

**Appendix E**

**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Asthma - All**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	1,185	1,155	1,184	1,214	1,240	1,256
Episodes per Thousand Members Over Two Years	78.98	77.00	78.93	80.93	82.67	83.73

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	26	23	25	29	31	34
Outpatient Cost per Episode	159	150	158	166	176	183
Physician / Other Cost per Episode	229	225	229	232	236	237
Pharmacy Cost per Episode	501	487	502	516	529	538
Total Cost per Episode	915	885	913	943	972	993

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Asthma - No Complication and No Surgery**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	950	924	950	976	999	1,011
Episodes per Thousand Members Over Two Years	63.34	61.60	63.33	65.07	66.60	67.40

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	5	4	5	6	7	7
Outpatient Cost per Episode	126	117	125	134	143	150
Physician / Other Cost per Episode	198	194	198	200	204	207
Pharmacy Cost per Episode	486	470	486	503	516	528
Total Cost per Episode	815	785	814	843	871	892

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Asthma - with Complication Only**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	Mean	Percentiles - Risk Adjusted				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	235	223	235	246	256	263
Episodes per Thousand Members Over Two Years	15.64	14.87	15.67	16.40	17.07	17.53

**Statistic Percentiles by Total Cost per Episode**

Service Type	Mean	Percentile Ranges - Risk Adjusted				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	110	88	105	127	153	174
Outpatient Cost per Episode	290	263	286	313	343	364
Physician / Other Cost per Episode	354	346	355	364	373	379
Pharmacy Cost per Episode	564	538	565	589	609	625
Total Cost per Episode	1,318	1,235	1,312	1,394	1,477	1,542

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Cerebral Vascular Disease - All**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	101	92	100	109	116	121
Episodes per Thousand Members Over Two Years	6.70	6.13	6.67	7.27	7.73	8.07

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	11,239	2,612	7,816	14,945	26,080	39,304
Outpatient Cost per Episode	1,393	1,397	1,405	1,445	1,420	1,425
Physician / Other Cost per Episode	1,556	1,496	1,589	1,636	1,652	1,725
Pharmacy Cost per Episode	193	180	184	202	233	233
Total Cost per Episode	14,382	5,686	10,993	18,229	29,386	42,687

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Cerebral Vascular Disease - No Complication and No Surgery**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	86	79	86	94	101	105
Episodes per Thousand Members Over Two Years	5.75	5.27	5.73	6.27	6.73	7.00

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	8,834	1,652	2,824	13,186	22,766	31,223
Outpatient Cost per Episode	1,306	1,302	1,481	1,375	1,298	1,313
Physician / Other Cost per Episode	1,311	1,263	1,460	1,389	1,380	1,409
Pharmacy Cost per Episode	189	187	200	195	185	189
Total Cost per Episode	11,641	4,404	5,965	16,146	25,628	34,133

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study  
Episodes Per Thousand Member Per Year and Average Cost per Episode  
Episode: Cerebral Vascular Disease - with Complication Only**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	10	8	10	13	15	16
Episodes per Thousand Members Over Two Years	0.68	0.53	0.67	0.87	1.00	1.07

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	2,804	1,583	2,533	3,791	5,076	6,299
Outpatient Cost per Episode	1,209	991	1,204	1,394	1,564	1,676
Physician / Other Cost per Episode	1,432	1,107	1,414	1,711	2,114	2,357
Pharmacy Cost per Episode	168	149	170	201	215	232
Total Cost per Episode	5,613	3,830	5,321	7,098	8,969	10,565

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Chronic Obstructive Pulmonary Disease - All**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	164	153	164	175	185	192
Episodes per Thousand Members Over Two Years	10.96	10.20	10.93	11.67	12.33	12.80

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	300	197	270	370	498	607
Outpatient Cost per Episode	451	392	440	510	561	612
Physician / Other Cost per Episode	496	467	498	529	553	571
Pharmacy Cost per Episode	551	512	559	587	617	637
Total Cost per Episode	1,797	1,569	1,766	1,996	2,229	2,427

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Chronic Obstructive Pulmonary Disease - No Complication and No Surgery**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	155	144	154	165	175	181
Episodes per Thousand Members Over Two Years	10.31	9.60	10.27	11.00	11.67	12.07

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	258	160	228	326	454	548
Outpatient Cost per Episode	409	349	400	457	515	572
Physician / Other Cost per Episode	464	437	466	492	514	533
Pharmacy Cost per Episode	534	498	543	577	600	619
Total Cost per Episode	1,666	1,444	1,637	1,852	2,082	2,272

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Chronic Obstructive Pulmonary Disease - with Complication Only**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	8	6	8	10	12	13
Episodes per Thousand Members Over Two Years	0.53	0.40	0.53	0.67	0.80	0.87

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	636	91	248	602	1,738	3,569
Outpatient Cost per Episode	843	501	764	1,155	1,535	1,603
Physician / Other Cost per Episode	762	536	692	974	1,147	1,249
Pharmacy Cost per Episode	841	577	848	1,100	1,262	1,278
Total Cost per Episode	3,082	1,705	2,553	3,832	5,681	7,699

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Congestive Heart Failure - All**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	56	49	55	62	68	72
Episodes per Thousand Members Over Two Years	3.71	3.27	3.67	4.13	4.53	4.80

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	1,771	1,020	1,521	2,236	3,179	4,282
Outpatient Cost per Episode	956	807	962	1,111	1,273	1,280
Physician / Other Cost per Episode	919	825	916	1,007	1,093	1,146
Pharmacy Cost per Episode	199	197	201	200	208	207
Total Cost per Episode	3,845	2,851	3,599	4,554	5,753	6,915

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Congestive Heart Failure - No Complication and No Surgery**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	Mean	Percentiles - Risk Adjusted				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	53	47	53	59	65	68
Episodes per Thousand Members Over Two Years	3.52	3.13	3.53	3.93	4.33	4.53

**Statistic Percentiles by Total Cost per Episode**

Service Type	Mean	Percentile Ranges - Risk Adjusted				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	1,543	820	1,339	1,970	2,782	3,872
Outpatient Cost per Episode	922	786	916	1,066	1,266	1,240
Physician / Other Cost per Episode	871	780	869	961	1,036	1,089
Pharmacy Cost per Episode	199	201	202	204	209	210
Total Cost per Episode	3,534	2,587	3,326	4,201	5,293	6,412

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Diabetes - All**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	1,166	1,134	1,166	1,197	1,226	1,242
Episodes per Thousand Members Over Two Years	77.75	75.60	77.73	79.80	81.73	82.80

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	22	19	22	25	27	31
Outpatient Cost per Episode	236	230	236	241	246	251
Physician / Other Cost per Episode	547	541	548	554	560	564
Pharmacy Cost per Episode	1,357	1,313	1,355	1,401	1,445	1,474
Total Cost per Episode	2,162	2,103	2,160	2,221	2,278	2,319

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Diabetes - No Complication and No Surgery**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	1,143	1,111	1,142	1,173	1,201	1,218
Episodes per Thousand Members Over Two Years	76.17	74.07	76.13	78.20	80.07	81.20

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	19	17	19	23	24	28
Outpatient Cost per Episode	230	225	230	235	240	245
Physician / Other Cost per Episode	540	533	540	546	552	556
Pharmacy Cost per Episode	1,357	1,312	1,355	1,402	1,446	1,476
Total Cost per Episode	2,147	2,087	2,145	2,205	2,263	2,304

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Diabetes - with Complication Only**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	10	8	10	13	15	16
Episodes per Thousand Members Over Two Years	0.69	0.53	0.67	0.87	1.00	1.07

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	271	215	247	306	418	496
Outpatient Cost per Episode	262	218	257	311	352	364
Physician / Other Cost per Episode	553	500	548	606	665	689
Pharmacy Cost per Episode	1,152	869	1,118	1,388	1,649	1,920
Total Cost per Episode	2,238	1,802	2,170	2,611	3,084	3,469

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Diabetes - with Surgery Only**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	13	10	13	16	18	20
Episodes per Thousand Members Over Two Years	0.88	0.67	0.87	1.07	1.20	1.33

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	56	20	24	45	91	318
Outpatient Cost per Episode	712	583	695	838	946	1,023
Physician / Other Cost per Episode	1,212	1,067	1,179	1,323	1,487	1,586
Pharmacy Cost per Episode	1,486	1,219	1,475	1,733	2,012	2,152
Total Cost per Episode	3,466	2,888	3,373	3,939	4,536	5,079

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Hyperlipidemia - All**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	1,993	1,956	1,993	2,029	2,063	2,085
Episodes per Thousand Members Over Two Years	132.86	130.40	132.87	135.27	137.53	139.00

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	0	0	0	0	0	0
Outpatient Cost per Episode	62	60	62	63	64	65
Physician / Other Cost per Episode	121	120	121	121	122	122
Pharmacy Cost per Episode	325	316	325	334	343	349
Total Cost per Episode	508	497	508	519	529	537

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Hypertension - All**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	3,273	3,225	3,273	3,323	3,367	3,392
Episodes per Thousand Members Over Two Years	218.23	215.00	218.20	221.53	224.47	226.13

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	1	1	1	1	1	1
Outpatient Cost per Episode	181	175	180	186	192	196
Physician / Other Cost per Episode	235	233	235	236	238	239
Pharmacy Cost per Episode	297	292	298	302	305	308
Total Cost per Episode	713	702	713	724	735	743

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study  
Episodes Per Thousand Member Per Year and Average Cost per Episode  
Episode: Hypertension - No Complication and No Surgery**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	3,180	3,133	3,180	3,229	3,273	3,298
Episodes per Thousand Members Over Two Years	212.03	208.87	212.00	215.27	218.20	219.87

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	1	1	1	1	1	1
Outpatient Cost per Episode	179	174	179	184	190	195
Physician / Other Cost per Episode	230	228	230	231	233	234
Pharmacy Cost per Episode	296	291	296	301	304	307
Total Cost per Episode	706	694	705	717	728	736

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Hypertension - with Complication Only**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	93	85	93	100	107	112
Episodes per Thousand Members Over Two Years	6.20	5.67	6.20	6.67	7.13	7.47

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	0	0	0	0	0	0
Outpatient Cost per Episode	244	202	238	277	326	364
Physician / Other Cost per Episode	397	382	398	413	425	435
Pharmacy Cost per Episode	331	309	331	355	371	385
Total Cost per Episode	972	892	966	1,045	1,123	1,184

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

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**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Ischemic Heart Disease - All**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	383	366	383	400	416	426
Episodes per Thousand Members Over Two Years	25.55	24.40	25.53	26.67	27.73	28.40

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	2,866	2,349	2,763	3,274	3,853	4,362
Outpatient Cost per Episode	1,499	1,423	1,500	1,585	1,621	1,692
Physician / Other Cost per Episode	1,797	1,685	1,795	1,902	2,049	2,111
Pharmacy Cost per Episode	757	746	757	763	772	775
Total Cost per Episode	6,919	6,202	6,814	7,523	8,295	8,940

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

**Appendix E**

**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Ischemic Heart Disease - No Complication and No Surgery**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	337	321	336	353	367	376
Episodes per Thousand Members Over Two Years	22.46	21.40	22.40	23.53	24.47	25.07

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	1,026	799	1,010	1,216	1,443	1,609
Outpatient Cost per Episode	1,204	1,136	1,198	1,283	1,356	1,405
Physician / Other Cost per Episode	1,580	1,396	1,529	1,725	1,927	2,113
Pharmacy Cost per Episode	731	716	734	742	747	756
Total Cost per Episode	4,540	4,048	4,471	4,966	5,474	5,883

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

**Appendix E**

**Society of Actuaries - ACO Episode Risk-Adjustment Study  
Episodes Per Thousand Member Per Year and Average Cost per Episode  
Episode: Ischemic Heart Disease - with Complication Only**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	10	8	10	12	15	16
Episodes per Thousand Members Over Two Years	0.69	0.53	0.67	0.80	1.00	1.07

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	1,971	1,478	1,968	2,463	2,778	3,117
Outpatient Cost per Episode	1,517	891	1,277	1,904	2,866	3,614
Physician / Other Cost per Episode	967	807	948	1,087	1,283	1,462
Pharmacy Cost per Episode	618	570	619	659	716	798
Total Cost per Episode	5,073	3,746	4,812	6,112	7,643	8,991

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

**Appendix E**

**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Ischemic Heart Disease - with Surgery Only**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	22	19	22	26	29	31
Episodes per Thousand Members Over Two Years	1.49	1.27	1.47	1.73	1.93	2.07

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	28,336	20,220	26,273	34,223	43,783	51,705
Outpatient Cost per Episode	5,122	4,931	5,007	5,193	5,546	6,514
Physician / Other Cost per Episode	5,034	4,620	4,946	5,413	5,923	6,261
Pharmacy Cost per Episode	1,175	1,173	1,160	1,177	1,186	1,169
Total Cost per Episode	39,668	30,944	37,386	46,005	56,438	65,649

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

**Appendix E**

**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Ischemic Heart Disease - with Complication and Surgery**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	Mean	Percentiles - Risk Adjusted				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	14	11	13	16	19	20
Episodes per Thousand Members Over Two Years	0.91	0.73	0.87	1.07	1.27	1.33

**Statistic Percentiles by Total Cost per Episode**

Service Type	Mean	Percentile Ranges - Risk Adjusted				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	7,159	6,695	7,161	7,664	8,113	8,116
Outpatient Cost per Episode	2,819	1,807	2,323	3,049	4,133	7,640
Physician / Other Cost per Episode	2,472	2,323	2,475	2,637	2,769	2,767
Pharmacy Cost per Episode	819	803	825	836	856	862
Total Cost per Episode	13,268	11,627	12,784	14,186	15,870	19,385

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

**Appendix E**

**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Joint Degeneration, localized - back - All**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	968	941	968	995	1,018	1,033
Episodes per Thousand Members Over Two Years	64.55	62.73	64.53	66.33	67.87	68.87

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	328	283	334	388	406	389
Outpatient Cost per Episode	1,046	883	943	1,039	1,337	1,916
Physician / Other Cost per Episode	1,308	1,287	1,317	1,342	1,343	1,333
Pharmacy Cost per Episode	325	307	324	347	356	352
Total Cost per Episode	3,007	2,760	2,918	3,117	3,442	3,990

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

**Appendix E**

**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Joint Degeneration, localized - back - No Complication and No Surgery**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	830	806	829	854	875	888
Episodes per Thousand Members Over Two Years	55.31	53.73	55.27	56.93	58.33	59.20

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	36	29	33	41	57	52
Outpatient Cost per Episode	907	698	777	919	1,279	1,958
Physician / Other Cost per Episode	1,093	1,081	1,103	1,120	1,110	1,105
Pharmacy Cost per Episode	310	288	312	338	349	336
Total Cost per Episode	2,346	2,096	2,226	2,417	2,795	3,451

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

**Appendix E**

**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Joint Degeneration, localized - back - with Complication Only**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	99	91	99	106	113	118
Episodes per Thousand Members Over Two Years	6.60	6.07	6.60	7.07	7.53	7.87

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	119	59	93	147	222	328
Outpatient Cost per Episode	1,167	1,064	1,171	1,280	1,369	1,433
Physician / Other Cost per Episode	1,446	1,367	1,447	1,528	1,592	1,622
Pharmacy Cost per Episode	440	382	431	482	554	622
Total Cost per Episode	3,173	2,871	3,141	3,436	3,737	4,004

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

**Appendix E**

**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Joint Degeneration, localized - back - with Surgery Only**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	22	18	21	25	28	29
Episodes per Thousand Members Over Two Years	1.44	1.20	1.40	1.67	1.87	1.93

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	5,638	3,827	5,293	7,096	9,158	10,420
Outpatient Cost per Episode	3,662	3,553	3,625	3,659	3,772	4,383
Physician / Other Cost per Episode	5,076	4,794	5,061	5,374	5,646	5,770
Pharmacy Cost per Episode	311	313	308	321	319	333
Total Cost per Episode	14,687	12,487	14,286	16,451	18,895	20,907

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

**Appendix E**

**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Joint Degeneration, localized - back - with Complication and Surgery**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	18	15	18	21	24	26
Episodes per Thousand Members Over Two Years	1.21	1.00	1.20	1.40	1.60	1.73

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	8,509	5,851	7,943	10,587	13,518	16,212
Outpatient Cost per Episode	3,611	3,564	3,614	3,672	3,672	3,666
Physician / Other Cost per Episode	5,917	5,595	5,953	6,230	6,536	6,667
Pharmacy Cost per Episode	424	413	427	431	436	424
Total Cost per Episode	18,461	15,423	17,937	20,920	24,161	26,969

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

**Appendix E**

**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Pregnancy with Delivery - All**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	220	210	220	231	240	246
Episodes per Thousand Members Over Two Years	14.70	14.00	14.67	15.40	16.00	16.40

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	6,822	6,722	6,828	6,923	7,020	7,066
Outpatient Cost per Episode	2,113	2,024	2,107	2,204	2,297	2,358
Physician / Other Cost per Episode	5,139	5,068	5,135	5,196	5,255	5,347
Pharmacy Cost per Episode	156	154	156	160	163	165
Total Cost per Episode	14,230	13,968	14,226	14,483	14,736	14,936

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

**Appendix E**

**Society of Actuaries - ACO Episode Risk-Adjustment Study  
 Episodes Per Thousand Member Per Year and Average Cost per Episode  
 Episode: Pregnancy with Delivery - No Complication and No Surgery**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	49	45	49	54	58	61
Episodes per Thousand Members Over Two Years	3.30	3.00	3.27	3.60	3.87	4.07

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	5,446	5,305	5,474	5,603	5,738	5,803
Outpatient Cost per Episode	1,408	1,244	1,396	1,553	1,736	1,847
Physician / Other Cost per Episode	4,334	4,167	4,295	4,447	4,575	4,928
Pharmacy Cost per Episode	129	123	128	139	142	147
Total Cost per Episode	11,317	10,838	11,293	11,742	12,192	12,725

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

**Appendix E**

**Society of Actuaries - ACO Episode Risk-Adjustment Study  
Episodes Per Thousand Member Per Year and Average Cost per Episode  
Episode: Pregnancy with Delivery - with Complication Only**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	96	89	96	103	109	113
Episodes per Thousand Members Over Two Years	6.41	5.93	6.40	6.87	7.27	7.53

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	5,861	5,741	5,868	5,980	6,096	6,177
Outpatient Cost per Episode	2,403	2,224	2,387	2,572	2,735	2,868
Physician / Other Cost per Episode	4,989	4,911	4,993	5,079	5,155	5,214
Pharmacy Cost per Episode	157	153	155	162	166	169
Total Cost per Episode	13,411	13,028	13,403	13,792	14,153	14,428

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

**Appendix E**

**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Pregnancy with Delivery - with Surgery Only**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	12	9	12	14	16	18
Episodes per Thousand Members Over Two Years	0.79	0.60	0.80	0.93	1.07	1.20

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	8,060	7,859	8,102	8,318	8,493	8,661
Outpatient Cost per Episode	1,339	995	1,234	1,573	2,017	2,407
Physician / Other Cost per Episode	5,060	4,914	5,060	5,215	5,320	5,407
Pharmacy Cost per Episode	162	132	158	176	216	265
Total Cost per Episode	14,622	13,900	14,554	15,282	16,046	16,739

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.

**Appendix E**

**Society of Actuaries - ACO Episode Risk-Adjustment Study**

**Episodes Per Thousand Member Per Year and Average Cost per Episode**

**Episode: Pregnancy with Delivery - with Complication and Surgery**

**Population Size: 15,000**

**Statistic Percentiles by Counts of Episodes**

	<b>Mean</b>	<b>Percentiles - Risk Adjusted</b>				
	Risk Adjusted	25th	50th	75th	90th	95th
Total Episodes Included Per ACO	63	58	63	68	74	77
Episodes per Thousand Members Over Two Years	4.20	3.87	4.20	4.53	4.93	5.13

**Statistic Percentiles by Total Cost per Episode**

Service Type	<b>Mean</b>	<b>Percentile Ranges - Risk Adjusted</b>				
	Risk Adjusted	20th - 30th	45th - 55th	70th - 80th	85th - 95th	90th - 100th
Inpatient Cost per Episode	9,135	8,992	9,139	9,274	9,418	9,527
Outpatient Cost per Episode	2,370	2,165	2,355	2,564	2,767	2,925
Physician / Other Cost per Episode	6,014	5,923	6,009	6,096	6,178	6,234
Pharmacy Cost per Episode	176	170	173	185	188	191
Total Cost per Episode	17,695	17,249	17,676	18,119	18,551	18,877

Notes: Excludes the following claim types: incomplete episodes, claims with no episode assignment, ungroupable ETG, and episodes with costs within the top and bottom 1%.