this Exhibit. The calculated Actuarial Values were:

PSE Gold	84.9%
PSE Silver	76.0%
PSE Bronze	71.3%

**Projected Premiums of a Choice Platform**

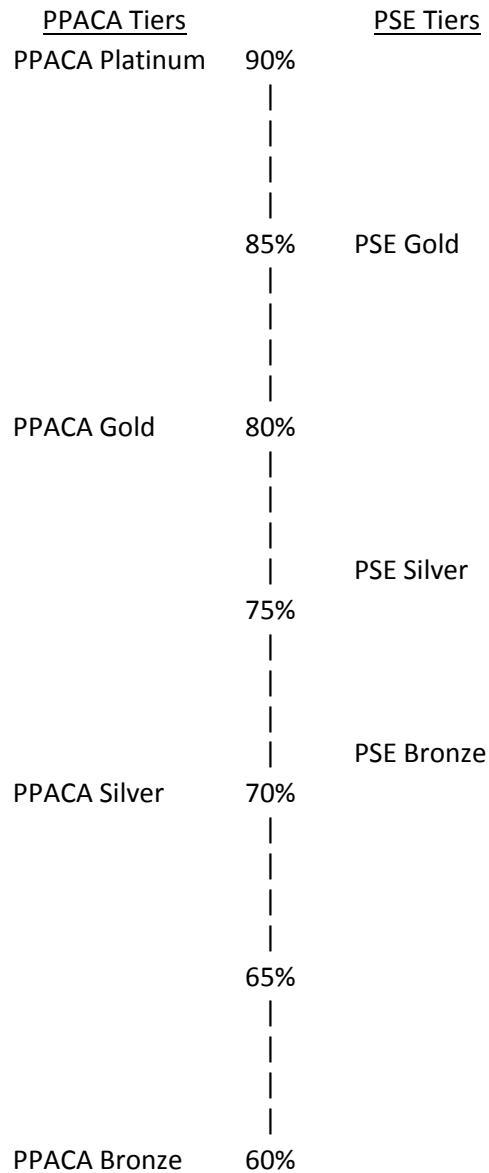
After determining the Actuarial Cost of the current tiers, we needed to verify the projected premiums of a four tier system that is being reviewed by Collier Insurance as one of their models. The model uses the four PPACA tiers. Those tiers are referred to as Platinum, Gold, Silver and Bronze.

There was then developed with Collier Insurance a set of projected premiums for each tier. This was completed using the relative Actuarial Values of the current closest plan tier. For example, the Employee only Platinum premium would be based on the PSE Gold premium for 2014 of \$566.72. When this is multiplied by the ratio of Actuarial Values (90% v. 84.9%), you get about \$600 per month. A \$14 PEPM additional administrative cost was added to cover the expense of education and communication of this model. This additional administrative cost is an estimate provided by Collier Insurance. A complete table of these developed monthly rates is as follows.

	<u>Platinum</u>	<u>Gold</u>	<u>Silver</u>	<u>Bronze</u>
Employee Only	\$614.07	463.08	406.95	240.19
Employee & Spouse	1,454.06	1,076.97	944.10	521.87
Employee & Children	1,123.90	834.8	732.20	409.66
Family	1,963.93	1,448.78	1,269.43	691.35
Implied Blended	1,288.99	955.91	838.17	465.77

Exhibit 3 (continued)

Each tier has a specified Actuarial Value (90%, 80%, 70%, and 60%). These values do not describe particular provisions, but the relative value of those provisions. For comparison purposes, we have charted the PPACA tiers and the PSE tiers below:



## PSE Gold Plan Provisions for Actuarial Value 2014

### User Inputs for Plan Parameters

- Use Integrated Medical and Drug Deductible?
- Apply Inpatient Copay per Day?
- Apply Skilled Nursing Facility Copay per Day?
- Use Separate OOP Maximum for Medical and Drug Spending?
- Grandfathered Plan?

HSA/HRA Options	
HSA/HRA Employer Contribution?	<input type="checkbox"/>
Annual Contribution Amount:	

Tier 1 Plan Benefit Design		
	Medical	Drug
Deductible (\$)		
Coinsurance (% , Insurer's Cost Share)		
OOP Maximum (\$)	\$2,500.00	
OOP Maximum if Separate (\$)		

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Type of Benefit	Tier 1			
	Subject to Deductible?	Subject to Coinsurance?	Coinsurance, if different	Copay, if separate
<b>Medical</b>	<input checked="" type="checkbox"/> All	<input type="checkbox"/> All		
Emergency Room Services	<input checked="" type="checkbox"/>	<input type="checkbox"/>		\$250.00
All Inpatient Hospital Services (inc. MHSA)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		\$250.00
Primary Care Visit to Treat an Injury or Illness (exc. Well Baby, Preventive, and X-rays)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		\$35.00
Specialist Visit	<input checked="" type="checkbox"/>	<input type="checkbox"/>		\$70.00
Mental/Behavioral Health and Substance Abuse Disorder Outpatient Services	<input checked="" type="checkbox"/>	<input type="checkbox"/>		\$35.00
Imaging (CT/PET Scans, MRIs)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		\$250.00
Rehabilitative Speech Therapy	<input checked="" type="checkbox"/>	<input type="checkbox"/>		\$35.00
Rehabilitative Occupational and Rehabilitative Physical Therapy	<input checked="" type="checkbox"/>	<input type="checkbox"/>		\$35.00
Preventive Care/Screening/Immunization	<input type="checkbox"/>	<input type="checkbox"/>	100%	\$0.00
Laboratory Outpatient and Professional Services	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		\$250.00
X-rays and Diagnostic Imaging	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Skilled Nursing Facility	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		\$250.00
Outpatient Facility Fee (e.g., Ambulatory Surgery Center)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Outpatient Surgery Physician/Surgical Services	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<b>Drugs</b>	<input type="checkbox"/> All	<input type="checkbox"/> All		
Generics	<input type="checkbox"/>	<input type="checkbox"/>		\$15.00
Preferred Brand Drugs	<input type="checkbox"/>	<input type="checkbox"/>		\$40.00
Non-Preferred Brand Drugs	<input type="checkbox"/>	<input type="checkbox"/>		\$80.00
Specialty High-Cost Drugs	<input type="checkbox"/>	<input type="checkbox"/>		\$100.00

### Options for Additional Benefit Design Limits:

Set a Maximum on Specialty Rx Coinsurance Payments? <input type="checkbox"/>
Specialty Rx Coinsurance Maximum:
Set a Maximum Number of Days for Charging an IP Copay? <input type="checkbox"/>
# Days (1-10):
Begin Primary Care Cost-Sharing After a Set Number of Visits? <input type="checkbox"/>
# Visits (1-10):
Begin Primary Care Deductible/Coinsurance After a Set Number of Copays? <input type="checkbox"/>
# Copays (1-10):

### Output

Status/Error Messages:

MV Over 60%

**Minimum Value:**

**84.9%**

Note: This page shows a summary of the inputs determined by OCA and the Actuarial Value output from the Minimum Value Calculator. The Minimum Value Calculator was created by CMS and is publicly available through [www.cms.gov](http://www.cms.gov). The Minimum Value Calculator is designed to give an estimate of Network liability for a given plan design.

## PSE Silver Plan Provisions for Actuarial Value 2014

### User Inputs for Plan Parameters

- Use Integrated Medical and Drug Deductible?
- Apply Inpatient Copay per Day?
- Apply Skilled Nursing Facility Copay per Day?
- Use Separate OOP Maximum for Medical and Drug Spending?
- Grandfathered Plan?

HSA/HRA Options	
HSA/HRA Employer Contribution?	<input type="checkbox"/>
Annual Contribution Amount:	

Tier 1 Plan Benefit Design		
Medical	Drug	Combined
Deductible (\$)		\$1,000.00
Coinsurance (%; Insurer's Cost Share)		80.00%
OOP Maximum (\$)		\$4,000.00
OOP Maximum if Separate (\$)		

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Type of Benefit	Tier 1			
	Subject to Deductible?	Subject to Coinsurance?	Coinsurance, if different	Copay, if separate
<b>Medical</b>	<input checked="" type="checkbox"/> All	<input type="checkbox"/> All		
Emergency Room Services	<input checked="" type="checkbox"/>	<input type="checkbox"/>		\$300.00
All Inpatient Hospital Services (inc. MHSA)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		\$300.00
Primary Care Visit to Treat an Injury or Illness (exc. Well Baby, Preventive, and X-rays)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		\$35.00
Specialist Visit	<input checked="" type="checkbox"/>	<input type="checkbox"/>		\$70.00
Mental/Behavioral Health and Substance Abuse Disorder Outpatient Services	<input checked="" type="checkbox"/>	<input type="checkbox"/>		\$35.00
Imaging (CT/PET Scans, MRIs)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		\$300.00
Rehabilitative Speech Therapy	<input checked="" type="checkbox"/>	<input type="checkbox"/>		\$35.00
Rehabilitative Occupational and Rehabilitative Physical Therapy	<input checked="" type="checkbox"/>	<input type="checkbox"/>		\$35.00
Preventive Care/Screening/Immunization	<input type="checkbox"/>	<input type="checkbox"/>	100%	\$0.00
Laboratory Outpatient and Professional Services	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		\$300.00
X-rays and Diagnostic Imaging	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Skilled Nursing Facility	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		\$300.00
Outpatient Facility Fee (e.g., Ambulatory Surgery Center)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Outpatient Surgery Physician/Surgical Services	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<b>Drugs</b>	<input type="checkbox"/> All	<input type="checkbox"/> All		
Generics	<input type="checkbox"/>	<input type="checkbox"/>		\$15.00
Preferred Brand Drugs	<input type="checkbox"/>	<input type="checkbox"/>		\$40.00
Non-Preferred Brand Drugs	<input type="checkbox"/>	<input type="checkbox"/>		\$80.00
Specialty High-Cost Drugs	<input type="checkbox"/>	<input type="checkbox"/>		\$100.00

### Options for Additional Benefit Design Limits:

Set a Maximum on Specialty Rx Coinsurance Payments?	<input type="checkbox"/>
Specialty Rx Coinsurance Maximum:	
Set a Maximum Number of Days for Charging an IP Copay?	<input type="checkbox"/>
# Days (1-10):	
Begin Primary Care Cost-Sharing After a Set Number of Visits?	<input type="checkbox"/>
# Visits (1-10):	
Begin Primary Care Deductible/Coinsurance After a Set Number of Copays?	<input type="checkbox"/>
# Copays (1-10):	

### Output

Status/Error Messages:

MV Over 60%

**Minimum Value:**

**76.0%**

Note: This page shows a summary of the inputs determined by OCA and the Actuarial Value output from the Minimum Value Calculator. The Minimum Value Calculator was created by CMS and is publicly available through [www.cms.gov](http://www.cms.gov). The Minimum Value Calculator is designed to give an estimate of Network liability for a given plan design.

## PSE Bronze Plan Provisions for Actuarial Value 2014

### User Inputs for Plan Parameters

- Use Integrated Medical and Drug Deductible?
- Apply Inpatient Copay per Day?
- Apply Skilled Nursing Facility Copay per Day?
- Use Separate OOP Maximum for Medical and Drug Spending?
- Grandfathered Plan?

HSA/HRA Options	
HSA/HRA Employer Contribution?	<input type="checkbox"/>
Annual Contribution Amount:	

Tier 1 Plan Benefit Design		
	Medical	Drug
Deductible (\$)		\$2,000.00
Coinsurance (% , Insurer's Cost Share)		80.00%
OOP Maximum (\$)		\$6,350.00
OOP Maximum if Separate (\$)		

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	Tier 1			
	Subject to Deductible?	Subject to Coinsurance?	Coinsurance, if different	Copay, if separate
<b>Medical</b>	<input checked="" type="checkbox"/> All	<input checked="" type="checkbox"/> All		
Emergency Room Services	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
All Inpatient Hospital Services (inc. MHSA)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Primary Care Visit to Treat an Injury or Illness (exc. Well Baby, Preventive, and X-rays)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Specialist Visit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Mental/Behavioral Health and Substance Abuse Disorder Outpatient Services	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Imaging (CT/PET Scans, MRIs)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Rehabilitative Speech Therapy	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Rehabilitative Occupational and Rehabilitative Physical Therapy	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Preventive Care/Screening/Immunization	<input type="checkbox"/>	<input type="checkbox"/>	100%	\$0.00
Laboratory Outpatient and Professional Services	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
X-rays and Diagnostic Imaging	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Skilled Nursing Facility	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Outpatient Facility Fee (e.g., Ambulatory Surgery Center)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Outpatient Surgery Physician/Surgical Services	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<b>Drugs</b>	<input checked="" type="checkbox"/> All	<input checked="" type="checkbox"/> All		
Generics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Preferred Brand Drugs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Non-Preferred Brand Drugs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Specialty High-Cost Drugs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

### Options for Additional Benefit Design Limits:

Set a Maximum on Specialty Rx Coinsurance Payments?	<input type="checkbox"/>
Specialty Rx Coinsurance Maximum:	
Set a Maximum Number of Days for Charging an IP Copay?	<input type="checkbox"/>
# Days (1-10):	
Begin Primary Care Cost-Sharing After a Set Number of Visits?	<input type="checkbox"/>
# Visits (1-10):	
Begin Primary Care Deductible/Coinsurance After a Set Number of Copays?	<input type="checkbox"/>
# Copays (1-10):	

### Output

Status/Error Messages:

MV Over 60%

**Minimum Value:**

**71.3%**

Note: This shows a summary of the inputs determined by OCA and the Actuarial Value output from the Minimum Value Calculator. The Minimum Value Calculator was created by CMS and is publicly available through [www.cms.gov](http://www.cms.gov). The Minimum Value Calculator is designed to give an estimate of network liability for a given plan design.

Exhibit 3 (continued)

**Health Reimbursement Account (“HRA”) and Health Savings Account (“HSA”)**

A Health Reimbursement Account (“HRA”) is an employer funded arrangement used to reimburse employees for out-of-pocket qualified medical expenses. Note that this is funded with employer money. Any unused funds can (if so designed by the employer) be rolled over to subsequent years accounts.

A Health Savings Account (“HSA”) is a tax-advantaged account used to pay for qualified medical expenses. In many ways, the HSA is similar to a 401(k) retirement plan. The employee can contribute (on a pre-tax basis), and the employer can contribute, up to certain amounts. Any unused funds in one year carryover to the next year. The HSA is portable, and can move with an employee to another employer. When the employee retires, he can use the HSA to pay for qualified medical expenses after retirement, tax-free. Any investment earnings in the HSA are also tax-free.

## Exhibit 4

### Review of Assumptions Used By Collier Insurance

Collier Insurance was also hired by the State and Public School Life and Health Insurance Program Legislative Task Force. They have developed some strategic recommendations based on their modeling of individual behaviors relating to health insurance and income. Collier Insurance asked us to review some assumptions that went into their modeling.

We reviewed the following assumptions. In our opinion, these assumptions are reasonable for the purpose of their modeling.

<b>Variable</b>	<b>Collier Assumption</b>	<b>How Used</b>
Waived Opt Out Percentage	90%	Of the currently waived employees, 90% (selected randomly) will not examine options and will continue to waive coverage from PSE. The remaining 10% will be placed in the Plan Choice Modeling queue and either: elect group coverage, elect individual coverage, elect Medicaid, elect Medicaid, or waive all coverage options
Ineligible Opt Out Percentage	20%	Of the currently ineligible employees, 20% (selected randomly) will not examine options and will waive coverage from PSE (and will either be uninsured or covered under some other option not modeled here, e.g. other group coverage, tricare, etc.). The remaining 80% will be placed in the Plan Choice Modeling queue and either: elect group coverage, elect individual coverage, elect Medicaid, elect Medicaid, or waive all coverage options.
Plan Termination Penalty	\$2,080	\$2,000 penalty indexed by the premium adjustment percentage in the HHS Notice of Benefit and Payment Parameters for 2015 final rule
Subsidy Eligible Penalty	\$3,120	\$3,000 penalty indexed by the premium adjustment percentage in the HHS Notice of Benefit and Payment Parameters for 2015 final rule
Affordability metric	9.71%	9.5% affordability measure, indexed by the difference between the premium adjustment percentage and FPL growth
Transitional Reinsurance Fee	(\$19)	The 2014 plan year premiums are assumed to already include the \$63 per member transitional reinsurance fee. This fee drops to \$44 per covered member in 2015. To account for that reduction, we model the fee as a negative \$19.
Future Exchange Plan Trend	9%	Our default medical inflation to trend 2014 premiums to 2015 is 9% for the state and federal exchanges



Exhibit 4 (continued)

<b>Variable</b>	<b>Collier Assumption</b>	<b>How Used</b>
Future Group Plan Trend	9%	Our default medical inflation to trend 2014 premiums to 2015 is 9% for the group
Future FPL Trend	2%	We project a 2% increase in the Federal Poverty Level for 2015 over 2014.
Contribution Increase Threshold (waived or ineligible)	8%	Individuals are exempt from the individual mandate penalty if the cost of all available coverage options exceeds 8% of household income. As a result, we project that all currently waived or ineligible employees (currently paying 0% of their household income towards coverage) will only elect a coverage option (group, individual, Medicaid, or Medicare) if the cost of such coverage is no greater than 8% of their household income.
Contribution Increase Threshold (currently covered)	8%	Similarly, we project that all currently enrolled employees will only elect a coverage option (group, individual, Medicaid, or Medicare) if the cost of such coverage is an <i>increase</i> of no greater than 8% of their household income.

## Exhibit 5

### Analysis of Variability of Annual Aggregate Claims

As part of our charge to evaluate potential plan changes, we undertook an analysis of projected variability of annual aggregate claims. Using 2013 medical and pharmacy claims data provided by the Employee Benefits Division, we constructed a database aligned by member to aggregate total allowed claims. As we were only provided with actual paid amounts for pharmacy claims, we estimated the allowed claims by grossing in copays assuming 80% were tier one and 20% were tier three.

We then prepared a Monte Carlo simulation of 2014 claims. We estimated the number of 2014 claimants by assuming a Poisson distribution with a mean equal to the number of 2013 claimants (81,112 in our data). We assumed claim severity experienced a 9% medical cost inflation, and then fitted the allowed claims data to a lognormal distribution ( $\mu = 7.3253$  and  $\sigma = 1.5600$ ). For each trial in our simulation, we projected a number of claimants, and then modeled the expected allowed annual claims individually for each claimant using the fitted lognormal distribution. We then estimated the actual plan paid amount for each claimant by subjecting the modeled allowed amount to the deductible and maximum out of pocket expense values which would apply under the PSE Bronze, Silver, and Gold plans. Our estimate of the 2014 plan paid amount was the weighted average of the 2014 estimated enrollment numbers amongst the plans (57.81% Bronze, 10.84% Silver, 31.35% Gold). Our analysis included a simulation of 1,000 such trials. A summary of results is depicted below.

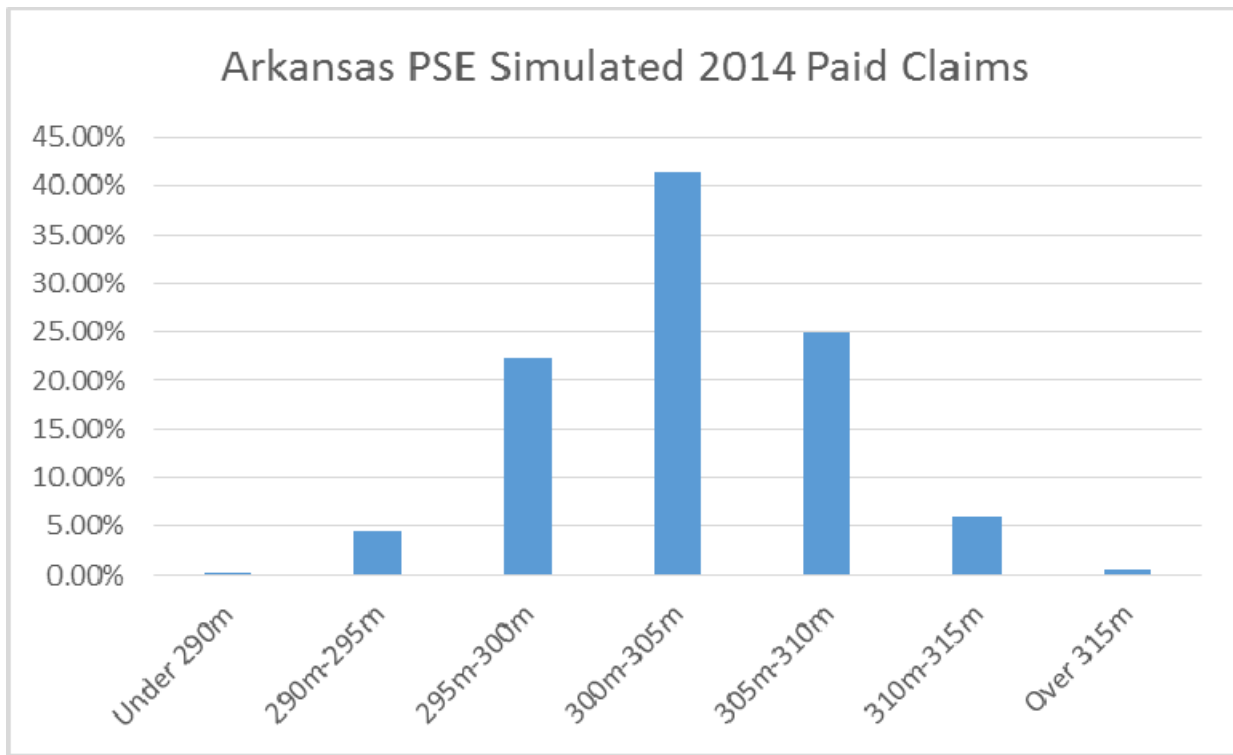


Exhibit 5 (continued)

The simulation suggested an average estimated 2014 paid claims total of just under \$303 million, with the median of our trials in the same neighborhood.

The results suggests that projected variability is a bit lower than one might expect—there was only approximately a 5% chance of actual annual claims being more than \$8 million more than the expected claims, and a 5% chance of actual annual claims being more than \$8 million less than expected claims.

<b>Estimated 2014 Aggregate Claims</b>	<b>Number of Simulation Results</b>
Under \$290,000,000	2
\$290m - \$295m	44
\$295m - \$300m	224
\$300m - \$305m	414
\$305m - \$310 m	250
\$310m - \$315m	60
Over \$315,000,000	6

The average amount of allowed claims in the simulation was just under \$416 million, with the lowest simulated trial projecting approximately \$401 million and then highest projecting approximately \$432 million. Number of projected claimants ranged from 80,305 to 81,939.

## Exhibit 6

### Actuarial Analysis of Large Claims

In conjunction with the Monte Carlo simulation described in Exhibit 5, that same simulation also developed a projection of claims over \$1 million.

We previously reported (see our March 11, 2014 report) on the size of individual claims. Supplementing that information with the Monte Carlo simulation suggests the following:

- (1) The “average” number of large claims (i.e., over \$1 million) in a year is about 2. Note that there were exactly two large claims in 2013.
- (2) There is almost a 40% chance that there will be more than 2 large claims in a year.
- (3) There is a 5% to 10% chance of having 4 or more large claims in a year.
- (4) These “chances”, or probabilities, will increase over time, due to medical inflation.
- (5) These probabilities are not out of line with national statistics.

#### Stop-Loss Reinsurance

The model indicated that an “average” year had about \$750,000 in claims over \$1 million. But there is a 25% chance that losses over \$1 million would exceed \$3 million.

The rate for a \$1 million stop-loss policy (i.e., a policy that pays that part of a claim over \$1 million) is \$4 to \$10 per member per month. With about 60,000 enrolled, even an inexpensive stop-loss policy would cost almost \$3 million a year. The advantage of the stop-loss insurance is that it replaces a variable risk with a fixed cost. But off-loading that risk comes with a price.

Another way to compare stop-loss to retaining the risk, suppose that the stop-loss reinsurance cost \$3 million a year. The insurance company would come out ahead 75% of the time (i.e., the 75% of years in which losses over \$1 million were less than \$3 million). The fund would come out ahead about 25% of the time (i.e., the 25% of years in which the losses over \$1 million totaled more than the \$3 million premium).

## **Exhibit 7**

### **Centers of Excellence and Other**

A primary focus to date has been on “big picture” claims and enrollment trends, to inform the State and Public School Life and Health Insurance Program Legislative Task Force, and to assist Collier Insurance in setting assumptions to model structural changes. But we also looked at some tactical changes which could save money with or without major restructuring.

One such tactical change would be a renegotiation of the access fee for the Preferred Provider Organization networks (“PPO”). This is an avenue worth pursuing.

The idea of a “Centers of Excellence” type program within the PSE plan was discussed in an earlier Task Force meeting. A “Centers of Excellence” program identifies highly rated providers and health care facilities (usually based on clinical outcomes and complication rates), typically highly specialized, with which the program can negotiate specialized arrangements for care. The idea is that, for complex or rare conditions or operations, receiving higher quality care is worth initial (potentially) higher medical and transportation costs, anticipating that future claim costs will be lower.

In our research, we have found a growth in the popularity of such arrangements over the past couple of years – the announcement of Wal-Mart and Lowe’s expansions and partnerships with the non-profit Pacific Business Group Health, first and foremost. Some large insurance companies are integrating similar practices: Aetna has “Institutes of Excellence” and “Institutes of Quality” designations for specialized treatment and managed care arrangements.

Because this is a relatively recent phenomenon, and the projected savings are expected to be realized over a long time horizon, there is little data available to estimate the efficacy of such a program. We do believe that, if managed properly and with careful selection of covered conditions, such a program would be able to provide some long term cost savings. However, such a program is expected to do little to affect premiums in the short-run (and may even increase them).