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August 8, 2023

Ms. Katie Torres  
 Santa Barbara County  
 1226 Anacapa St.  
 Santa Barbara, CA 93101

## RE: Actuarial Report - Dental IBNR and Claim Fluctuation Margin

Dear Katie:

This letter will recommend appropriate levels of reserves for the Santa Barbara County self-funded dental program for both Incurred But Not Reported (IBNR) and claims fluctuation margin based on actuarial analysis.

### Background

The County participates in a self-funded EIA-sponsored pool, with the County's claims, rates, and reserves established independently from the pool.

### Analysis of Reserves for IBNR Claims

Reserves for IBNR claims reflect the liability for claims incurred but not yet paid due to normal billing, submission, and processing delays. In the event of self-funded plan termination, this IBNR liability would be funded by the plan and would be covered by funds set aside during pre-termination operations. Normally, this reserve is less than 1 month of average actual dental claims and administrative expenses, depending on the TPA's processing patterns. Estimated reserves for IBNR claims for the Santa Barbara County Dental Program are as follows:

	IBNR	% of Paid Claims
As of 6/30/23	\$142,862	6.4%

Our analysis uses completion factor methodology. This approach applies completion factors (the estimated percentage of claims incurred and paid after 1 month, 2 months, 3 months, etc.), developed over the most recent 6 months of data, to claim lag data to calculate estimated incurred claims for each month during the prior year. This is a standard actuarial methodology that is well known throughout the health and welfare industry.

The IBNR is slightly lower than last year's IBNR estimate of \$153,831 and 6.7% of claims. Actual runout for the prior 12-month period through 6/30/22 was \$99,727.

### Claim Fluctuation Margin

Claim fluctuation margin is an optional but highly recommended reserve that enables self-funded plans to manage unfavorable claim years through the use of funds set aside for random claim fluctuation. The amount of this reserve is usually defined by a confidence level such as 70%, 80%, 90%, etc. that quantifies the probability that claims will not exceed premium plus the specified margin in any given year. Most groups strive to fund this reserve to a 95% confidence level within 3-5 years following the commencement of operations.

The methodology used for this analysis is normally the simulation of multiple years of random claim experience. The approach defines the estimated claim level that will produce the confidence levels described above. When a group is large enough to be fully credible, its historic claim volatility is a more reasonable predictor of its future results. This is especially important if the actual volatility is higher than the simulated results.

Claim Fluctuation Margin recommendations are as follows:

	<b>Confidence Level</b>				
<b>Self-Funded Dental</b>	<b>70%</b>	<b>80%</b>	<b>90%</b>	<b>95%</b>	<b>Other</b>
Margin (% of claims)	6.0%	9.0%	12.0%	15.0%	20.0%
Amount	\$134,688	\$202,032	\$269,376	\$336,719	\$448,959

The above chart shows confidence levels from 70%-95%. It also shows a slightly higher funding option that would help the plan to remain fully funded in the event of headcount growth, consecutive years of unfavorable claims, etc.

## Program Financials

The following table shows the funding status for the various different options:

Self-Funded Dental	Confidence Level				
	70%	80%	90%	95%	EIA CFM%
<b>Total Assets 6/30/23</b>	<b>\$879,045</b>				
IBNR	\$142,862				
CFM	\$134,688	\$202,032	\$269,376	\$336,719	\$448,959
<b>Total IBNR/CFM</b>	<b>\$277,550</b>	<b>\$344,894</b>	<b>\$412,238</b>	<b>\$479,582</b>	<b>\$591,822</b>
Surplus/Deficit	\$601,495	\$534,151	\$466,807	\$399,463	\$287,223

The County maintains cash and investments sufficient to fund both IBNR and Margin. A surplus position provides the maximum flexibility in rates setting, reserving, etc.

## Recommendations

Our recommendations are to:

- Establish and fund IBNR reserves as shown above
- Establish a fund a 95%+ Confidence Level Claim Fluctuation Margin Reserve as shown above.

We look forward to discussing this information with you.

Sincerely,

*David E. Turner*

David E. Turner, FSA  
 Manager  
 TURNER CONSULTING AND ACTUARIAL, LLC

# COUNTY OF SANTA BARBARA

## Claim Lag and IBNR Projection

### Dental

Month Incurred	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Incurred Total	Complete	Percent	Est. Total Inc. Claims	Adj. Total Inc. Claims	Enrollment	Avg./Mem.	
Jan-21 -29			1,040													1,040	1,241,959	100.0%	1,040	1,040	3,686	0.28	
Feb-21 -28			0													0	1,241,959	100.0%	0	0	3,686	0.00	
Mar-21 -27	113		157													270	1,241,959	100.0%	270	270	3,692	0.07	
Apr-21 -26	0		0													0	1,241,959	100.0%	0	0	3,666	0.00	
May-21 -25	0		0													0	1,241,959	100.0%	0	0	3,669	0.00	
Jun-21 -24	0		373													373	1,241,959	100.0%	373	373	3,676	0.10	
Jul-21 -23	403		208													611	1,241,959	100.0%	611	611	3,680	0.17	
Aug-21 -22	0		123													123	1,241,959	100.0%	123	123	3,667	0.03	
Sep-21 -21	549		662													1,211	1,241,959	100.0%	1,211	1,211	3,682	0.33	
Oct-21 -20	512	103	792			152										1,559	1,241,959	100.0%	1,559	1,559	3,651	0.43	
Nov-21 -19	906	0	212			0	1,500									2,618	1,241,959	100.0%	2,618	2,618	3,644	0.72	
Dec-21 -18	488	0	601	304	643	0	0									2,036	1,241,959	100.0%	2,036	2,036	3,637	0.56	
Jan-22 -17	2,733	606	1,213	59	1,536	0	0									6,147	1,241,959	100.0%	6,147	6,147	3,732	1.65	
Feb-22 -16	8,925	3,153	1,728	485	604	395	103	204		115						15,712	1,241,959	100.0%	15,712	15,712	3,732	4.21	
Mar-22 -15	77,846	4,795	1,276	905	185	112	0	2,285	541	0		47				87,992	1,241,959	100.0%	87,992	87,992	3,729	23.60	
Apr-22 -14	118,997		3,029	450	658	329	1,579	756	455	0		360				195,699	1,241,959	100.0%	195,699	195,699	3,682	53.15	
May-22 -13		107,781	64,718	6,245	592	3,030	715	606	727	0		0	154			184,568	1,241,959	100.0%	184,568	184,568	3,678	50.18	
Jun-22 -12			109,083	62,341	4,544	1,533	1,449	1,883	544	0	204	397	0			181,978	1,241,959	100.0%	181,978	181,978	3,666	49.64	
Jul-22 -11				92,377	55,903	3,113	698	1,001	602	1,415	519	0	108		405	156,141	1,241,912	100.0%	156,147	156,147	3,644	42.85	
Aug-22 -10					89,755	80,783	3,991	1,358	2,498	435	22	236	97	300	0	179,476	1,240,878	99.9%	179,632	179,632	3,651	49.20	
Sep-22 -9						101,661	50,720	3,111	495	0	2,458	600	101	76	0	159,222	1,240,878	99.9%	159,360	159,360	3,641	43.77	
Oct-22 -8							96,803	58,142	4,994	1,529	355	1,494	908	750	129	165,104	1,240,073	99.8%	165,356	165,356	3,645	45.37	
Nov-22 -7								78,586	78,610	1,770	2,937	956	1,609	126	206	164,801	1,239,567	99.8%	165,119	165,119	3,660	45.11	
Dec-22 -6									99,184	31,156	7,535	1,740	926	0	185	140,726	1,237,755	99.7%	141,204	141,204	3,662	38.56	
Jan-23 -5										119,794	118,203	10,069	2,859	1,713	2,033	254,671	1,234,499	99.4%	256,210	256,210	3,652	70.16	
Feb-23 -4											104,371	109,767	3,234	862	1,129	219,363	1,226,469	98.8%	222,133	222,133	3,635	61.11	
Mar-23 -3												156,347	64,341	2,816	3,377	226,882	1,221,391	98.3%	230,702	230,702	3,654	63.14	
Apr-23 -2													117,981	68,023	8,054	194,058	1,208,086	97.3%	199,499	199,499	3,628	54.99	
May-23 -1														107,784	69,418	177,202	1,174,609	94.6%	187,363	187,363	3,645	51.40	
Jun-23 0															107,423	107,423	713,701	57.5%	186,934	206,033	3,646	56.51	
Paid Total	211,472	185,523	185,215	163,166	154,420	191,108	157,559	147,933	188,652	156,214	236,604	282,013	192,319	182,450	192,358	2,145,069			2,249,659	2,268,759			
Rolling 12 Month average				163,166	158,793	169,565	166,563	162,837	167,140	165,579	174,457	186,408	186,999	186,585	187,066	(Prior 12)							
Percent Change					-2.7%	3.9%	2.1%	-0.2%	2.4%	1.5%	6.9%	14.2%	14.6%	14.4%	14.6%								
Beginning Medical IBNR (Prior Runout)																			Runout (-12)	99,727	99,727		
Ending Medical IBNR																			IBNR	104,590	123,690		
Medical IBNR Reserve Change																			IBNR Chng	4,863	23,963		

Claim Fluctuation Margin						Adjustment for Large Claims		0.0%
70%	80%	90%	95%	Other		Adjusted Dental IBNR		123,690
6.0%	9.0%	12.0%	15.0%	20.0%		Adjustment for Margin		1,050
CFM	134,688	202,032	269,376	336,719	448,959	Add Admin		1,100
IBNR	142,862	142,862	142,862	142,862	142,862	Est. Dental IBNR		142,862
Total	277,550	344,894	412,238	479,582	591,822	Paid Claims (prior 12 months)		2,244,796
6/30/2023 Fund			879,045			% of Paid Claims		6.4%
Surplus/Deficit	601,495	534,151	466,807	399,463	287,223			