

July 24, 2023

**Re: Oklahoma Higher Education Employee Interlocal – Medical and Prescription Drug IBNR Reserve Estimate – As of June 30, 2023**

Dear Oklahoma Higher Education Employee Interlocal:

The following provides an uncertified estimate of Medical and Prescription Drug reserve for incurred but not reported claims (IBNR) for Oklahoma Higher Education Employee Interlocal's self-funded employee health plan.

**Reserve Estimate**

The reserve estimate as of June 30, 2023 is \$1,247,000 (\$1,371,000 including IBNR margin). The results are broken down by benefit in the table below. Details of the reserve development are provided in the attached exhibits.

	IBNR Estimate (without margin)	IBNR Estimate (with 10% IBNR margin)
BCBS OK Medical	\$1,092,000	\$1,201,000
BCBS OK Prescription Drug	\$155,000	\$170,000
<b>Total</b>	<b>\$1,247,000</b>	<b>\$1,371,000</b>

**Methodology and Assumptions**

The attached exhibits provide the following information for each incurred month: number of employees (exposure units), paid-to-date claims by incurred date, completion factors, incurred claims, outstanding claim reserve, and per exposure unit values.

Deriving the IBNR estimate uses a blending of methods. For more stable patterns of payments the development method is used. This method uses historical claim payment patterns to develop completion factors used to calculate monthly ultimate incurred estimates.

For the more recent months, where experience is more variable or insufficient to produce credible completion factors, a projection method is used. Thus, an estimate of ultimate incurred claims per employee per month (PEPM) is determined based on historical ultimate incurred claims.

We have also added a 10% margin to the IBNR reserve estimate to reflect expected variability from our estimate.

Run-out administrative fees are not included in this analysis.

**Data**

The BCBS OK Medical analysis is based on historical data incurred and paid for the period from July 1, 2021 through June 30, 2023. Medical claims and enrollment data was provided by BCBS OK.

The BCBS OK Prescription Drug analysis is based on historical data incurred and paid for the period from July 1, 2021 through June 30, 2023. Prescription Drug claims and enrollment data was provided by BCBS OK.

**Reliance and Limitations**

The purpose of this letter is to present the results of the reserve estimate and to document the methods and assumptions employed. This document is uncertified and its purpose is for internal budgetary use only and not intended for third parties. Any other use of this memorandum is inappropriate.

The IBNR calculation uses claims processed as of the valuation date and would not include analysis on items used (e.g., outstanding checks issued) in an Incurred but not Paid (IBNP) reserve calculation.

The estimate relies upon the accuracy of the claim and enrollment data provided by BCBS OK. We have not independently performed a claim audit or cash flow testing. However, we have no reason to doubt the accuracy of the data at this time.

Please contact us if you have any questions.



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## Oklahoma Higher Education Employee Interlocal IBNR Analysis Based on BCBS OK Medical Claims Paid Through June 30, 2023

Incurral Month	Exposure Unit	Paid to Date Claims by Incurral Date	Completion Factor	Incurral Claims	Outstanding Claim Reserve	Outstanding Claim Reserve	Monthly Paid Claims	Paid to Date Claims Per Unit	Incurred Claims Per Unit	Rolling Twelve Months Incurred Claims Per Unit	Rolling Six Months Incurred Claims Per Unit	Rolling Three Months Incurred Claims Per Unit
	(Employees)		6 of 8 Months Averaging		(Before Margin)	(Margin Applied)		PEPM	PEPM	PEPM	PEPM	PEPM
Jul-21	3,412	\$1,260,480	1.0000	\$1,260,480	\$0	\$0	\$1,249,339	\$369	\$369			
Aug-21	3,363	\$1,461,876	1.0000	\$1,461,876	\$0	\$0	\$1,523,813	\$435	\$435			
Sep-21	3,455	\$1,478,587	1.0000	\$1,478,587	\$0	\$0	\$1,457,427	\$428	\$428			\$411
Oct-21	3,472	\$1,722,351	1.0000	\$1,722,351	\$0	\$0	\$1,348,244	\$496	\$496			\$453
Nov-21	3,473	\$1,948,542	1.0000	\$1,948,542	\$0	\$0	\$1,928,213	\$561	\$561			\$495
Dec-21	3,478	\$1,713,447	1.0000	\$1,713,447	\$0	\$0	\$1,624,179	\$493	\$493		\$464	\$517
Jan-22	3,399	\$1,137,876	0.9999	\$1,137,936	\$60	\$66	\$1,624,988	\$335	\$335		\$458	\$464
Feb-22	3,388	\$1,176,478	0.9999	\$1,176,560	\$82	\$90	\$1,308,000	\$347	\$347		\$444	\$392
Mar-22	3,389	\$1,318,118	0.9999	\$1,318,316	\$197	\$217	\$1,624,317	\$389	\$389		\$438	\$357
Apr-22	3,369	\$973,722	0.9998	\$973,943	\$221	\$244	\$1,113,967	\$289	\$289		\$403	\$342
May-22	3,356	\$1,505,893	0.9997	\$1,506,349	\$455	\$501	\$1,364,251	\$449	\$449		\$384	\$376
Jun-22	3,317	\$1,225,085	0.9995	\$1,225,750	\$665	\$732	\$1,390,186	\$369	\$370	\$414	\$363	\$369
Jul-22	3,287	\$1,238,340	0.9990	\$1,239,550	\$1,210	\$1,331	\$1,404,503	\$377	\$377	\$415	\$370	\$399
Aug-22	3,256	\$1,592,496	0.9987	\$1,594,624	\$2,128	\$2,341	\$1,449,719	\$489	\$490	\$419	\$393	\$412
Sep-22	3,335	\$1,434,583	0.9979	\$1,437,537	\$2,953	\$3,249	\$1,554,107	\$430	\$431	\$419	\$400	\$432
Oct-22	3,345	\$1,355,093	0.9966	\$1,359,769	\$4,675	\$5,143	\$1,375,889	\$405	\$407	\$412	\$420	\$442
Nov-22	3,338	\$1,210,135	0.9963	\$1,214,614	\$4,479	\$4,927	\$1,253,730	\$363	\$364	\$395	\$406	\$400
Dec-22	3,318	\$1,599,155	0.9936	\$1,609,464	\$10,309	\$11,340	\$1,286,859	\$482	\$485	\$394	\$425	\$418
Jan-23	2,992	\$996,303	0.9895	\$1,006,886	\$10,583	\$11,641	\$1,305,029	\$333	\$337	\$395	\$420	\$397
Feb-23	3,015	\$1,204,941	0.9851	\$1,223,164	\$18,223	\$20,045	\$1,138,994	\$400	\$406	\$400	\$406	\$412
Mar-23	3,013	\$1,074,644	0.9717	\$1,105,983	\$31,339	\$34,473	\$1,116,548	\$357	\$367	\$398	\$395	\$370
Apr-23	3,014	\$1,347,212	0.9449	\$1,425,844	\$78,631	\$86,494	\$1,030,445	\$447	\$473	\$413	\$406	\$415
May-23	3,011	\$1,327,153	0.8657	\$1,532,953	\$205,800	\$226,379	\$1,906,197	\$441	\$509	\$418	\$430	\$450
Jun-23	2,972	\$765,421	0.5155	\$1,484,917	\$719,496	\$791,446	\$1,488,539	\$258	\$500	\$428	\$432	\$494
<b>Jul-21 to Jun-23</b>	<b>78,767</b>	<b>\$32,067,934</b>	<b>96.71%</b>	<b>\$33,159,440</b>	<b>\$1,091,506</b>	<b>\$1,200,657</b>	<b>\$33,867,482</b>	<b>\$407</b>	<b>\$421</b>			

12 Months Incurred Claims PEPM - 6/1/2022 to 5/31/2023	\$418
Midpoint of Experience Period	12/1/2022
Midpoint of Rating Period	6/15/2023
Months to Trend	6.5
Assumed Annual Trend	7.50%
Underwriting Adjustment	1.15
PEPM Trended Claims for June 2023	\$500

Base Claim Reserve @ 6/30/2023	\$1,091,506
6-Month Average Monthly Paid Claims	\$1,330,959
Reserve Expressed as Months of Claims	0.82
Margin Used	10.00%

*This analysis is uncertified and for illustrative purposes only, and is not a guarantee of future expenses, claims costs, managed care savings, etc. There are many variables that can affect future health care costs including utilization patterns, catastrophic claims, changes in plan design, healthcare trend increases, etc. This analysis does not amend, extend, or alter the coverage provided by the actual insurance policies and contracts. Please see your policy or contact us for specific information or further details in this regard.*



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## Oklahoma Higher Education Employee Interlocal IBNR Analysis Based on BCBS OK Prescription Drug Claims Paid Through June 30, 2023

Incurral Month	Exposure Unit	Paid to Date Claims by Incurral Date	Completion Factor	Incurral Claims	Outstanding Claim Reserve	Outstanding Claim Reserve	Monthly Paid Claims	Paid to Date Claims Per Unit	Incurral Claims Per Unit	Rolling Twelve Months Incurred Claims Per Unit	Rolling Six Months Incurred Claims Per Unit	Rolling Three Months Incurred Claims Per Unit
	(Employees)		6 of 8 Months Averaging		(Before Margin)	(Margin Applied)		PEPM	PEPM	PEPM	PEPM	PEPM
Jul-21	3,412	\$653,183	1.0000	\$653,183	\$0	\$0	\$787,107	\$191	\$191			
Aug-21	3,363	\$743,760	1.0000	\$743,760	\$0	\$0	\$669,672	\$221	\$221			
Sep-21	3,455	\$704,194	1.0000	\$704,194	\$0	\$0	\$659,586	\$204	\$204			\$205
Oct-21	3,472	\$759,660	1.0000	\$759,660	\$0	\$0	\$839,901	\$219	\$219			\$215
Nov-21	3,473	\$656,189	1.0000	\$656,189	\$0	\$0	\$642,211	\$189	\$189			\$204
Dec-21	3,478	\$863,802	1.0000	\$863,802	\$0	\$0	\$893,363	\$248	\$248		\$212	\$219
Jan-22	3,399	\$683,294	1.0000	\$683,294	\$0	\$0	\$630,938	\$201	\$201		\$214	\$213
Feb-22	3,388	\$674,741	1.0000	\$674,741	\$0	\$0	\$741,373	\$199	\$199		\$210	\$216
Mar-22	3,389	\$766,272	1.0000	\$766,272	\$0	\$0	\$627,018	\$226	\$226		\$214	\$209
Apr-22	3,369	\$750,308	1.0000	\$750,308	\$0	\$0	\$855,946	\$223	\$223		\$214	\$216
May-22	3,356	\$780,491	1.0000	\$780,491	\$0	\$0	\$767,676	\$233	\$233		\$222	\$227
Jun-22	3,317	\$755,589	1.0000	\$755,589	\$0	\$0	\$690,201	\$228	\$228	\$215	\$218	\$228
Jul-22	3,287	\$702,717	1.0000	\$702,717	\$0	\$0	\$779,694	\$214	\$214	\$217	\$220	\$225
Aug-22	3,256	\$829,468	1.0000	\$829,468	\$0	\$0	\$714,271	\$255	\$255	\$220	\$230	\$232
Sep-22	3,335	\$749,981	1.0000	\$749,981	\$0	\$0	\$874,552	\$225	\$225	\$221	\$229	\$231
Oct-22	3,345	\$824,589	1.0000	\$824,589	\$0	\$0	\$822,162	\$247	\$247	\$224	\$233	\$242
Nov-22	3,338	\$870,547	1.0000	\$870,547	\$0	\$0	\$822,992	\$261	\$261	\$230	\$238	\$244
Dec-22	3,318	\$903,461	1.0000	\$903,461	\$0	\$0	\$923,932	\$272	\$272	\$232	\$246	\$260
Jan-23	2,992	\$701,227	1.0000	\$701,227	\$0	\$0	\$737,315	\$234	\$234	\$235	\$249	\$257
Feb-23	3,015	\$703,929	1.0000	\$703,929	\$0	\$0	\$621,023	\$233	\$233	\$238	\$246	\$248
Mar-23	3,013	\$927,757	1.0000	\$927,757	\$0	\$0	\$1,010,376	\$308	\$308	\$244	\$259	\$259
Apr-23	3,014	\$818,307	1.0000	\$818,307	\$0	\$0	\$737,195	\$272	\$272	\$248	\$264	\$271
May-23	3,011	\$830,766	1.0000	\$830,766	\$0	\$0	\$847,298	\$276	\$276	\$252	\$266	\$285
Jun-23	2,972	\$791,385	0.8366	\$945,938	\$154,553	\$170,008	\$1,034,330	\$266	\$318	\$259	\$274	\$288
<b>Jul-21 to Jun-23</b>	<b>78,767</b>	<b>\$18,445,617</b>	<b>99.17%</b>	<b>\$18,600,169</b>	<b>\$154,553</b>	<b>\$170,008</b>	<b>\$18,730,132</b>	<b>\$234</b>	<b>\$236</b>			

12 Months Incurred Claims PEPM - 6/1/2022 to 5/31/2023	\$252
Midpoint of Experience Period	12/1/2022
Midpoint of Rating Period	6/15/2023
Months to Trend	6.5
Assumed Annual Trend	10.30%
Underwriting Adjustment	1.20
PEPM Trended Claims for June 2023	\$318

Base Claim Reserve @ 6/30/2023	\$154,553
6-Month Average Monthly Paid Claims	\$831,256
Reserve Expressed as Months of Claims	0.19
Margin Used	10.00%

*This analysis is uncertified and for illustrative purposes only, and is not a guarantee of future expenses, claims costs, managed care savings, etc. There are many variables that can affect future health care costs including utilization patterns, catastrophic claims, changes in plan design, healthcare trend increases, etc. This analysis does not amend, extend, or alter the coverage provided by the actual insurance policies and contracts. Please see your policy or contactus for specific information or further details in this regard.*