



November 29, 2007

M. Freda Miller
Benefits Manager
State of Alaska
PO Box 110203
Juneau, AK 99811

Re: Alaska Care Retiree Plan Colonoscopy Coverage – Revised

Dear Freda:

We have evaluated Alaska Care active and retiree medical claim data for calendar 2004 through 2006 related to colorectal cancer treatment and screenings in an attempt to estimate return-on-investment (ROI) for adding colonoscopy coverage to the retiree plan. Active plan data is included in our analysis as a proxy for data on relatively younger retirees, for whom the greatest plan cost reductions can be obtained through early detection. Attached are several charts illustrating data analyzed and the projected cost and savings of adding colonoscopy coverage to the retiree plan.

Overview

Currently the retiree plan excludes colonoscopies as part of “X-ray, laboratory, pathological services, and machine diagnostic tests, unless related to a specific illness, injury or a definitive set of symptoms, except for pap smears, prostate specific antigen tests and mammograms.” Select Benefits for active employees similarly excludes colonoscopies except in conjunction with “one routine physical examination for each covered person per benefit year.”

Based on four key observations from 2004-2006 medical claims data described below, we recommend that Alaska Care add limited colonoscopy coverage as part of a colon-screening enhancement of covered routine lab tests. Coverage can be limited in terms of frequency and/or dollar amounts, also discussed below.

Data Observations

The attached chart labeled “Alaska Care Medical Claims Data, Calendar 2004 through 2006 (excludes Rx)” summarizes the number of claimants, claims, and plan benefits paid for colorectal cancer treatment, colonoscopies, fecal occult blood tests, flexible sigmoidoscopies and barium enemas. In order to estimate comorbidity costs, this chart also summarizes all other medical claims for claimants with these colorectal cancer or colon screening claims. Information is shown separately for active plan members and retirees, and is broken out for retirees under age 65 for colorectal cancer treatment, colonoscopies and all other medical claims.

1. Numerous retiree plan benefits for colon screenings

The attached data shows that 1,620 retirees and dependents obtained an average plan benefit of \$828 for colonoscopies from 2004-2006, compared to 160 retired members treated for colorectal cancer. 847 retirees and dependents under age 65 obtained an average plan benefit of \$1,282 for colonoscopies from 2004-2006, compared to 35 retired members under age 65 treated for colorectal cancer. A portion of colonoscopy benefits paid for members over age 65 is attributable to initial physicals under Medicare. A portion of all retiree colon-screening benefits paid by Alaska Care is related to diagnoses other than colon cancer. Nevertheless, we believe providers have "learned the system" and a good portion of diagnostic colonoscopies are already coded such that the plan provides benefits. To the extent this is the case, colonoscopy ROI analysis is skewed because many members who would be screened under an explicit plan benefit have already been screened. However, additional plan costs under a colon screening benefit will also be lower.

2. Relatively low cost for colorectal cancer treatment

The attached data shows that medical treatment for colorectal diagnoses codes averages \$4,108 per member per year for all retirees and \$13,032 per member per year for retirees under age 65 only. Total medical claims for retirees and dependents with colorectal diagnoses average \$9,352 per member per year all retirees and \$30,107 per member per year for retirees under age 65 only. We estimated Rx costs for colon cancer patients equal to 2.5 times all of their medical claims. Even at these levels, total Alaska Care plan costs for retirees with colon cancer range from an average of about \$37,000 in 2008 across all retirees to about \$118,000 per patient in 2008 among retirees under age 65 only. Per the January 10, 2007 issue of the *Journal of Clinical Oncology*, Rx costs alone for multiple-drug treatment of metastatic colorectal cancer amount to \$150,000 to \$200,000 per year. Additionally, the June 1999 issue of *Medical Care* estimates that 92% of all colorectal cancer patient medical spend during the initial stages of care are cancer related. This ratio drops to a range of 33% to 63% of all costs for such patients during continuing care and increases to a range of 63% to 82% of all costs for such patients during terminal care. Not all Alaska Care patients are in late stages of the disease, but to the extent medical claims data and our estimates of Rx costs understate Alaska Care costs for treating retirees with colon cancer, our estimate of ROI for extending colonoscopy benefits will be understated.

3. Retrospective medical claims analysis

Looking back at colorectal treatment and colonoscopy utilization and costs from 2004-2006, actual Alaska Care plan ROI can be estimated by comparing the cost of treating colorectal cancer, including screenings, to the cost of all colonoscopies provided. The following chart summarizes this comparison for all active and retired plan members combined (actives included as a proxy for data on relatively younger retirees, for whom the greatest plan cost reductions can be obtained through early detection), for all retirees (excluding actives), and for retirees under age 65 only (eliminating the impact of any Medicare-covered colonoscopies):

2004-2006 Alaska Care Medical Claims Data	Medical Claims Paid under Colorectal Cancer Screening and Diagnosis Codes	Estimated Total Medical and Rx Claims Paid for Colon Cancer Care	Total Colonoscopy Benefits Paid	Total Colon Screening Benefits Paid
Actives and Retirees	\$917,459	\$3,211,000	\$1,591,229	\$1,646,790
All Retirees	\$669,002	\$2,342,000	\$1,341,183	\$1,388,003
Retirees < Age 65	\$464,252	\$1,625,000	\$1,086,194	\$1,124,113

Medical claim data alone does not support a positive ROI for colonoscopies. Assuming that colonoscopy coverage could have prevented half the estimated medical and Rx costs of colon cancer care produces a slightly positive ROI for active and retiree patients combined, but not for retirees alone. Assuming that colonoscopy coverage could have prevented two-thirds of the estimated medical and Rx costs of colon cancer care generates positive ROI across all categories above.

Based on these assumptions we believe the Alaska Care retiree plan will likely experience a positive ROI for colonoscopy coverage, but this assertion cannot be demonstrated using available medical claim analysis alone.

4. Projected costs / savings, including estimated Rx costs

Looking forward, future Alaska Care plan ROI can be estimated by projecting the cost of treating colorectal cancer and the incidence of early detection attributable to additional screenings to the cost of expected additional colonoscopies. The attached chart labeled "Alaska Care Retiree Colorectal Cancer Treatment and Screening Summary" develops these projections for all retirees and their dependents, and for members under age 65 only. We projected the incidence of colorectal cancer and of screenings using the 2004-2006 baseline with 0.25% annual increases. We projected the plan cost of colorectal cancer and of screenings using the 2004-2006 baseline with 6% annual increases. As with our retrospective analysis, Rx plan costs are estimated at 2.5 times associated medical costs. Additional key variables address how many additional colonoscopies to expect, at what rate additional colonoscopies will detect cancers, and what portion of projected cancer treatment costs will be saved through early detection:

- We assume that colonoscopies will increase to four times the current run rate during the first year of coverage as a diagnostic benefit, dropping off to three times the current rate in year two, two times the current rate in year three and a 50% increase over current levels thereafter.
- To create a range of minimum and maximum savings due to additional screenings, we assume that additional colonoscopies will detect cancers at half the current rate to double the current rate.
- Finally, at a minimum we project that newly detected cancers will be treated at plan costs 75% below current average levels. At a maximum we project that newly detected cancers will be treated at plan costs 90% below current average levels.
- Projections for all retirees are revised from our November 19 letter to decrease the number of additional colonoscopies among Medicare retirees attributable to increased plan benefits. We previously assumed only an initial "Welcome to Medicare" screening would be covered by

Medicare and Alaska Care. Enclosed projections now assume all colonoscopies within American Cancer Society guidelines are covered by Medicare and Alaska Care before any plan change.

- Also, revised and original projections reflect assumed future retirements among the Under Age 65 group to emphasize the expected impact of increased screening as new, typically younger retirees enter the plan. This assumption is not applied to the All Ages projection in order to highlight the likely impact of newly covered screenings among the age 50-64 group – the group among whom maximum plan savings can be expected from early detection.

In combination, the above assumptions do not produce favorable ROI at the minimum savings or conservative range. At the maximum savings or optimistic range, the assumptions above generate ROI at 1 to 2 times investment annually after about 5 years, with all initial investment recovered within 10 years.

Again, adopting the assumptions and discussion above, we believe the Alaska Care retiree plan will likely experience a positive ROI for colonoscopy coverage, but this assertion cannot be demonstrated using available medical claim analysis alone.

Conclusion

Given that available data presents likely but not obvious savings, and that a fair number of colonoscopies and other colon screenings are already provided under the retiree plan without a colorectal cancer diagnosis, we believe an explicit colon screening diagnostic provision in the retiree plan will prove financially positive over time. A positive ROI can be better insured with member and provider education around the new diagnostic benefit. We further suggest that the State structure this benefit with both dollar and frequency limitations. For example, colon screenings could be covered per the American Cancer Society guidelines (attached) up to specific dollar limits per procedure type or up to a single annual dollar limit for any type of screening shown below. Note that Premera currently estimates colonoscopy procedure costs, including ancillaries but excluding concurrent therapeutic procedures or biopsies, to range from \$1,600 to \$3,000 in Alaska:

Diagnostic Colon Screen and Recommended Diagnostic Benefit	Per-Procedure Type Annual Benefit	Combined Annual Benefit
Fecal occult blood test (FOBT) or fecal immunochemical test (FIT)	100% covered	\$2,000
Flexible sigmoidoscopy	\$200	
Double-contrast barium enema	\$300	
Colonoscopy	\$2,000	

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We look forward to discussing our conclusions.

Sincerely,

Chris Hull

[Redacted]

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Principal

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Monica a DeGraff

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cc: Pat Shier, DRB
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Attachments

American Cancer Society Colon and Rectal Cancer Screening Guidelines

[See also http://www.cancer.org/docroot/PED/content/PED_2_3X_ACS_Cancer_Detection_Guidelines_36.asp.]

Beginning at age 50, both men and women should follow 1 of these 5 testing schedules:

- yearly fecal occult blood test (FOBT)* or fecal immunochemical test (FIT)
- flexible sigmoidoscopy every 5 years
- yearly FOBT* or FIT, plus flexible sigmoidoscopy every 5 years**
- double-contrast barium enema every 5 years
- colonoscopy every 10 years

*For FOBT, the take-home multiple sample method should be used.

**The combination of yearly FOBT or FIT flexible sigmoidoscopy every 5 years is preferred over either of these options alone.

All positive tests should be followed up with colonoscopy.

People should talk to their doctor about starting colorectal cancer screening earlier and/or undergoing screening more often if they have any of the following colorectal cancer risk factors:

- a personal history of colorectal cancer or adenomatous polyps
- a strong family history of colorectal cancer or polyps (cancer or polyps in a first-degree relative [parent, sibling, or child] younger than 60 or in 2 first-degree relatives of any age)
- a personal history of chronic inflammatory bowel disease
- a family history of an hereditary colorectal cancer syndrome (familial adenomatous polyposis or hereditary non-polyposis colon cancer)

Records for Claimants with Colon Cancer AND/OR Colon Screenings					Records for Colon Cancer Claimants Only					
	# Claimants	# Claims	Total Paid	Average Paid Per Claimant		# Claimants	# Claims	Total Paid	Average Paid Per Claimant	Average Paid Per Claim
Diagnosis 153 - 153.9: Malignant Neoplasm of Colon										
Actives	6	525	\$ 246,270	\$ 41,045	\$ 469	6	525	\$ 246,270	\$ 41,045	\$ 469
Retirees	160	6,509	\$ 657,298	\$ 4,108	\$ 101	160	6,509	\$ 657,298	\$ 4,108	\$ 101
Retirees under Age 65	35	2,282	\$ 456,116	\$ 13,032	\$ 200	35	2,282	\$ 456,116	\$ 13,032	\$ 200
Colonoscopies										
Actives	159	334	\$ 250,046	\$ 1,573	\$ 749	1	1	\$ 2,075	\$ 2,075	\$ 2,075
Retirees	1,620	3,599	\$ 1,341,183	\$ 828	\$ 373	30	63	\$ 9,814	\$ 327	\$ 156
Retirees under Age 65	847	1,837	\$ 1,086,194	\$ 1,282	\$ 591	6	8	\$ 2,057	\$ 343	\$ 257
Fecal Occult Blood Tests										
Actives	181	227	\$ 2,661	\$ 15	\$ 12	1	1	\$ 42	\$ 42	\$ 42
Retirees	1,418	2,093	\$ 10,013	\$ 7	\$ 5	8	16	\$ 49	\$ 6	\$ 3
Flexible Sigmoidoscopies										
Actives	14	16	\$ 3,040	\$ 217	\$ 190	0	0	\$ -	\$ -	\$ -
Retirees	112	177	\$ 22,768	\$ 203	\$ 129	4	7	\$ 1,758	\$ 439	\$ 251
Barium Enemas										
Actives	8	16	\$ 3,040	\$ 380	\$ 190	1	2	\$ 50	\$ 50	\$ 25
Retirees	74	145	\$ 14,039	\$ 190	\$ 97	5	5	\$ 103	\$ 21	\$ 21
Total of Above										
Actives	356	1,118	\$ 505,057	\$ 1,419	\$ 452	6	529	\$ 248,437	\$ 41,406	\$ 470
Retirees	3,189	12,523	\$ 2,045,300	\$ 641	\$ 163	160	6,600	\$ 669,022	\$ 4,181	\$ 101
All Claims for Members with Claims Noted Above										
Actives	356	11,770	\$ 1,736,029	\$ 4,876	\$ 147	6	899	\$ 372,526	\$ 62,088	\$ 414
Retirees	3,189	148,672	\$ 11,371,421	\$ 3,566	\$ 76	160	18,303	\$ 1,496,270	\$ 9,352	\$ 82
Retirees under Age 65	1,873	75,619	\$ 8,964,861	\$ 4,786	\$ 119	35	5,641	\$ 1,053,750	\$ 30,107	\$ 187

	# Claimants	# Claims	Total Paid	Average Paid Per Claimant	Average Paid Per Claim		# Claimants	# Claims	Total Paid	Average Paid Per Claimant	Average Paid Per Claim
Diagnosis 153 - 153.9: Malignant Neoplasm of Colon											
Retirees <20	0	0	\$ -	\$ -	\$ -	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 20-24	0	0	\$ -	\$ -	\$ -	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 20-29	0	0	\$ -	\$ -	\$ -	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 30-34	0	0	\$ -	\$ -	\$ -	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 35-39	0	0	\$ -	\$ -	\$ -	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 40-44	0	0	\$ -	\$ -	\$ -	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 45-49	0	0	\$ -	\$ -	\$ -	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 50-54	5	999	\$ 185,842	\$ 37,168	\$ 186	5	999	\$ 185,842	\$ 37,168	\$ 186	\$ 186
Retirees 55-59	7	163	\$ 62,067	\$ 8,867	\$ 381	7	163	\$ 62,067	\$ 8,867	\$ 381	\$ 381
Retirees 60-64	23	1,120	\$ 208,207	\$ 9,052	\$ 186	23	1,120	\$ 208,207	\$ 9,052	\$ 186	\$ 186
Retirees 65-69	34	1,379	\$ 82,225	\$ 2,418	\$ 60	34	1,379	\$ 82,225	\$ 2,418	\$ 60	\$ 60
Retirees 70-74	26	887	\$ 34,036	\$ 1,309	\$ 38	26	887	\$ 34,036	\$ 1,309	\$ 38	\$ 38
Retirees 75-79	24	1,024	\$ 27,561	\$ 1,148	\$ 27	24	1,024	\$ 27,561	\$ 1,148	\$ 27	\$ 27
Retirees 80-84	25	739	\$ 52,338	\$ 2,094	\$ 71	25	739	\$ 52,338	\$ 2,094	\$ 71	\$ 71
Retirees 85-89	12	164	\$ 4,986	\$ 416	\$ 30	12	164	\$ 4,986	\$ 416	\$ 30	\$ 30
Retirees 90+	4	34	\$ 35	\$ 9	\$ 1	4	34	\$ 35	\$ 9	\$ 1	\$ 1
Total	160	6,509	\$ 657,298	\$ 4,108	\$ 101	160	6,509	\$ 657,298	\$ 4,108	\$ 101	\$ 101

	# Claimants	# Claims	Total Paid	Average Paid Per Claimant	Average Paid Per Claim		# Claimants	# Claims	Total Paid	Average Paid Per Claimant	Average Paid Per Claim
Colonoscopies											
Retirees <20	3	5	\$ 5,152	\$ 1,717	\$ 1,030	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 20-24	1	2	\$ 2,381	\$ 2,381	\$ 1,191	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 20-29	0	0	\$ -	\$ -	\$ -	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 30-34	0	0	\$ -	\$ -	\$ -	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 35-39	1	2	\$ 2,530	\$ 2,530	\$ 1,265	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 40-44	1	2	\$ 1,026	\$ 1,026	\$ 513	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 45-49	11	19	\$ 13,893	\$ 1,263	\$ 731	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 50-54	117	267	\$ 151,286	\$ 1,293	\$ 567	1	1	\$ -	\$ -	\$ -	\$ -
Retirees 55-59	320	706	\$ 416,964	\$ 1,303	\$ 591	2	3	\$ 918	\$ 459	\$ 306	\$ 306
Retirees 60-64	393	834	\$ 492,961	\$ 1,254	\$ 591	3	4	\$ 1,139	\$ 380	\$ 285	\$ 285
Retirees 65-69	334	744	\$ 161,701	\$ 484	\$ 217	2	11	\$ 2,318	\$ 1,159	\$ 211	\$ 211
Retirees 70-74	224	493	\$ 45,175	\$ 202	\$ 92	9	20	\$ 1,318	\$ 146	\$ 66	\$ 66
Retirees 75-79	122	303	\$ 34,025	\$ 279	\$ 112	3	7	\$ 482	\$ 161	\$ 69	\$ 69
Retirees 80-84	66	157	\$ 10,336	\$ 157	\$ 66	7	12	\$ 3,266	\$ 469	\$ 274	\$ 274
Retirees 85-89	24	61	\$ 3,476	\$ 145	\$ 57	2	4	\$ 310	\$ 155	\$ 78	\$ 78
Retirees 90+	3	4	\$ 276	\$ 92	\$ 69	1	1	\$ 43	\$ 43	\$ 43	\$ 43
Total	1,620	3,599	\$ 1,341,183	\$ 828	\$ 373	30	63	\$ 9,814	\$ 327	\$ 156	\$ 156

	# Claimants	# Claims	Total Paid	Average Paid Per Claimant	Average Paid Per Claim		# Claimants	# Claims	Total Paid	Average Paid Per Claimant	Average Paid Per Claim
All Claims for Members with Claims Noted Above											
Retirees <20	16	652	\$ 65,392	\$ 4,087	\$ 100	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 20-24	5	251	\$ 18,896	\$ 3,779	\$ 75	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 20-29	0	0	\$ -	\$ -	\$ -	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 30-34	1	182	\$ 7,004	\$ 7,004	\$ 38	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 35-39	1	115	\$ 23,998	\$ 23,998	\$ 209	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 40-44	7	176	\$ 7,210	\$ 1,030	\$ 41	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 45-49	35	1,408	\$ 168,068	\$ 4,802	\$ 119	0	0	\$ -	\$ -	\$ -	\$ -
Retirees 50-54	240	12,718	\$ 1,539,585	\$ 6,415	\$ 121	5	1,556	\$ 277,927	\$ 55,585	\$ 179	\$ 179
Retirees 55-59	675	23,108	\$ 2,436,171	\$ 3,609	\$ 105	7	649	\$ 200,776	\$ 28,682	\$ 309	\$ 309
Retirees 60-64	893	37,009	\$ 4,698,536	\$ 5,262	\$ 127	23	3,436	\$ 575,046	\$ 25,002	\$ 167	\$ 167
Retirees 65-69	579	26,920	\$ 1,364,026	\$ 2,356	\$ 51	34	2,887	\$ 163,575	\$ 4,811	\$ 57	\$ 57
Retirees 70-74	355	20,562	\$ 391,472	\$ 1,033	\$ 19	26	3,062	\$ 83,077	\$ 3,195	\$ 27	\$ 27
Retirees 75-79	187	12,151	\$ 377,781	\$ 2,020	\$ 31	24	2,729	\$ 71,976	\$ 2,999	\$ 26	\$ 26
Retirees 80-84	124	8,187	\$ 185,861	\$ 1,499	\$ 23	25	2,714	\$ 102,296	\$ 4,092	\$ 38	\$ 38
Retirees 85-89	57	3,412	\$ 65,152	\$ 1,143	\$ 19	12	789	\$ 16,548	\$ 1,379	\$ 21	\$ 21
Retirees 90+	14	1,821	\$ 22,268	\$ 1,591	\$ 12	4	481	\$ 5,049	\$ 1,262	\$ 10	\$ 10
Total	3,189	148,672	\$ 11,371,421	\$ 3,566	\$ 76	160	18,303	\$ 1,496,270	\$ 9,352	\$ 82	\$ 82

Alaska Care Retiree Colorectal Cancer Treatment and Screening Summary

11/16/2007

Revised: 11/29/2007
(revisions highlighted yellow)

Statistics from Calendar 2004-2006 Experience Period

	Portion of Retiree Members	
	All	Under Age 65
Colon Cancer Claimants per 1,000	1.01	0.35
Cost per Claimant - colon cancer claims	\$ 4,108	\$ 13,032
Cost PMPM - colon cancer claims	\$ 0.347	\$ 0.382
Cost per Claimant - all medical claims for colon cancer claimants	\$ 9,352	\$ 30,107
Cost PMPM - all medical claims for colon cancer claimants	\$ 0.789	\$ 0.882
ALL Colonoscopies		
Colonoscopy Claimants per 1,000	10.25	8.51
Cost per Claimant	\$ 828	\$ 1,282
Cost PMPM	\$ 0.707	\$ 0.910
Colonoscopies without Colon Cancer Diagnosis		
Colonoscopy Claimants per 1,000	10.06	8.45
Cost per Claimant	\$ 837	\$ 1,289
Cost PMPM	\$ 0.702	\$ 0.908

Projected Costs and Savings for Adding Diagnostic Colonoscopies as a Covered Benefit (6% trend)

Colorectal Cancer Patients - All Ages								
Year	Members	Patients	Colon Cancer			Estimated Rx	Estimated Total Claims	Estimated Average Paid per Claimant
			Medical Claims Paid	Other Medical Claims Paid	Estimated Rx Claims Paid			
2008	54,830	55.5	\$ 256,273	\$ 327,106	\$ 1,458,000	\$ 2,041,000	\$ 36,762	
2009	55,944	56.8	\$ 277,864	\$ 375,944	\$ 1,635,000	\$ 2,289,000	\$ 40,306	
2010	57,081	58.1	\$ 301,278	\$ 432,080	\$ 1,833,000	\$ 2,566,000	\$ 44,173	
2011	58,241	59.4	\$ 326,666	\$ 496,601	\$ 2,058,000	\$ 2,881,000	\$ 48,485	
2012	59,425	60.8	\$ 354,191	\$ 570,751	\$ 2,312,000	\$ 3,237,000	\$ 53,258	
2013	60,633	62.2	\$ 384,029	\$ 655,962	\$ 2,600,000	\$ 3,640,000	\$ 58,549	
2014	61,865	63.6	\$ 416,369	\$ 753,874	\$ 2,926,000	\$ 4,096,000	\$ 64,413	
2015	63,122	65.0	\$ 451,414	\$ 866,367	\$ 3,294,000	\$ 4,612,000	\$ 70,910	
2016	64,405	66.5	\$ 489,461	\$ 995,751	\$ 3,713,000	\$ 5,198,000	\$ 78,130	
% treatment cost reduction due to early detection =>								
Year	Number	Number	Colonoscopy			Minimum Cases	Maximum Cases	
	Current Colonoscopies*	Additional Colonoscopies	Plan Cost	Additional Plan Cost	Detected Early	Detected Early	Minimum Plan Savings	Maximum Plan Savings
2008	551.8	\$ 519,115	1,266	\$ 1,191,096	0.64	2.56	\$ 17,672	\$ 84,826
2009	564.4	\$ 562,847	863	\$ 860,656	0.44	1.75	\$ 46,010	\$ 220,847
2010	577.3	\$ 610,266	441	\$ 466,191	0.22	0.90	\$ 48,083	\$ 230,798
2011	590.5	\$ 661,673	226	\$ 253,244	0.12	0.46	\$ 49,285	\$ 236,567
2012	604.0	\$ 717,420	231	\$ 274,378	0.12	0.47	\$ 54,813	\$ 263,102
2013	617.8	\$ 777,865	236	\$ 297,135	0.12	0.48	\$ 61,039	\$ 292,987
2014	632.0	\$ 843,395	241	\$ 321,637	0.12	0.50	\$ 68,052	\$ 326,651
2015	646.4	\$ 914,441	247	\$ 349,423	0.13	0.51	\$ 76,010	\$ 364,848
2016	661.2	\$ 991,485	253	\$ 379,385	0.13	0.52	\$ 85,016	\$ 408,077

Colorectal Cancer Patients - Under Age 65 - With Assumed Future Retirements								
Year	Members	Patients	Colon Cancer			Estimated Rx	Estimated Total Claims	Estimated Average Paid per Claimant
			Medical Claims Paid	Other Medical Claims Paid	Estimated Rx Claims Paid			
2008	34,535	12.2	\$ 177,908	\$ 233,107	\$ 1,028,000	\$ 1,439,000	\$ 118,436	
2009	35,237	12.4	\$ 192,928	\$ 267,955	\$ 1,152,000	\$ 1,613,000	\$ 129,767	
2010	35,953	12.7	\$ 209,111	\$ 307,856	\$ 1,292,000	\$ 1,809,000	\$ 142,329	
2011	36,684	13.0	\$ 226,715	\$ 353,799	\$ 1,451,000	\$ 2,032,000	\$ 156,308	
2012	37,429	13.3	\$ 245,864	\$ 406,703	\$ 1,631,000	\$ 2,284,000	\$ 171,729	
2013	38,190	13.6	\$ 266,494	\$ 467,279	\$ 1,834,000	\$ 2,568,000	\$ 188,824	
2014	38,966	13.9	\$ 288,923	\$ 537,002	\$ 2,065,000	\$ 2,891,000	\$ 207,836	
2015	39,758	14.2	\$ 313,304	\$ 617,256	\$ 2,326,000	\$ 3,257,000	\$ 228,883	
2016	40,566	14.6	\$ 339,803	\$ 709,633	\$ 2,624,000	\$ 3,673,000	\$ 252,266	
% treatment cost reduction due to early detection =>								
Year	Number	Number	Colonoscopy			Minimum Cases	Maximum Cases	
	Current Colonoscopies*	Additional Colonoscopies	Plan Cost	Additional Plan Cost	Detected Early	Detected Early	Minimum Plan Savings	Maximum Plan Savings
2008	291.8	\$ 422,712	876	\$ 1,268,832	0.15	0.62	\$ 13,688	\$ 65,702
2009	298.5	\$ 458,331	597	\$ 916,601	0.11	0.42	\$ 136,811	\$ 656,693
2010	305.4	\$ 496,947	305	\$ 496,377	0.05	0.22	\$ 138,418	\$ 664,406
2011	312.3	\$ 538,822	156	\$ 269,118	0.03	0.11	\$ 139,338	\$ 668,824
2012	319.5	\$ 584,207	160	\$ 292,579	0.03	0.11	\$ 143,640	\$ 689,473
2013	326.8	\$ 633,429	163	\$ 315,949	0.03	0.12	\$ 148,446	\$ 712,541
2014	334.3	\$ 686,783	167	\$ 343,124	0.03	0.12	\$ 153,907	\$ 738,755
2015	341.9	\$ 744,651	171	\$ 372,424	0.03	0.12	\$ 160,082	\$ 768,395
2016	349.7	\$ 807,383	175	\$ 404,003	0.03	0.13	\$ 167,070	\$ 801,934

* Applies to non-colorectal cancer patients only.