

# Memo

**To:** Acton Health Insurance Trustees  
**From:** John Petersen  
**CC:** Peter Savage, Bill Ryan, Peter Ashton  
**Date:** February 23, 2009  
**Subject:** Health Insurance Trust – Historical Trends in Trust Expense

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## Introduction

Annually the Health Insurance Trustees need to set rates. The purpose of this memorandum is to present an estimate of the rate increase required to cover the trust's costs in FY10 based on the Acton Health Insurance Trust audited expenses of the trust focusing on the period from 2003 to present. This memorandum will also present the case for the need to estimate rate increases based on past performance over periods longer than one year to avoid unnecessary volatility in the rate setting process. The relative rates for various plans offered by the Trust are also presented.

The estimate from this memorandum should be considered along with changes in conditions of our reinsurance, general trends in healthcare inflation, health care utilization and any significant changes expected in the covered group from FY09 to FY10 in the final rate setting process.

## Historical Health Insurance Trust Costs

In 2005, Peter Ashton compiled the audited results of the Health Insurance Trust from FY93 through FY05. I have added the audited results from FY06-08 as well as the unaudited first half of FY09. The complete data set is provided as Appendix A. A limitation of the data set is that it does not include numbers of subscribers. In general, the number of subscribers has increased over time so the increases in cost in the table should be viewed as an upper limit of the increase in health care costs on a per subscriber basis.

An examination of the increase in cost year over year immediately establishes the high level of volatility associated with rates based on expected costs (Table 1). For example, if the trustees had set rates so that revenues matched expenses, for year 16 (FY08) the rate increase (assuming no change in the number of subscribers) would have been 15%. However, the year before the rate increase would have been only 2%. Inspection of the remainder of the health trust history establishes that a one year basis results in high rate volatility. In my opinion, this level of volatility is undesirable and unnecessary, the trust should base rate increases on longer periods.

As shown in Table 2, a three year rolling average is considerably less volatile while the five year average is not significantly better (in terms of volatility). On this basis, I recommend that we use an approximately three year rolling average in the rate setting process. If we were to simply use the past three complete fiscal years, the rates should be increased by 8.5% (less approximately 1% to account for subscriber growth over this period, see Petersen memo to Trustees of Jan 20, 2009.) Alternatively one could use the past two fiscal years (FY07 & 08 plus the unaudited 1H FY09) in which case the calculated rate increase would be a slightly lower 8.3%.

In FY09, trust revenues will be approximately \$13.5 million. Thus a 1% change in rates is equivalent to \$135,000. In any given month the trust may show a profit or loss of over \$200,000. For example in April 2008 the trust “lost” \$382,000 while in October 2008 the trust “gained” \$234,000. Given this level of monthly volatility, the argument for rate changes at less than 1% level (for example a rate of 7.6% instead of 7.9%) would fail to meet the test for statistical significance. Thus, in the rate setting process the trustees should simply select an integer rate increase (e.g. 8%).

Table 1. Year over year cost increase

Year	Year over Year	
1	FY93	
2	FY94	38.03%
3	FY95	-11.01%
4	FY96	-6.82%
5	FY97	-74.85%
6	FY98	57.18%
7	FY99	4.86%
8	FY00	22.02%
9	FY01	3.43%
10	FY02	20.79%
11	FY03	15.20%
12	FY04**	9.37%
13	FY05	13.65%
14	FY06	7.88%
15	FY07	2.41%
16	FY08	15.36%
17	1H FY09	5.78%

Table 2. Acton Health Insurance Trust expense increases over one, three and five year rolling periods

Year	One year average	Three year average	Five year average	
11	FY03	15.20%	<b>13.14%</b>	13.26%
12	FY04**	9.37%	<b>15.12%</b>	14.16%
13	FY05	13.65%	<b>12.74%</b>	12.49%
14	FY06	7.88%	<b>10.30%</b>	13.38%
15	FY07	2.41%	<b>7.98%</b>	9.70%
16	FY08	15.36%	<b>8.55%</b>	9.74%
17	1H FY09	5.78%	<b>7.85%</b>	9.02%

As noted above, even with the entire covered pool, annual volatility is very large. Thus, it is even more important to take a multi-year approach to rate setting for our individual plans. As of Feb09, the Trust has 362 contracts with Harvard Pilgrim Health Care (HPHC, 31%), 344 contracts with Network Blue (30%), 282 contracts with Medex (24%), 143 contracts with Master Health Plus (MHP, 12%), and 30 contracts with Blue Care Elect (BCE, 3%). While the plan experience should factor into the rate setting process, the experience used should be a minimum of the previous two years plus the current part year.

The relative rate history of the health plans is shown in Table 3. For FY09, split rates were adopted with a slight difference in town and school rates. For the purpose of simplifying this discussion only the school rates are shown. The school rate is about 3% lower than the town rate.

Table 3. Rate History Rate History of Acton Health Plans

FY	MHP	MHP	Medex	HPHC	HPHC	Net Blue	Net Blue	Blue Care Elect	Elect
	Ind Rate \$/mo	Fam Rate \$/mo	Ind Rate \$/mo	Ind Rate \$/mo	Fam Rate \$/mo	Ind Rate \$/mo	Fam Rate \$/mo	Ind Rate \$/mo	Fam Rate \$/mo
2000	353	768	173	201	443				
2001	265	576	200	242	532				
2002	265	576	230	242	532				
2003	265	576	230	242	532				
2004	344	749	276	295	649				
2005	588	1305	300	367	824	367	824		
2006	738	1643	378	458	1041	458	1041		
2007	801	1778	389	536	1217	536	1217		
2008	1004	2226	389	572	1295	572	1295	884	1778
Sch 2009	1004	2225	389	555	1256	538	1217	884	1778
Proposed*	1164	2582	413	632	1431	538	1217	972	1956

\*Proposed rate is per P. Savage table of 1/20/2009

The year over year increases in rates for each plan are shown as percentages in Table 4. Note that the change in rates year to year has been very volatile. The ratio of the family rate to the individual rate has been stable and for all plans is a ratio about 2.2. However, general actuarial experience indicates that the family rate should be about 2.5 times the individual rate.

Table 4. Year over year percentage cost increases of Acton Health Plans, and ratio of family/individual plan cost

FY	MHP	MHP	Medex	HPHC	HPHC	Net Blue	Net Blue	Blue Care Elect	Elect
	Fam Inc %	Fam/Ind ratio	Ind Inc %	Fam Inc %	Fam/Ind ratio	Fam Inc %	Fam/Ind ratio	Fam Inc %	Fam/Ind ratio
2000		2.17			2.20				
2001	-25.0%	2.17	15.9%	20.0%	2.20				
2002	0.0%	2.17	15.0%	0.0%	2.20				
2003	0.0%	2.17	0.0%	0.0%	2.20				
2004	30.0%	2.17	20.0%	22.0%	2.20				
2005	74.3%	2.22	8.7%	27.1%	2.25		2.25		
2006	25.9%	2.23	26.0%	26.3%	2.27	26.3%	2.27		
2007	8.2%	2.22	3.0%	16.9%	2.27	16.9%	2.27		
2008	25.1%	2.22	0.0%	6.4%	2.26	6.4%	2.26		2.01
Sch 2009	0.0%	2.22	0.0%	-3.0%	2.26	-6.0%	2.26	0.0%	2.01
Proposed	16.02%	2.22	6.1%	13.9%	2.26	0.0%	2.26	10.0%	2.01

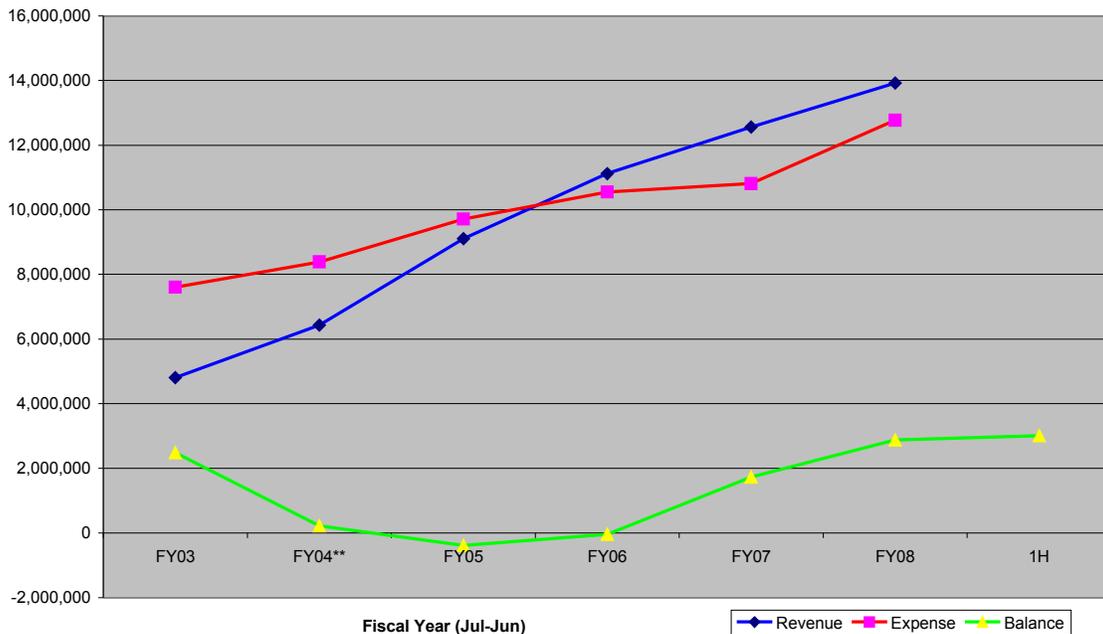
The relative pricing of the individual plans is shown in Table 5, with the reference being the HPHC pricing as this is our largest and one of our oldest plans. Note that the proposed pricing for Net Blue is a significant departure from pricing that historically has been equivalent between HPHC and Net Blue.

Table 5. Relative rates compared to HPHC rates

FY	MHP Ind Rate relative	Medex Ind Rate relative	HPHC Ind Rate relative	Net Blue Ind Rate relative	Blue Care Elect Ind Rate relative
2000	3.81	0.857	1		
2001	2.38	0.828	1		
2002	2.38	0.952	1		
2003	2.38	0.952	1		
2004	2.54	0.936	1		
2005	3.56	0.818	1	1.000	
2006	3.59	0.826	1	1.000	
2007	3.32	0.727	1	1.000	
2008	3.89	0.681	1	1.000	1.55
Sch 2009	4.01	0.702	1	0.969	1.59
Proposed	4.09	0.653	1	0.851	1.54

Some perspective on the rate setting process and consequences for the trust fund balance can be seen in the graph below which shows a relatively sharp increase in revenues over the period from 2003 to present and a relatively more moderate increase in expenses. In 2003, the trust revenues were inadequate to cover trust expenses and the trust balance declined. By 2008, the situation was reversed and the trust balance increased. At the time of this report, expenses and revenues are approximately equal so the trust balance shows little change through the first half of 2009. This suggests that the required increase in rates should be set to match the expected increase in expenses if no change in the trust fund balance is desired. Given that the balance represents 23% of 2008 expenses equivalent to 2.8 months worth of expenses, the trust is adequately funded and an increase in the reserve is not warranted.

Health Insurance Trust



**Appendix A. Acton Health Insurance Trust Accounting, Trust Expenses, Revenues and Trust Fund Balance**

	<b>BEG</b>	Employee &						<b>END</b>			
<b>BEG</b>	<b>FUND</b>	Employer	INVEST	INCR	TOTAL	TOTAL	NET	<b>FUND</b>		Balance as	
<b>DATE</b>	<b>Balance</b>	Contrib	Income	w/ Deposit	Revenue	Expend	Profit/Loss	<b>Balance+</b>	Source	% annl exp	Year
FY93	469,857	2,996,280	22,432		3,018,712	2,012,895	1,005,817	1,475,674	AUDIT	73%	1
FY94	1,475,674	4,375,990	0		4,375,990	3,248,115	1,127,875	2,603,549	AUDIT	80%	2
FY95	2,603,549	3,992,537	137,681		4,130,218	2,925,911	1,204,307	3,807,856	AUDIT	130%	3
FY96	3,807,856	3,227,938	204,180		3,432,118	2,739,230	692,888	4,500,744	AUDIT	164%	4
FY97	4,500,744	3,328,602	281,973		3,610,575	1,566,616	2,043,959	6,544,703	AUDIT	418%	5
FY98	6,544,703	4,320,867	364,956		4,685,823	3,658,414	1,027,409	7,572,112	AUDIT	207%	6
FY99	7,572,112	4,006,873	399,746		4,406,619	3,845,395	561,224	8,133,336	AUDIT	212%	7
FY00	8,133,336	3,968,665	451,031		4,419,696	4,931,421	-511,725	7,621,611	AUDIT	155%	8
FY01	7,621,611	4,002,790	450,063	115,020	4,567,873	5,106,717	-538,844	7,082,767	AUDIT	139%	9
FY02	7,082,767	4,478,140	172,824		4,650,964	6,447,046	-1,796,082	5,286,685	AUDIT	82%	10
FY03	5,286,685	4,718,160	88,436		4,806,596	7,603,006	-2,796,410	2,490,275	AUDIT	33%	11
FY04**	2,176,228	6,413,526	21,435		6,434,961	8,389,480	-1,954,519	221,709	AUDIT	3%	12
FY05	221,709	9,096,409	7,752		9,104,161	9,715,326	-611,165	-389,456	AUDIT	-4%	13
FY06	-610,779	11,101,560	16,862		11,118,422	10,546,873	571,549	-39,230	AUDIT	0%	14
FY07	-22,368	12,536,187	24,873		12,561,060	10,807,731	1,753,329	1,730,961	AUDIT	16%	15
FY08	1,730,961	13,822,334	97,875		13,920,209	12,769,552	1,150,657	2,881,618	AUDIT	23%	16
1H FY09	2,881,618	6,863,528	41,403		6,904,931	6,776,627	128,304	3,009,922	unaudit		17

\*\* Per FY04 audit, fund balance was adjusted to correct a prior year's error on advanced contributions in the amount of -\$314,047. Increase in total trust expenses does not adjust for increase in subscribers, increases on a per subscriber basis are lower Trust year is Jul-Jun