Actuarial Committee

Meeting Minutes

Date	Time	Location	Staff Contact
December 11, 2020	9:00 AM	WCIRB Teleconference	David M. Bellusci

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Members	**Representing**
Mauro Garcia	Zurich North America
Ika Irsan	Republic Indemnity Company of America
Miranda Ma	American International Group
Joanne Ottone	Berkshire Hathaway Homestate Companies
Jill Petker	Liberty Mutual Group
Kate Smith	State Compensation Insurance Fund
Bryan Ware	AmTrust
Chris Westermeyer	Travelers

California Department of Insurance
Giovanni Muzzarelli
Mitra Sanandajifar

WCIRB
Bill Mudge
David Bellusci
Laura Carstensen
Tony Milano
Shane Steele
Julia Zhang

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The webinar teleconference meeting of the Actuarial Committee was called to order at 9:00 AM following a reminder of applicable antitrust restrictions, with Mr. David Bellusci, Executive Vice President and Chief Actuary, presiding.

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Notice

The information in these Minutes was developed by the Workers' Compensation Insurance Rating Bureau of California (WCIRB) for the purpose of assisting the WCIRB Actuarial Committee. The WCIRB cannot make any guarantees if this information is used for any other purpose and the WCIRB shall not be liable for any damages, of any kind, whether direct, indirect, incidental, punitive or consequential, arising from the use of or reliance upon this information for any other purpose.

Item AC02-03-03
Experience of Large Deductible Policies

The Agenda included a summary of the experience of large deductible workers' compensation policies in California through December 31, 2019. Staff presented a summary of the analysis and noted that (a) the proportion of statewide business written on a large deductible basis has been consistent in recent years; (b) while differences exist in average reserve levels, indemnity claim reporting patterns, and incurred development patterns, the paid loss development patterns for large deductible business are similar to those of non-large deductible business and (c) the difference in the indicated pure premium rate level after excluding large deductible experience through December 31, 2019 was modest.

Following the discussion, the Committee agreed that there was no need to implement any special ratemaking procedures for large deductible experience at this time and the information should continue to be reviewed on an annual basis.

Item AC17-12-02
Legislative Cost Monitoring

Staff presented an updated evaluation of the impact of the drug formulary based on medical transaction information through December 31, 2019 and the pre-COVID-19 period in 2020. The Committee was reminded that the drug formulary was estimated to result in an overall 0.5% reduction in the total losses and loss adjustment expenses in the July 1, 2018 Pure Premium Rate Filing based primarily on a projected 10% reduction in pharmaceutical costs resulting from reduced use of opioids, compounds, physician-dispensed drugs and brand name drugs with generic alternatives. The Committee was further reminded that the WCIRB also published a one-year cost evaluation of the drug formulary impact in August 2019 based on the actual pharmaceutical transaction data one-year after the reform. This initial retrospective evaluation showed that the drug formulary contributed to an accelerated reduction in pharmaceutical costs and a shift toward prescribing drugs not subject to prospective utilization review (UR) during the first year of implementation.

The Committee was advised that the current evaluation focused only on the pre-COVID-19 pandemic period as the formulary impact on drug utilization may be mixed with the impact of the stay-at-home orders during the ongoing pandemic.

Staff noted the following in the updated evaluation:

- While pharmaceutical costs had been declining sharply prior to implementation of the formulary, the decline accelerated in 2018 and continued to decline at a somewhat slower rate through 2019 and the pre-COVID-19 period in 2020.

- The share of prescriptions for drugs not subject to prospective UR in accordance with the formulary continued to increase in 2019 and early 2020, while the share of drugs subject to UR continued to decline.

- The share of pharmaceutical payments for opioids, compounds and brand name drugs with generic alternatives dropped sharply in 2018 and continued to drop at a similar rate in 2019 and early 2020.

- While the share of pharmaceutical payments for physician-dispensed drugs started to increase slightly toward the end of 2019, on an annual basis, the share of payments to these drugs continued to decline during the two years of the formulary implementation.

- The continued downward trend in pharmaceutical costs through early 2020, as well as continued decreases in the proportion of drugs not subject to UR, opioid use, compounds, physician-dispensed drugs and brand name drugs with generic equivalents suggest the formulary, is achieving its intended effects.

In response to a Committee member's question, staff observed that, based on the updated information presented, a continued on-level adjustment factor of at least 10% of pharmaceutical costs continues to be appropriate, although the Committee could revisit the adjustment at the time the September 1, 2021 Pure Premium Rate Filing is being considered.

Item AC19-12-02
Review of ULAE Projection Methods

The Agenda included an updated analysis of unallocated loss adjustment expense (ULAE) projection methods that was initially reviewed by the Committee at the December 5, 2019 meeting. Staff summarized the updated analysis, which included ULAE data through calendar year 2019.

For the open claim count-based ULAE method, staff recommended projecting open counts incrementally, which increased the accuracy of the projection compared to the current approach based on the estimated ultimate number of claims. Staff noted that the current approach of using the latest two years of ULAE data continued to be appropriate. Staff also noted that none of the alternative ULAE severity trend projection approaches reviewed significantly enhanced the accuracy of the ULAE projection.

For the paid loss-based ULAE method, staff recommended using the reform-adjusted paid medical loss development factors to develop the calendar year loss ratios in the WCIRB's current method. Staff also noted the current paid loss-based method is significantly complex, less stable and somewhat of an outlier compared to other ULAE projection methods. Staff recommended using a simpler approach based on the latest two calendar years' paid ULAE to paid loss ratios, which is significantly more stable than the current paid loss method.

Following the discussion, the consensus of the Committee was that staff's recommended refinements were appropriate and should be reflected in the review of ULAE projection methodologies for the September 1, 2021 Pure Premium Rate Filing.

Item AC20-12-03
Classification Ratemaking – Loss Development

The Committee was reminded that the WCIRB has begun a multi-year investigation of the classification ratemaking process and that loss development was the first component being investigated. The Committee was informed that based on feedback at the March 3, 2020 Actuarial Research Working Group (ARWG) meeting, staff was focusing the analysis on limited loss development rather than unlimited loss development.

Staff presented the current methodology for dividing classifications into loss development groups (LDGs), which is based on an iterative bifurcation of classifications using a Kruskal-Wallis test to determine the optimal division of classifications.

The Committee was shown several alternative development groupings under consideration. Four of these options were based primarily on classification, while the final option used part of body, claim status, injury type and cumulative trauma indicators to determine groups. The first two classification-based alternatives determined groups using a Kruskal-Wallis bifurcation, as in the past. However, updated versions determined LDGs using development on open claims only. The first alternative would develop all claims in a LDG together, while the second alternative would develop open claims using the newly found LDGs and develop all closed claims as a single group. The third and fourth alternatives were analogous to the first and second but used a decision tree in lieu of the Kruskal-Wallis bifurcation to determine optimal LDGs. The tested decision trees are a supervised machine learning method that used development on individual claims, as opposed to aggregate development, to determine optimal groups. The Gini index is used to measure the homogeneity of possible groups. The final alternative used a decision tree along with the previously mentioned claim characteristics to determine development groups.

Staff presented the results for each alternative and noted that staff judged alternatives by their accuracy, the level of distinction between groups, simplicity of implementation and explanation, and by the consistency of development patterns across maturities. It was noted that, at the October 6, 2020 Actuarial Research Working Group meeting, a Working Group member noted and staff agreed, that inconsistency at later maturities would be acceptable if differences at earlier maturities were large enough.

Staff noted that the classification groupings using the Kruskal-Wallis bifurcation and the decision tree methods were very similar. This added confidence to the results of both methods, given that determinations were made using aggregate development in one case and individual claim development in the other, along with differences in the optimization approach.

While reviewing the performance of the alternatives, staff noted that on an observation-weighted basis the decision tree alternative using claim characteristics consistently outperformed the other methods. Staff attributed this to the method’s ability to successfully determine claim characteristics that predict development.

Ultimately, staff recommended developing claims using LDGs determined using a Kruskal-Wallis bifurcation for open claims along with separate development of closed claims. Staff noted that for any method using claim characteristics that can change between maturities, particularly claim status, separate development factor triangles would be needed for claims known open at report level 1, known open at report level 2 and so on. Staff also suggested revisiting the approach using claim characteristics in subsequent years once a sufficient history of claims with medical diagnosis information is available.

The Committee agreed that the proposed changes to the development process was a significant methodology enhancement and should be used in classification ratemaking beginning with the September 1, 2022 Regulatory Filing.

Item AC20-12-04
Experience Rating Eligibility

The Committee was reminded that the WCIRB has been reviewing multiple aspects of the experience rating plan (ERP) and that, while the eligibility threshold is adjusted annually for inflation, it had not undergone a comprehensive review in a number of years.

The Committee was advised that staff expanded the database of unit statistical report loss and exposure records for policy projection years from 1997 to 2017, which had been used in the first phase of the analysis presented to the Committee earlier this year to include 10 additional cohorts of employers by size. It was noted that these additional cohorts comprised a total of 400,000 employers with experience period expected losses of approximately $300 or more. The primary thresholds and D-ratios were optimized for these additional employers using the same methodology as used in the determination of the plan rating values included in the January 1, 2021 Regulatory Filing.

Staff presented results showing that past experience is predictive of future loss levels for employers with as little as $1,000 in expected loss during the experience period. Specifically, it was noted that employers with claims in the experience period are significantly more likely to have claims in the projection period and have significantly higher actual to expected loss ratios.

Staff compared the power of the current plan based on three years of experience with an alternative using five years of experience with primary thresholds and D-ratios optimized for the additional years of experience. Staff noted that the additional years of experience did not consistently improve the performance of the plan and would be more difficult to administer. Staff recommended continuing to use a plan based on three years of experience.

Staff observed that, in the current ERP with variable split points, 100% credibility assigned to primary losses and 0% credibility assigned to excess losses yields an implied cap to the impact on a modification of an additional claim based on the size of the primary threshold relative to the expected loss in the experience period. As primary thresholds increase more slowly than the corresponding expected loss ranges, it was noted that this marginal impact decreases as the size of the insured increases. Staff suggested that a system to cap modifications based on the number of claims in the experience period could protect small employers from large swings in their modification without impacting the modifications of larger employers. Staff suggested that a minimum credit for a claim-free modification could enhance the safety incentives associated with the plan. Staff presented an example of a plan structure that would meet these criteria.

While generally supportive of the concept, some Committee members suggested that the expansion to smaller employers would be more effective if the capping approach was simplified. Several Committee members also suggested that comprehensive outreach and training would be needed to help smaller employers understand the plan if it is to move forward. A Committee member also suggested analyzing the year-to-year volatility of the indicated modifications for smaller employers over time. The consensus of the Committee was that there is strong actuarial evidence as to the predictive value of smaller employer experience and staff should continue to explore this concept and consider options which simplify the capping plan for smaller employers.

Item AC20-12-06
Potential Applications of Indemnity Transaction Data

Staff shared plans to use the new indemnity transaction dataset to enhance ratemaking and research. Staff suggested several areas in which the granularity or near contemporaneous nature of the data could improve understanding of claim reporting patterns:

- Drilling down from the quarterly aggregate financial data to understand payment patterns and claim reporting at a more refined level
- Identify and assess rapidly emerging claim types
- Refining triangles based on claim characteristics
- Perform claim level analysis before unit statistical report loss data is available
- Combining with medical transaction data to map the stream of payments associated with individual claims
- Improving geolocation protocols for claims and exposure
- Analyzing claim frequency changes more quickly or at a more refined level
- Industry benchmarking reports
- Reconciling across WCIRB datasets

The Committee noted their interest in analyses based on more current data and suggested that staff be very clear about definitions and comparisons as elements may be defined differently in separate datasets or be reported on a different time frame.

The meeting was adjourned at 11:30 AM.

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Note to Committee Members: These Minutes, as written, have not been approved. Please refer to the meeting scheduled for February 16, 2021 for approval and/or modification.