



# **Session 18: Consumer-Driven Healthcare**

## ***3 Year Case Study – One Employer's Experience***

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# CDH Case Study Background

- Large national employer – over 50,000 covered active employees
- Offer two PPO plan options and one HRA plan option to all employees at open enrollment each year (HMO plans are offered in some locations, but these are excluded from this study)

Primary Plan Provision <i>(in-network single shown)</i>	2 PPO Options		1 HRA Option
	PPO1	PPO2	HRA
Annual Deductible	\$500	\$1,000	\$2,500
HRA Account	N/A	N/A	\$1,000
Deductible “Gap”	\$500	\$1,000	\$1,500
Coinsurance %	10%	10%	10%
Annual Out-of-pocket Limit	\$1,500	\$3,000	\$5,000
Office Visit Copay (PCP/Spec.)	N/A	N/A	N/A
Preventive Care & Well-Child	Paid at 100%	Paid at 100%	Paid at 100%

- A separate carve-out drug plan is offered across all non-HMO options
- Monthly employee premium contributions are set for each plan option to reflect the expected overall cost levels of the option and be as “cost-neutral” to the company as possible

# Background (cont.)

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- The HRA plan, introduced in 2006, was designed to educate and raise awareness of healthcare choices and their costs – and to shift accountability for clinical and financial decisions from the company to the employee
- The company has noticed that the HRA plan costs have been running lower than national norms and lower than the PPO plans, though the HRA annual trend increases have been higher (the gap in costs has been shrinking)
- There have been some noticeable movement between plans over the three year period, both into and out of the HRA plan

# Three Year Longitudinal Study

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- With three years of available plan experience, and limited plan changes during this time, an actuarial experience analysis was conducted to determine how the HRA plans are actually performing compared to the PPO plans, focusing on the following seven questions in particular:
  1. How does the relative health of HRA enrollees compare to PPO enrollees?
  2. How do those who enrolled in the HRA for 2006 compare to those that enrolled in 2007 or 2008?
  3. How do those who left the HRA compare to those to remained?
  4. How does utilization of the Preventive Care benefit differ between the CDH and PPO options?
  5. Are employees in the HRA plan staying there when their health deteriorates, or are they moving back into the PPO?
  6. Is the deterioration of the initial HRA enrollee group continuing?
  7. Is migration into the HRA option the result of “skimming” the next level of healthy people from the PPO, or is the HRA getting a better cross-section of health risks?

# Process Overview

- Deloitte collected detailed claims information from 2006, 2007, and 2008 for employees in the HRA and PPO plan; reconciled and validated to reports and control totals.
- The analysis only covers medical claims; pharmacy based claims are not covered under the HRA plan design.
- Detailed claim and enrollment data were analyzed for those employees identified as a member of one of eight cohort groups:

Cohort	2006 Choice	2007 Choice	2008 Choice	Distribution
1	PPO	PPO	PPO	63.2%
2	HRA	HRA	HRA	25.2%
3	PPO	PPO	HRA	3.9%
4	PPO	HRA	HRA	3.6%
5	HRA	PPO	PPO	1.7%
6	HRA	HRA	PPO	1.4%
7	HRA	PPO	HRA	0.5%
8	PPO	HRA	PPO	0.5%

# Process Overview (cont.)

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- The analysis looked for patterns in year-over-year cost and utilization statistics, by type of service, and by services delivered, for each cohort
- Any migration from, or into, the HMO plan options was excluded, do the lack of availability of HMO claims and enrollment data.
- The analysis was limited to only the credible services within each service type. Credibility was defined by the number of admissions or visits. Any service or diagnosis with less than 30 observations was deemed not credible.
- Analysis between cohorts was also done to determine if there were inherent morbidity or demographic biases in the experience.
- Cohort analysis allows for comparison between years and provides an indication of changes in behavior or actions resulting from the change in the plans designs.
- A diagnosis-based risk score was calculated at the member level to provide accurate grouping of members and claims

# Demographic & Health Status Summary

- Fairly consistent family and sex demographics can be seen across cohorts
- Older employees tend to enroll and stay in the PPO plan; 25% of cohort 1 is age 50 or older
- Less healthy individuals migrated out of the HRA plan. Individuals presently in cohorts 2, 5, 6, and 7 elected HRA coverage in 2006 and the overall risk score for these groups was 0.76 in 2006. Those who remained in the HRA (cohort 2) have a significantly lower risk score and those who switched to the PPO (cohorts 5, 6, and 7) have significantly higher risk scores.

Cohort		Demographic Factors					Ave. Risk Scores (incl. age/sex)		
		Family Size	% Male	% Under Age 31	% Age 30 – 50	% Over Age 50	2006	2007	2008
1	(PPO-PPO-PPO)	2.51	48%	39%	36%	25%	1.200	1.322	1.391
2	(HRA-HRA-HRA)	2.72	49%	47%	42%	11%	.535	.650	.728
3	(PPO-PPO-HRA)	2.72	47%	46%	42%	12%	.852	.787	.804
4	(PPO-HRA-HRA)	2.65	48%	48%	41%	12%	.722	.732	.829
5	(HRA-PPO-PPO)	2.92	46%	46%	38%	16%	1.196	1.474	1.181
6	(HRA-HRA-PPO)	2.82	48%	48%	37%	15%	.988	1.286	1.402
7	(HRA-PPO-HRA)	3.15	51%	49%	45%	7%	.931	1.125	0.955
8	(PPO-HRA-PPO)	2.87	43%	51%	34%	15%	1.027	1.203	1.700
Combined			48%	42%	38%	20%			

# Demographic Differences by Cohort

- Distribution by age is skewed towards younger ages for cohort 2, and older ages for cohort 1
- 50% of cohort 1 is age 40 or younger, versus 64% of cohort 2

2008 Membership by Cohort & Age Group

Cohort		Age 0-10	Age 11-20	Age 21-30	Age 31-40	Age 41-50	Age 51-60	Age 61+	Age/Sex Adj. Factor
1	(PPO-PPO-PPO)	13%	18%	8%	11%	25%	22%	3%	1.069
2	(HRA-HRA-HRA)	18%	20%	9%	17%	24%	10%	1%	0.874
3	(PPO-PPO-HRA)	21%	17%	9%	19%	23%	11%	0%	0.901
4	(PPO-HRA-HRA)	20%	18%	10%	18%	22%	11%	1%	0.880
5	(HRA-PPO-PPO)	17%	18%	12%	15%	23%	14%	2%	0.941
6	(HRA-HRA-PPO)	20%	17%	12%	17%	20%	14%	1%	0.935
7	(HRA-PPO-HRA)	29%	13%	10%	26%	15%	6%	1%	0.782
8	(PPO-HRA-PPO)	24%	17%	10%	19%	14%	15%	1%	0.877

# Health Status Differences by Cohort

- 2008 age-adjusted risk scores (adjusted to reflect only the difference in health status, not the difference in age/sex mix) are presented below for each cohort and age group
- Risk scores are significantly higher in those cohorts ending in the PPO in 2008 (in red) and significantly lower for those cohorts ending in the HRA in 2008 (in blue)
- It's interesting that those who started with the HRA in 2006 but switched to the PPO in 2007 had closer to an average risk score in 2008, regardless of the 2008 selection (cohorts 5 & 7)

Cohort		2008 Health Risk Score by Cohort & Age Group							Total
		Age 0-10	Age 11-20	Age 21-30	Age 31-40	Age 41-50	Age 51-60	Age 61+	
1	(PPO-PPO- <b>PPO</b> )	1.467	1.243	1.119	1.160	1.007	1.033	1.406	<b>1.106</b>
2	(HRA-HRA- <b>HRA</b> )	0.799	0.814	0.766	0.764	0.646	0.637	0.785	<b>0.708</b>
3	(PPO-PPO- <b>HRA</b> )	1.077	0.830	0.893	0.835	0.620	0.680	0.698	<b>0.759</b>
4	(PPO-HRA- <b>HRA</b> )	0.747	0.972	0.898	0.812	0.753	0.743	0.929	<b>0.800</b>
5	(HRA-PPO-PPO)	1.571	0.972	1.001	1.335	0.972	1.014	0.663	1.067
6	(HRA-HRA- <b>PPO</b> )	1.495	1.667	1.183	1.577	1.245	0.964	0.991	<b>1.273</b>
7	(HRA-PPO-HRA)	1.419	1.320	0.578	0.920	0.873	0.930	3.917	1.038
8	(PPO-HRA- <b>PPO</b> )	3.677	1.331	2.020	1.100	1.215	1.611	0.879	<b>1.647</b>
	Average	1.237	1.103	1.010	1.009	0.897	0.963	1.329	1.000

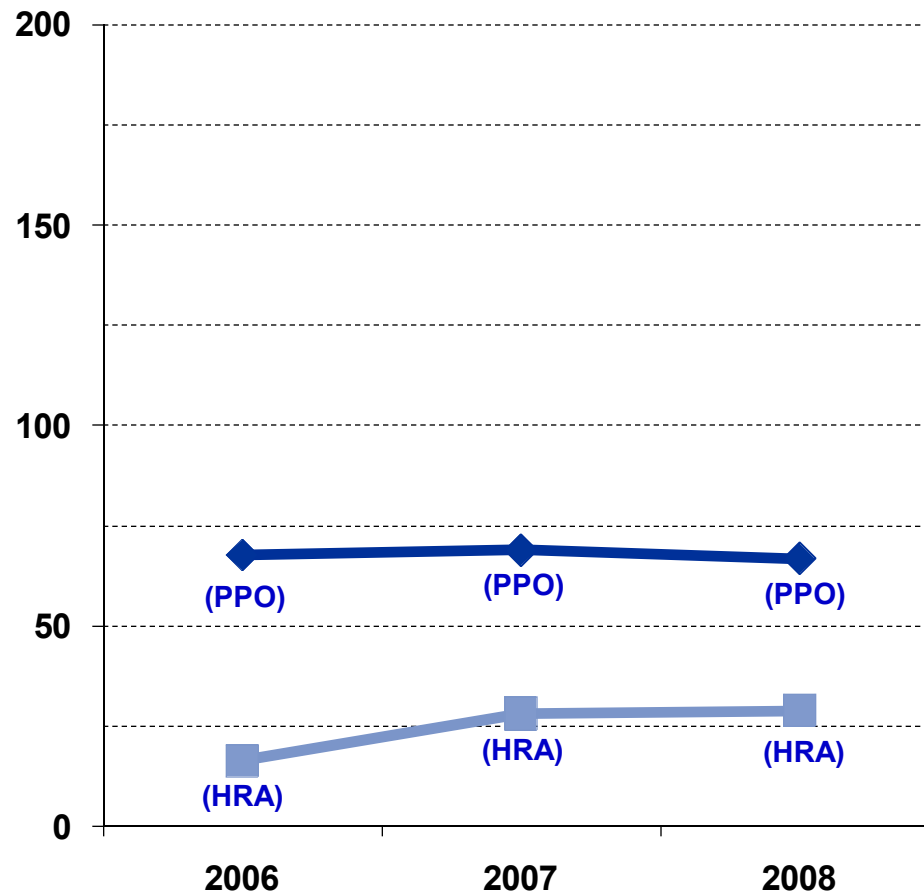
# Allowed Charge Cost and Trends Summary

- Although 2007 trends were somewhat higher than expected, overall cost levels and annual trend rates are not significantly out of line with expectations
- Cost levels are consistently lower for the HRA, consistent with the lower risk scores, although the cost trends are significantly higher
- Those cohorts that switch from the PPO to the HRA tend to have lower increases (cohorts 3, 4, and 7)

Cohort		Allowed Charges PEY			Ave. Charge Trend	
		2006	2007	2008	2006-07 Trend	2007-08 Trend
1	(PPO-PPO-PPO)	\$14,922	\$16,037	\$16,845	7%	5%
2	(HRA-HRA-HRA)	\$6,245	\$7,603	\$8,717	22%	15%
3	(PPO-PPO-HRA)	\$9,780	\$10,153	\$9,934	4%	-2%
4	(PPO-HRA-HRA)	\$7,661	\$8,068	\$8,351	5%	4%
5	(HRA-PPO-PPO)	\$17,739	\$20,268	\$16,496	14%	-19%
6	(HRA-HRA-PPO)	\$11,597	\$16,477	\$18,458	42%	12%
7	(HRA-PPO-HRA)	\$12,037	\$17,327	\$15,385	44%	-11%
8	(PPO-HRA-PPO)	\$13,314	\$19,759	\$22,209	48%	12%
Total		\$12,378	\$13,610	\$14,375	10%	6%

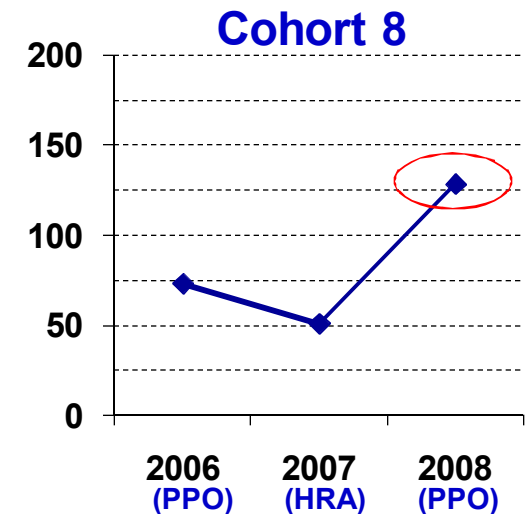
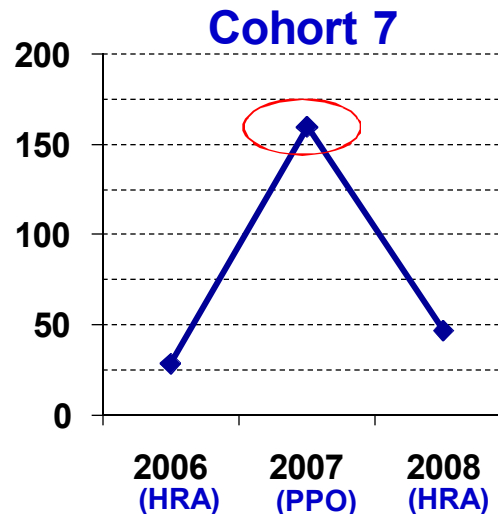
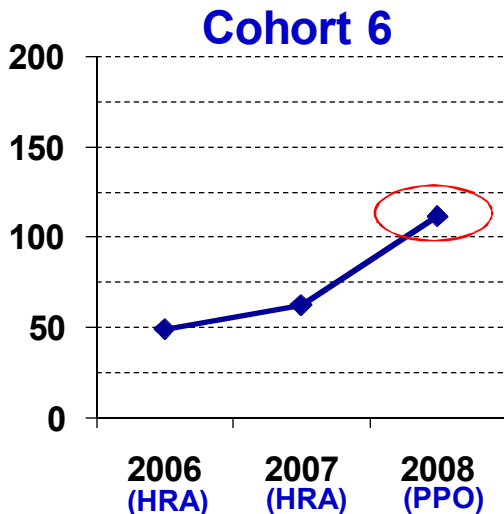
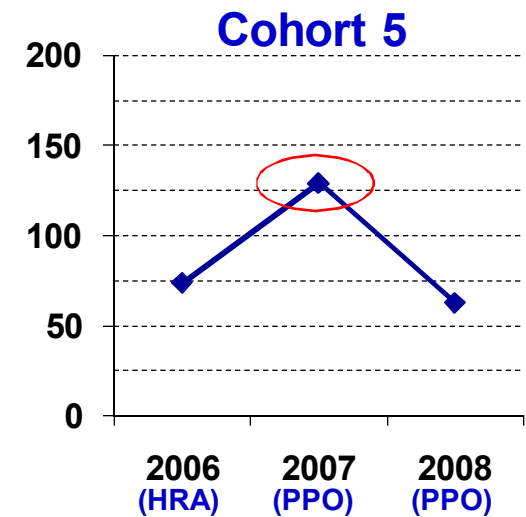
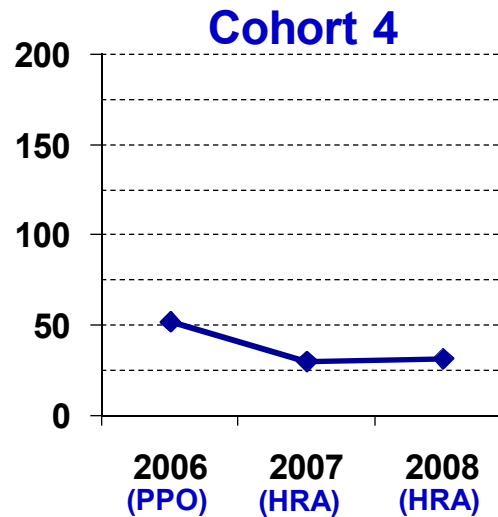
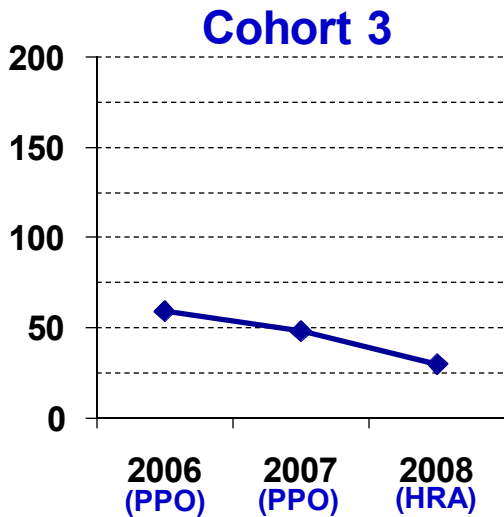
# Inpatient Admissions (per 1,000)

- Although not “discretionary” in a traditional sense, employees’ use of inpatient services demonstrates many of the characteristics of a discretionary service because of its predictability and ability to be scheduled in advance of a procedure.
- Admits per 1,000 is significantly lower across all years for cohort 2, when compared to cohort 1



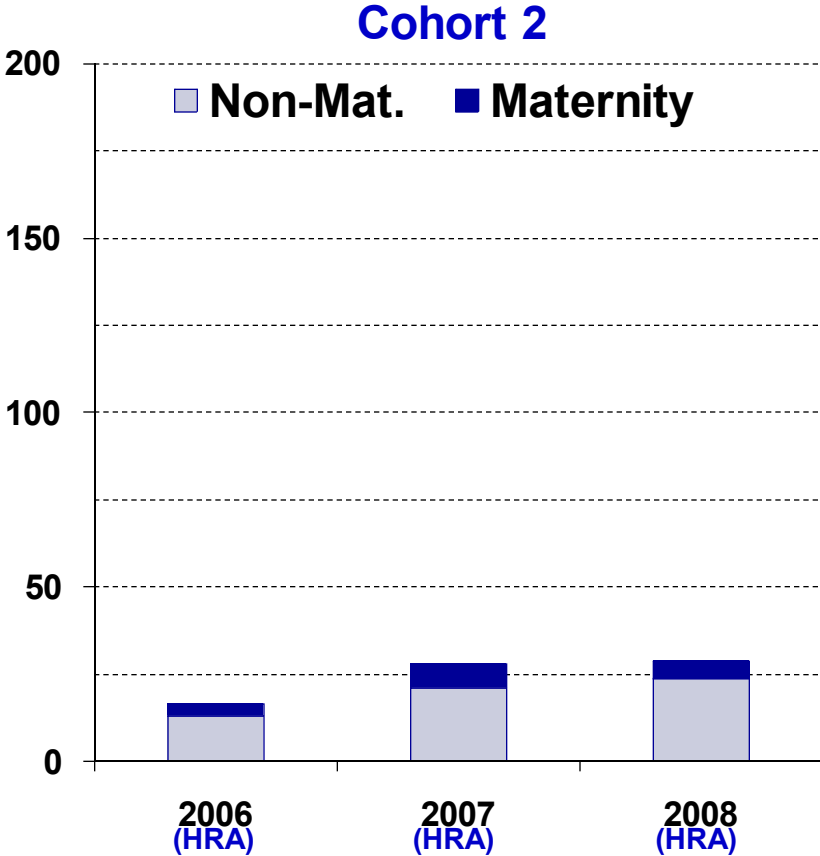
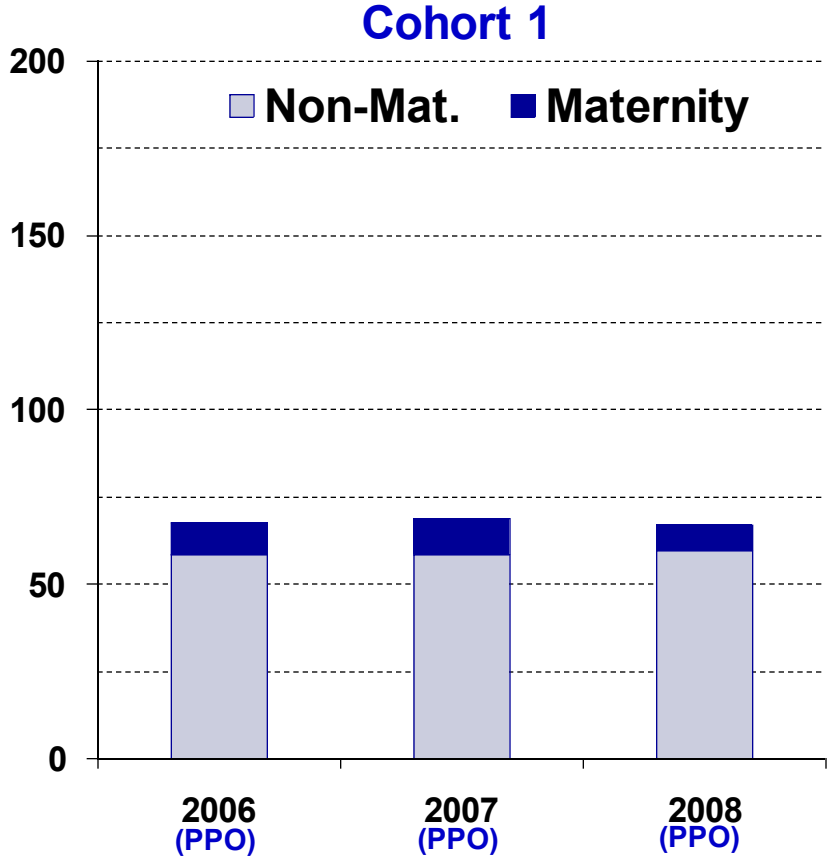
# Inpatient Admissions (per 1,000)

- Inpatient utilization peaks in the year the member migrated from the HRA to the PPO
- This peak in utilization is primarily attributed to increase in maternity and cancer related admissions. For example, for cohort 6, inpatient maternity related admits increased from 8% of total admits in 2006, to 22% in 2007 and 46% in 2008.



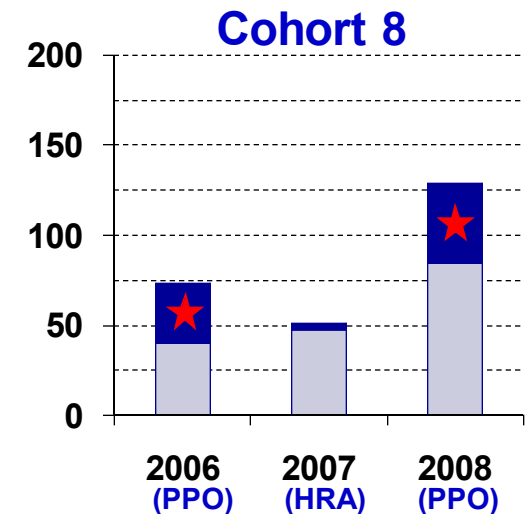
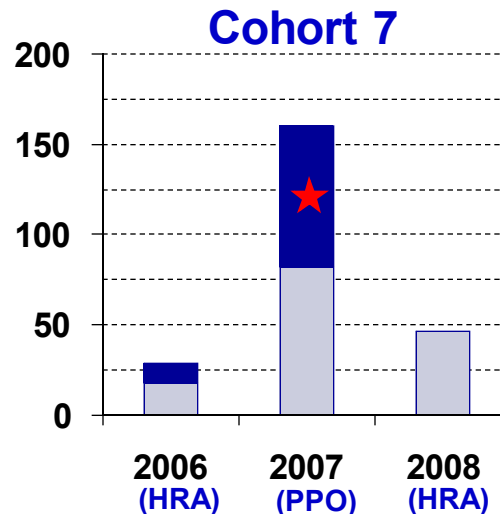
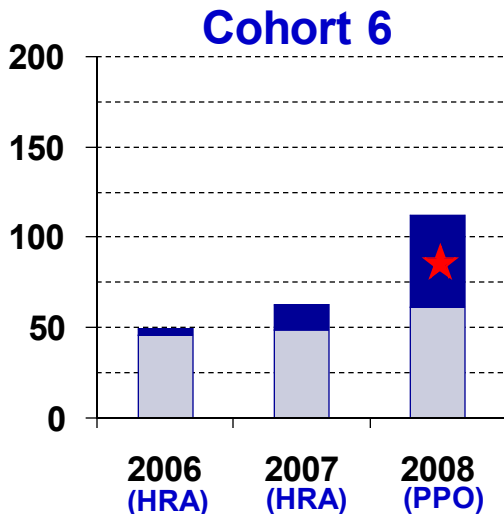
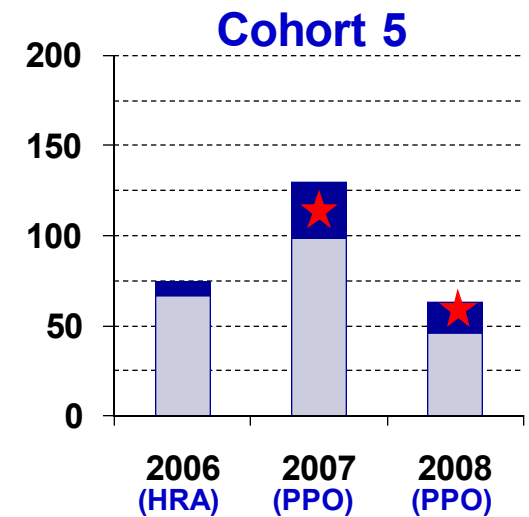
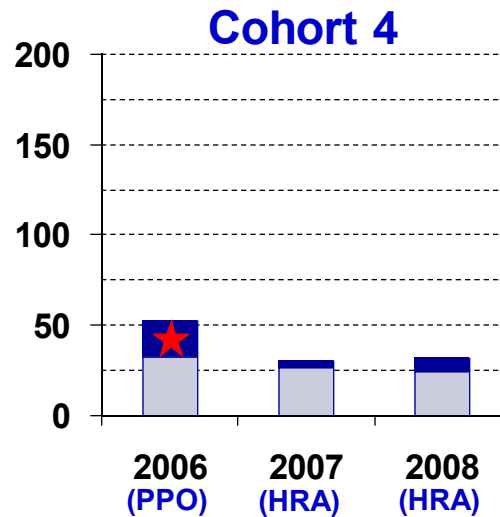
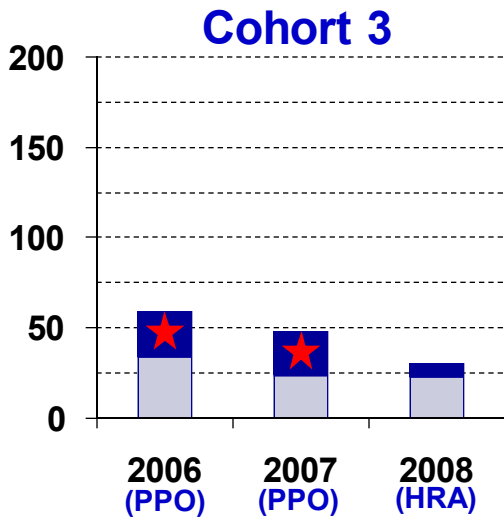
# Inpatient Admissions (per 1,000)

- Inpatient maternity admissions have remained fairly stable over three years for cohorts 1 and 2.



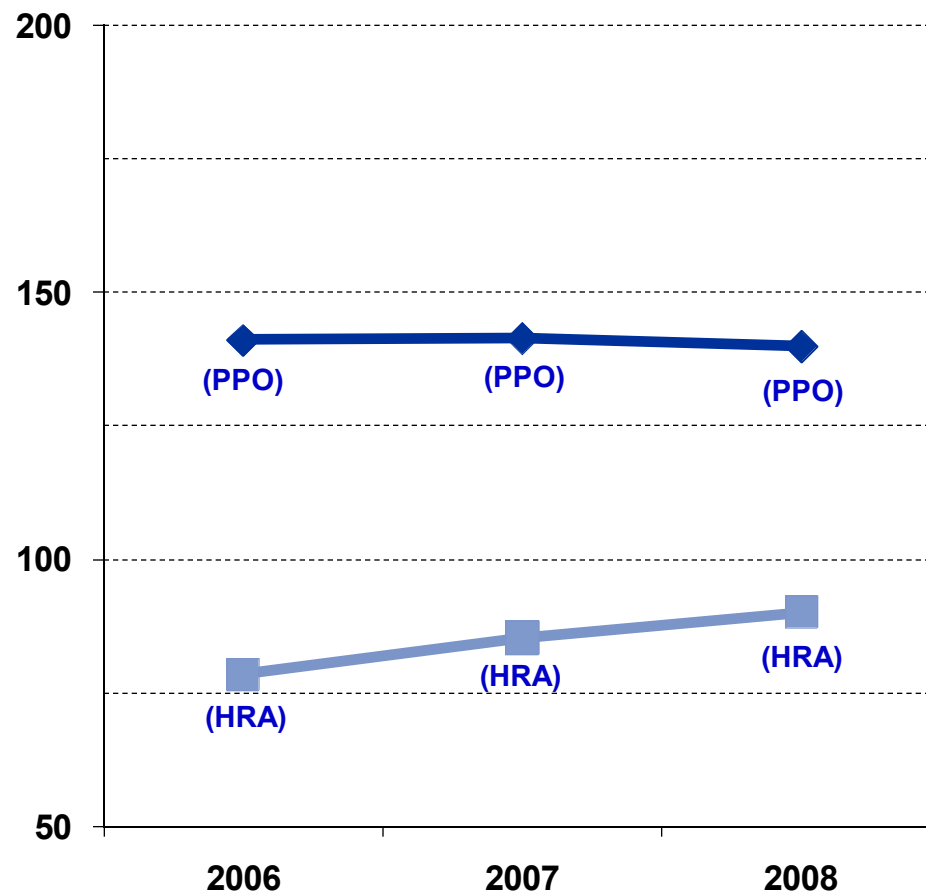
# Inpatient Admissions (per 1,000)

- While total inpatient admission levels have fluctuated by cohort from 2006 to 2008, inpatient maternity admissions are the greatest during the PPO year(s) of each cohort experiencing migration (denoted by ★ in the graphs)



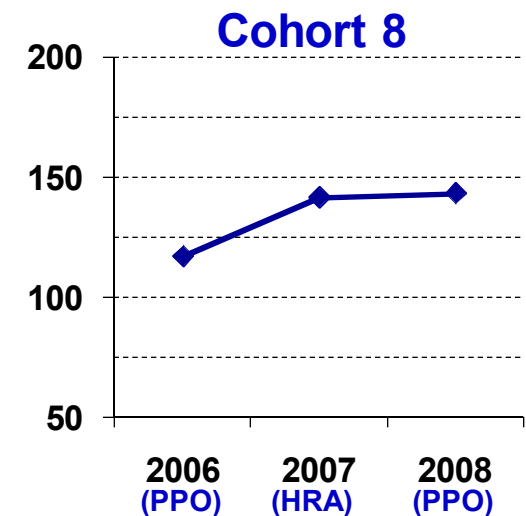
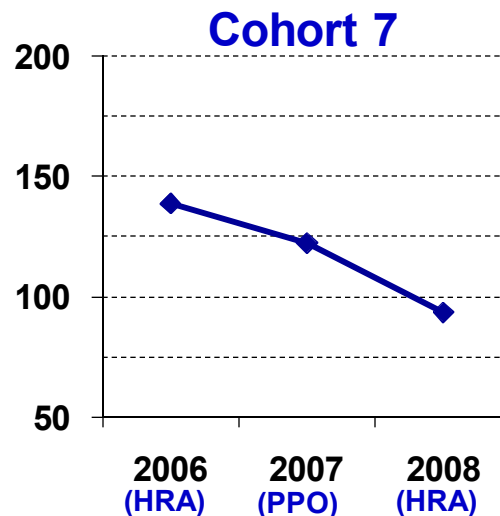
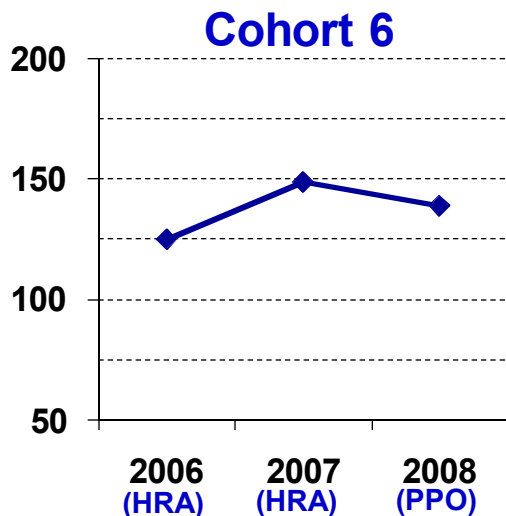
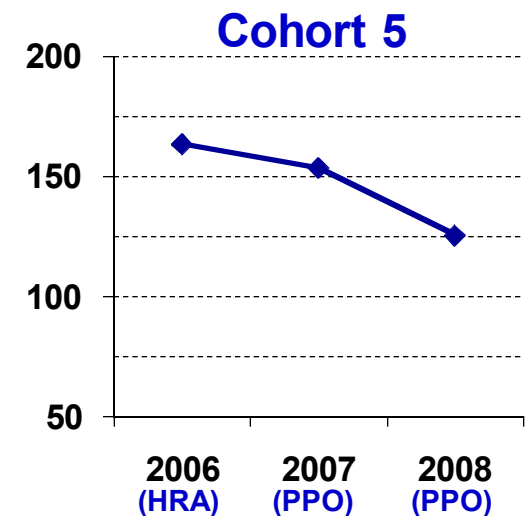
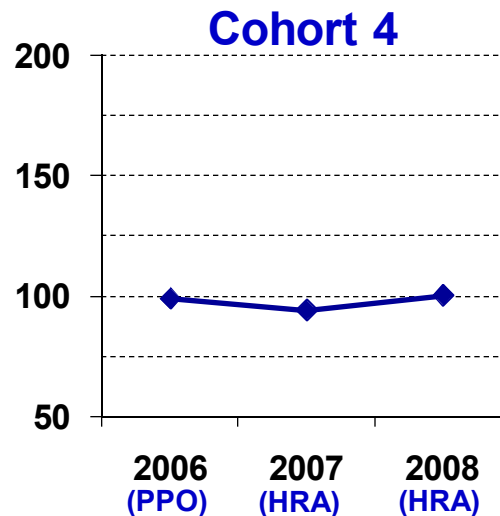
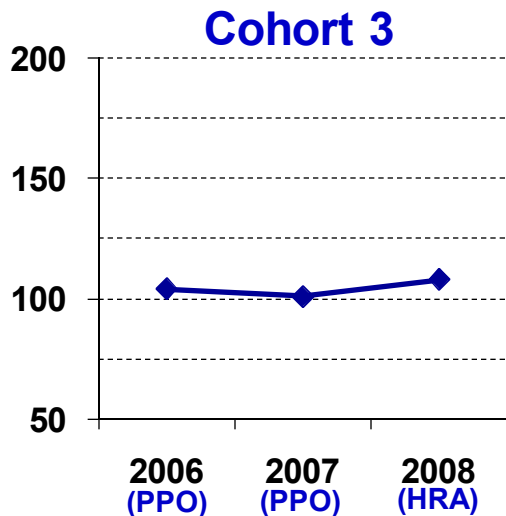
# Emergency Room Visits (per 1,000)

- ER visits per 1,000 is lower across all years for cohort 2, when compared to cohort 1
- It was anticipated that once in a CDH plan, ER utilization would drop, as visits to the ER would be replaced with visits to primary care or urgent care facilities
- But, ER visits are trending up faster in cohort 2 and the gap in utilization between the two cohorts is shrinking



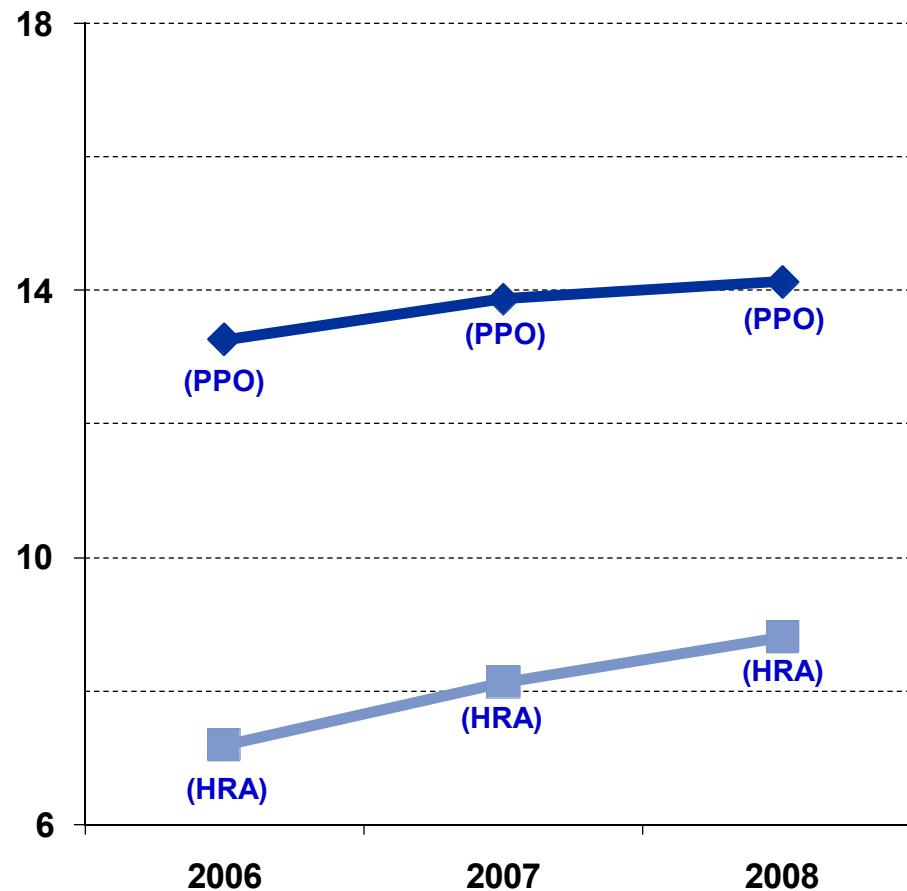
# Emergency Room Visits (per 1,000)

- ER utilization patterns of cohorts migrating between plans do not dramatically drop during the year of migration into the HRA plan, however, overall ER utilization levels for cohorts ending in the HRA (2,3,4,7) are well below ER utilization of cohorts ending in the PPO



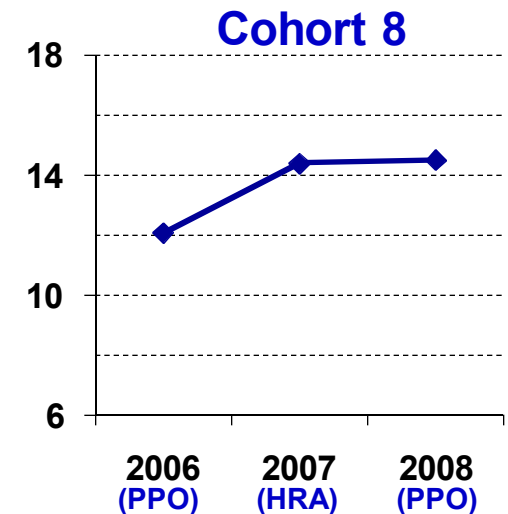
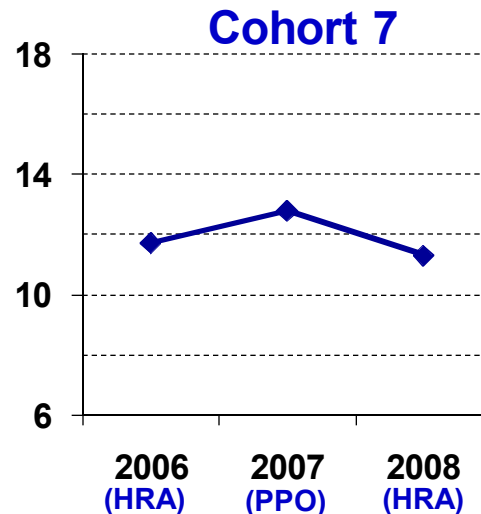
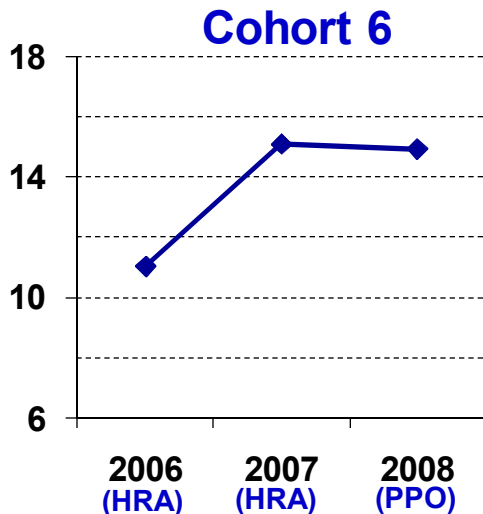
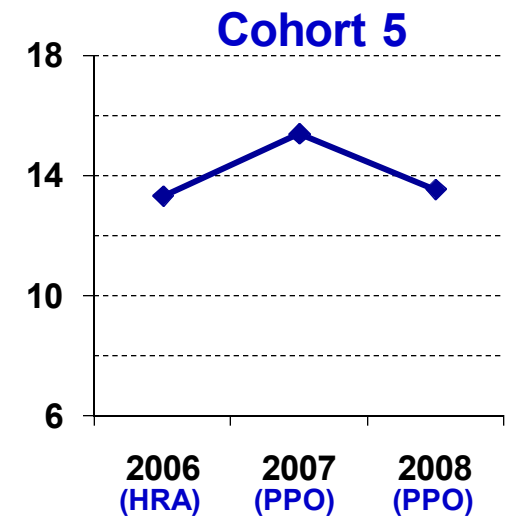
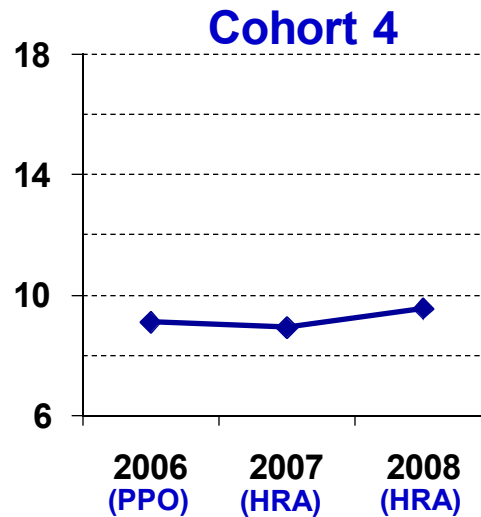
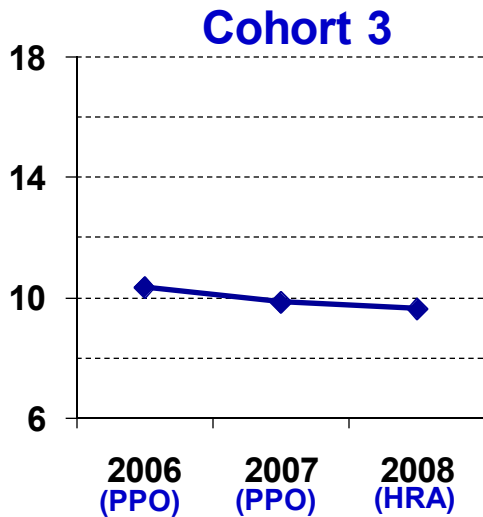
# Physician Services

- The number of physician services per member for cohort 2 (remaining in HRA all three years) is significantly lower than cohort 1 (remaining in PPO all three years)
- Both cohorts are showing steady increases over the three years, with somewhat steep increases for cohort 2 which is consistent with the increase in risk scores for that cohort



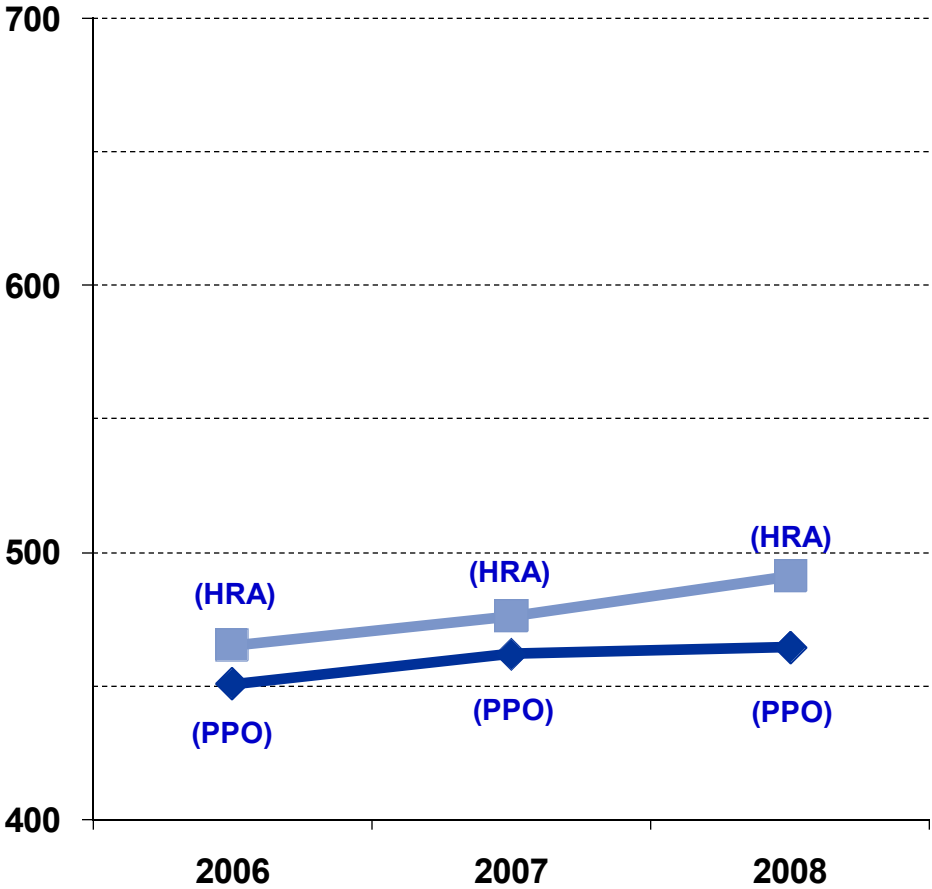
# Physician Services

- Those cohorts where the employee ultimately ended up switching to the PPO (cohorts 5, 6, and 8) exhibit higher overall levels of physician utilization (number of services per member per year)



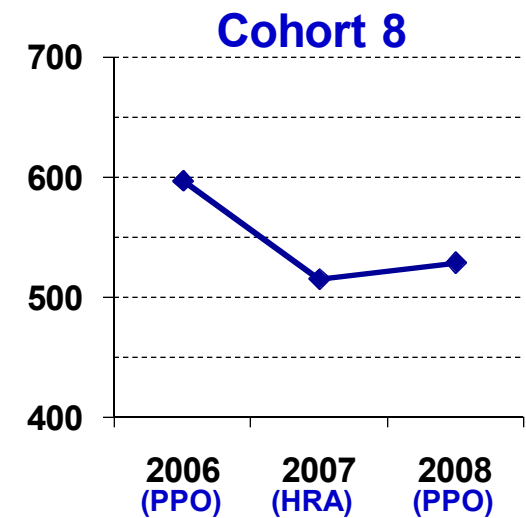
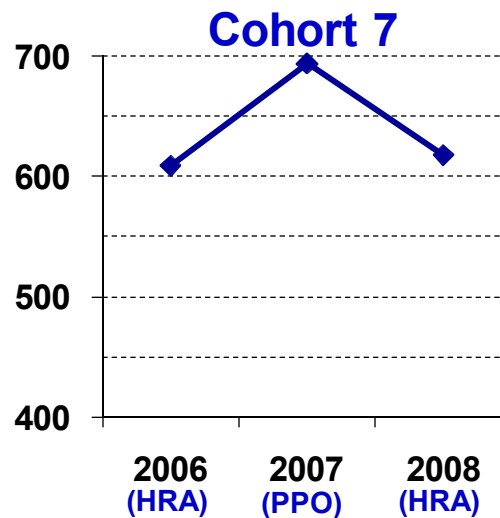
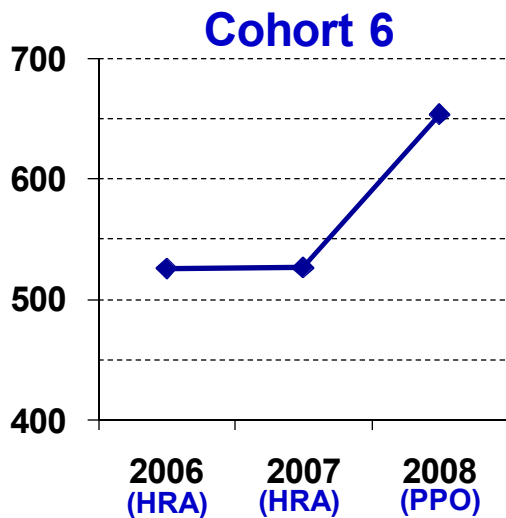
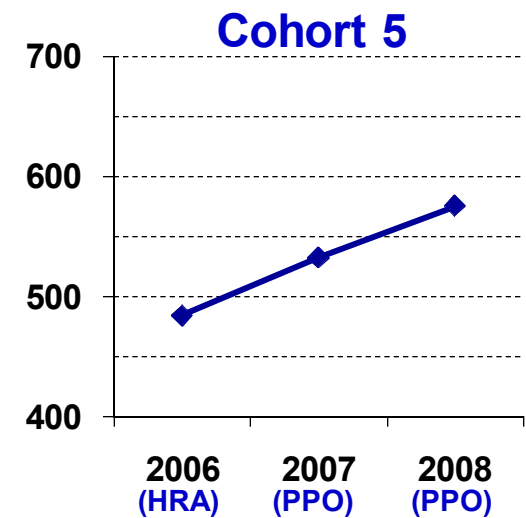
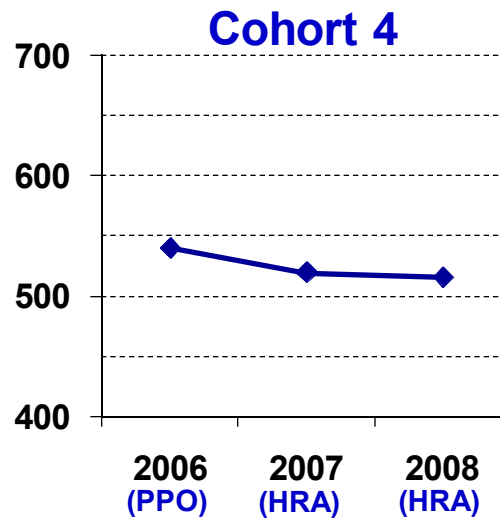
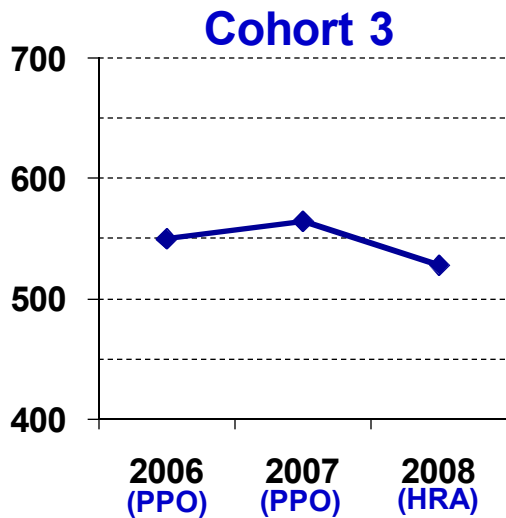
# Preventive Care Services (per 1,000)

- Though not significantly different, preventive care visits per 1,000 are slightly higher for cohort 2 (remaining in HRA all three years) than cohort 1 (remaining in PPO all three years)



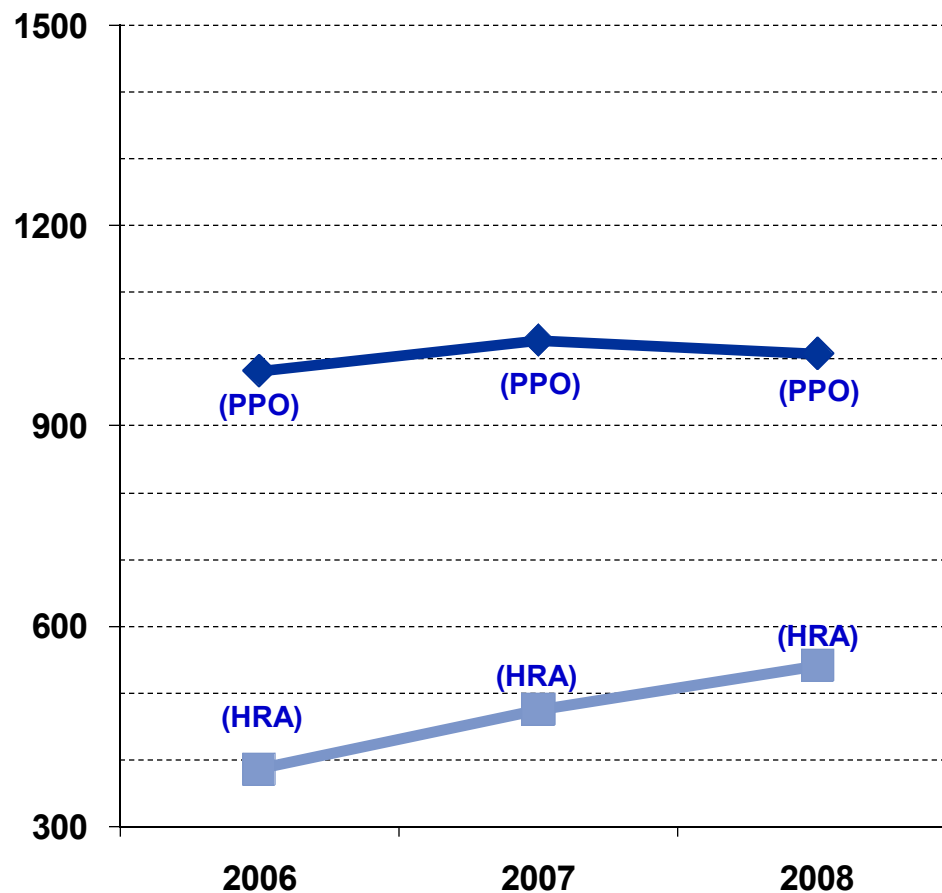
# Preventive Care Services (per 1,000)

- For each cohort where there is movement into or out of the HRA plan, the utilization rate of preventive care services increases after moving to the PPO and decreases after moving to the HRA



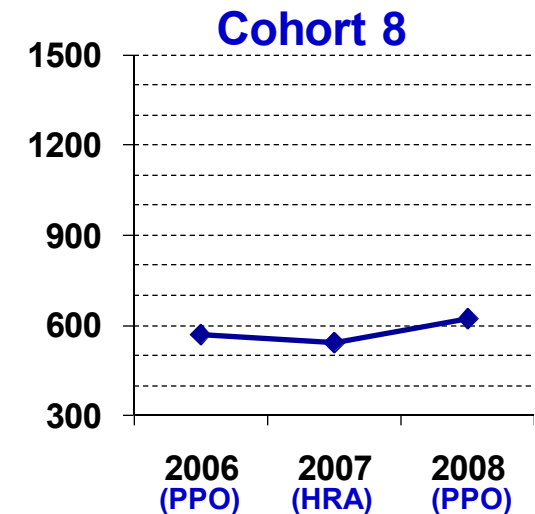
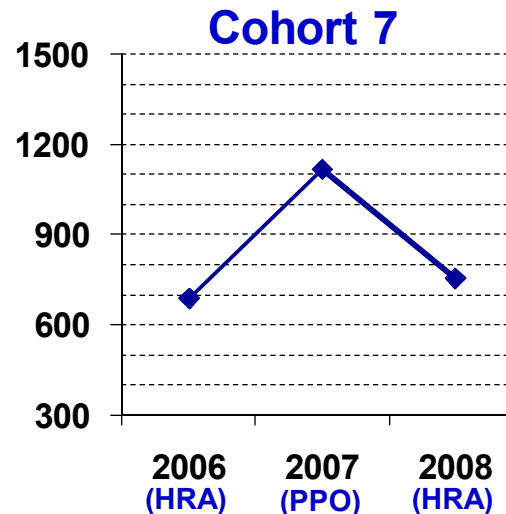
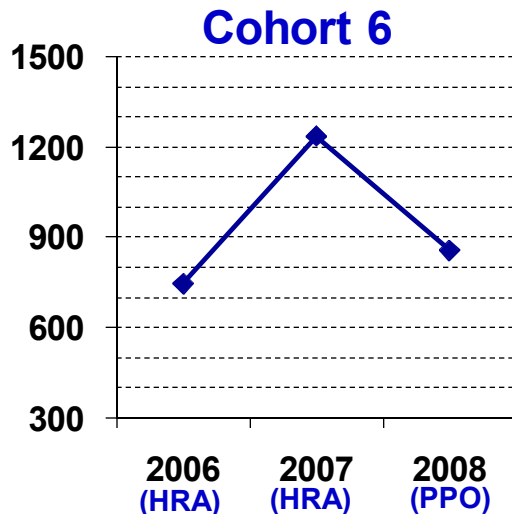
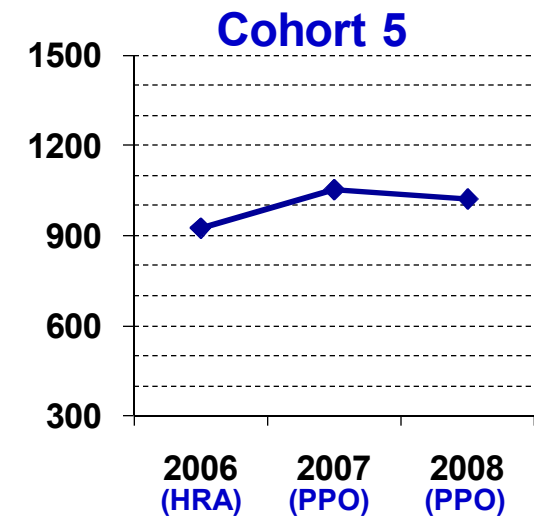
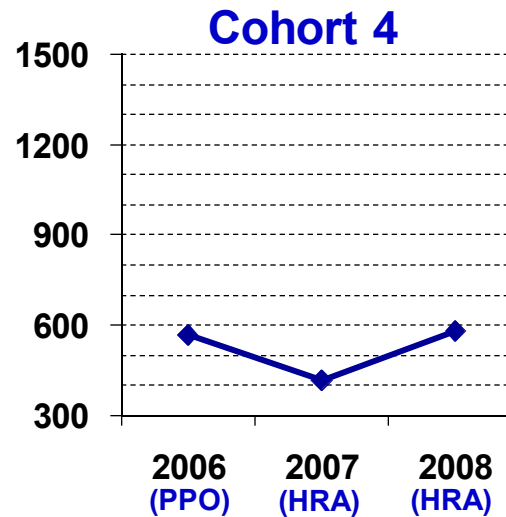
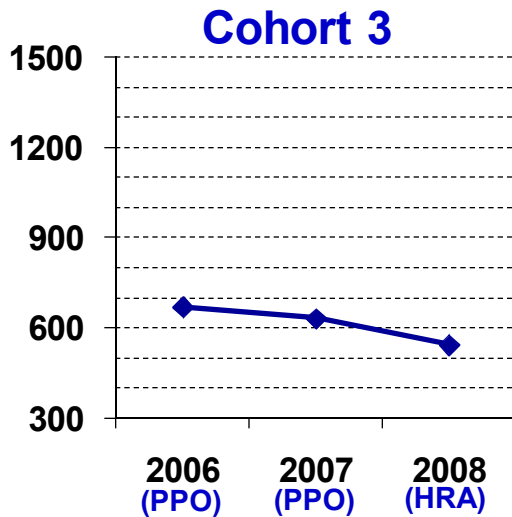
# Physical Therapy Services (per 1,000)

- Utilization of physical therapy services is significantly higher for cohort 1 (remaining in PPO all three years) than cohort 2 (remaining in HRA all three years)
- But, similar to Emergency Room utilization, visits are trending up faster in cohort 2 and the gap in utilization between the two cohorts is shrinking



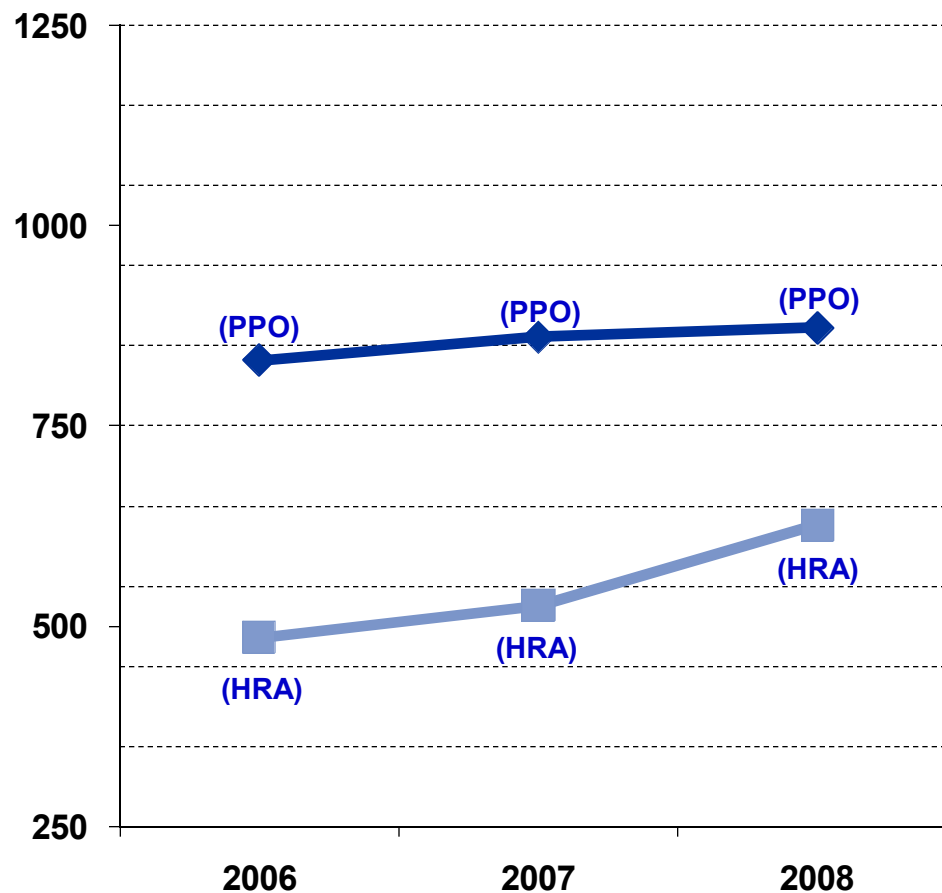
# Physical Therapy Services (per 1,000)

- Similar to preventive care, for most of the cohorts where there is movement into or out of the HRA plan, the utilization rate of physical therapy care services increases after moving to the PPO and decreases after moving to the HRA



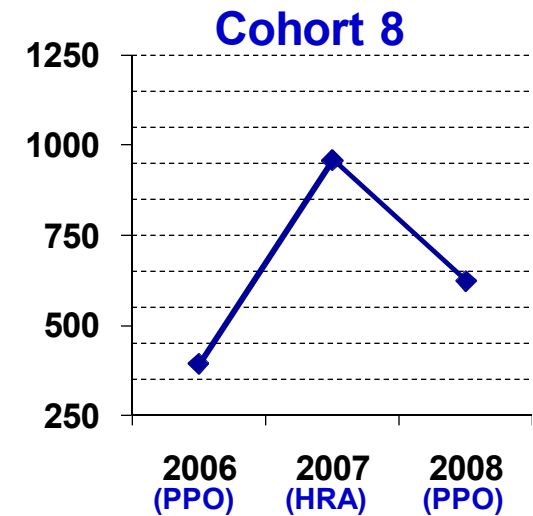
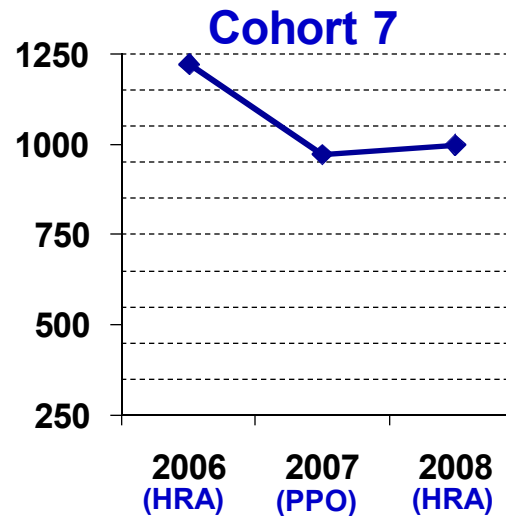
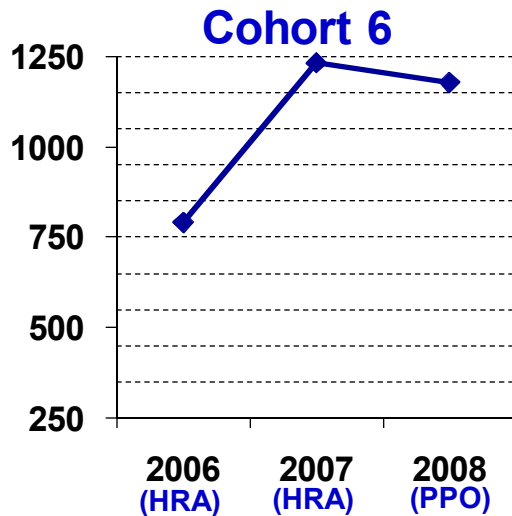
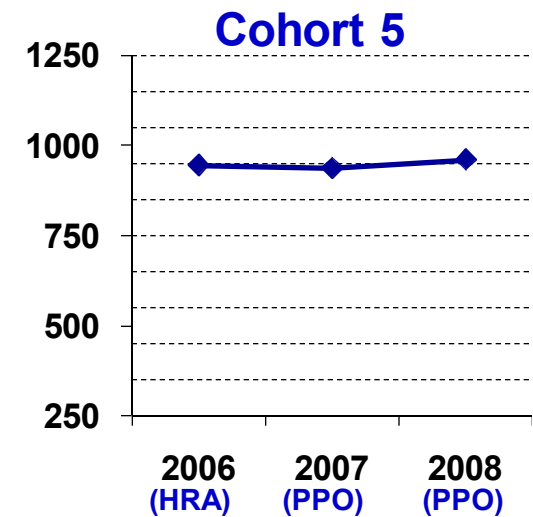
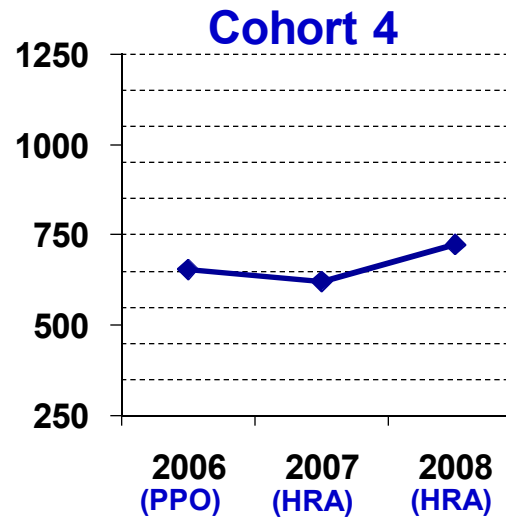
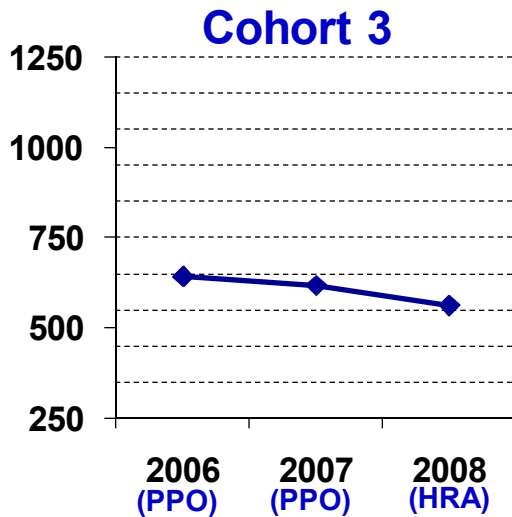
# Chiropractic Services (per 1,000)

- Utilization of chiropractic services is significantly higher for cohort 1 (remaining in PPO all three years) than cohort 2 (remaining in HRA all three years)
- But, again visits are trending up faster in cohort 2 and the gap in utilization between the two cohorts is shrinking



# Chiropractic Services (per 1,000)

- In contrast, though the trend is less pronounced, utilization of chiropractic services decreases somewhat after moving to the PPO



# Economics of Employee Choice

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- When we look at total employee cost by allowed charge levels for each plan offered in 2008 and look at which plan is optimal from a total employee cost perspective (including required premium contributions) across the continuum of allowed charges, we see that the HRA is very close in value to the \$1,000 PPO plan option for any member experiencing less than \$23,600 in allowed charges.
- It does not make financial sense for any member experiencing less than \$23,600 in allowed charges to migrate between plans.
- Those members moving out of the HRA for maternity-related and other low to moderate cost conditions, appear to not have a clear understanding of the HRA benefit design or the potential impact on out-of-pocket expenses and might be overly risk adverse.

# Strategic Considerations

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- Employees' apparent view of the HRA plan as a catastrophic plan is contributing to migration that is not "logical"
  - Overall enrollment in the HRA plan may be suppressed because of this view
  - Should a reduction in the out-of-pocket maximum on the HRA plan be considered to change the perception that this is a catastrophic plan?
  - Would introduction of a second HRA plan help convey the message that CDH is not catastrophic only?
  - How should employee contribution methodology be altered to optimize enrollment and generate cost savings?
  - What plan provisions could be altered to make the plan more "appealing" to a mix of health risks?
- Reduction in use of preventive services within the HRA plan is strong evidence that employees may be uneducated about the preventive benefit
  - Sub-optimal use of preventive and early diagnostic services will hamper long-term cost trend reduction efforts
- Are employees leaving the HRA option forfeiting (or accelerating expenditure of) dollars?
  - How would an HSA model impact this, and migration of employees in general?
  - How would prescription drugs "in" impact the plan and migration?
- Maternity claims known (or anticipated) at annual open enrollment are a significant contributor to migration, yet most are not "winners" in the PPO

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