Preferred Provider Organization Health Plan Assessment

Phase I Report

April 21, 2020

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PPO Health Plan Assessment Phase I Report

1. Purpose

The purpose of the Preferred Provider Organization (PPO) Health Plan Assessment Phase I Report is to provide key findings pertaining to the analysis conducted by CalPERS Actuarial Office's Health Unit regarding the PPO health plans' member migration patterns, plan designs, purchasing preferences, as well as the plans' health costs. The objective of the analysis is to understand the cause of the current premium disparities between the three PPO Basic Plans and help inform proposed changes to achieve the long-term sustainability and stability of the PPO Program.

2. Background

CalPERS offers the following PPO Health Plans: PERSCare, PERS Choice, and PERS Select. Each plan includes a Basic option and a corresponding Supplement to Medicare option, and were designed to offer a variety of choices between networks and benefit designs for CalPERS members.

In 2014, CalPERS introduced risk adjustment, which adjusted premiums for the health risk of the population so that the premiums paid by members more accurately reflected the value of each plan based on its networks and benefit designs. When CalPERS ended risk adjustment in 2019, the unadjusted premium for PERSCare, which has a concentration of members with higher medical needs, increased by nearly 40%. Without risk adjustment, premium spend-downs, or some other means, the PERSCare Basic Plan is likely to continue experiencing unacceptably high rate increases.

The assessment will provide CalPERS with information to help develop strategies to reduce year-over-year premium volatility allowing for more stable premiums and minimized member disruption. It will also help maintain member satisfaction and stabilize plan populations.

3. Data Collection Methodology

Premium and enrollment data from 2012 to 2020 was collected from my|CalPERS. Additional enrollment information and historical fee-for-service medical and pharmacy claims data from 2012 to 2018 was collected from the GEN 4 Health Care Decision Support System (HCDSS) data warehouse. The data was used in analyzing benefits-specific information along with the CalPERS Anthem Blue Cross PPO Health Plan Evidence of Coverage (EOC) booklets and other benefits-related information. In accordance with the Health Insurance Portability and Accountability Act of 1996 (HIPAA), CalPERS did not cross-reference any data from my|CalPERS with any data from HCDSS or vice versa.

4. Key Findings

Historical CalPERS Health Benefits Program policy initiatives taken since 2014 have influenced member migration patterns and annual premium trends. When risk adjustment was in effect from 2014 to 2018, premiums for each of the CalPERS PPO Basic plans more closely reflected the value of their networks and benefit designs. Since the

removal of risk adjustment, premiums primarily reflect the risk of each plan's population. As a result, the PERSCare Basic plan premium increased nearly 40% from 2018 to 2019. This is the impact of adverse selection.

Adverse selection occurs in health plans when there is an imbalance of high-risk, sick members to low-risk, healthy members in any given health plan product. Adverse selection can be influenced by network and benefit design differences and the health plan choices members make based upon their health status. Members with higher medical needs have historically migrated out of PERS Select and into PERSCare for its broad network and richer benefit design. As these members use more health care services, they are attracted to the lower out-of-pocket costs offered by PERSCare. Conversely, members with lower medical needs have historically migrated out of PERSCare and PERS Choice and into PERS Select. Since these members do not utilize health care services as often, they are attracted to the lower premiums offered by PERS Select. The analysis of historical enrollment and risk migration reports strongly corroborate this pattern of member behavior.

The increasing concentration of high-utilization members in PERSCare necessitates large annual premium increases to accommodate the higher total medical and pharmacy costs for the plan. Likewise, the increased concentration of low-utilization members in PERS Select cause the annual premium to be lower than the value of the plan based on the benefits and network offered to its members.

With the growing trend of adverse selection, the team anticipates the PERSCare Basic plan premium will continue to experience high increases, while the PERS Select Basic plan premium will be priced much lower than the actual benefit design and network value. The PPO Medicare Supplemental plans are not currently experiencing the effects of adverse selection. This is due to the relatively low member cost of these products, since the majority of the costs in Medicare products are borne by the federal government.

5. Analyses

5.1. Major CalPERS Health Benefits Program Policy Initiatives Versus Historical PPO Premium Changes

5.1.1. Major CalPERS Policy Initiatives

Within the last eight years, there have been four major health initiatives to improve the CalPERS Health Benefits Program for its members. In 2014, risk adjustment was implemented for the HMO program and the PPO program separately. Also, in 2014, CalPERS introduced six new HMO Basic plans into its program. These new plans were Anthem Blue Cross Select and Traditional, Health Net SmartCare and Salud y Mas, Sharp Performance Plus, and United Healthcare Alliance. In 2019, risk adjustment was eliminated for the HMO and PPO programs. In conjunction with the removal of risk adjustment, a Value-Based-Insurance-Design (VBID) was implemented for the PERS Select Basic plan.

5.1.2. Historical PPO Basic Plan Premium Changes

Graph 1 (below) shows the 2012-2020 premiums for each of the three PPO Basic plans. This data is tabulated in Table 1a. The annual trends for this data are presented in Table 1b. Due to the implementation of risk adjustment in 2014, the PERSCare Basic premium decreased 32%, and the PERS Select Basic premium increased 28%. Inversely, with the removal of risk adjustment in 2019, the PERSCare Basic premium increased 20%, and the PERS Select Basic

premium decreased 26%. However, for PERSCare, the premium increases in 2019 and 2020 would have been 38% and 21% respectively, without each year's premium spend-down.

Although member migration in 2014 was impacted by the introduction of new HMO plans, this did not significantly affect the PPO plans' premium changes. These premium changes are largely the result of the implementation of risk adjustment.

Graph 1; Historical Single-Party Premium by Plan (2012-2020):

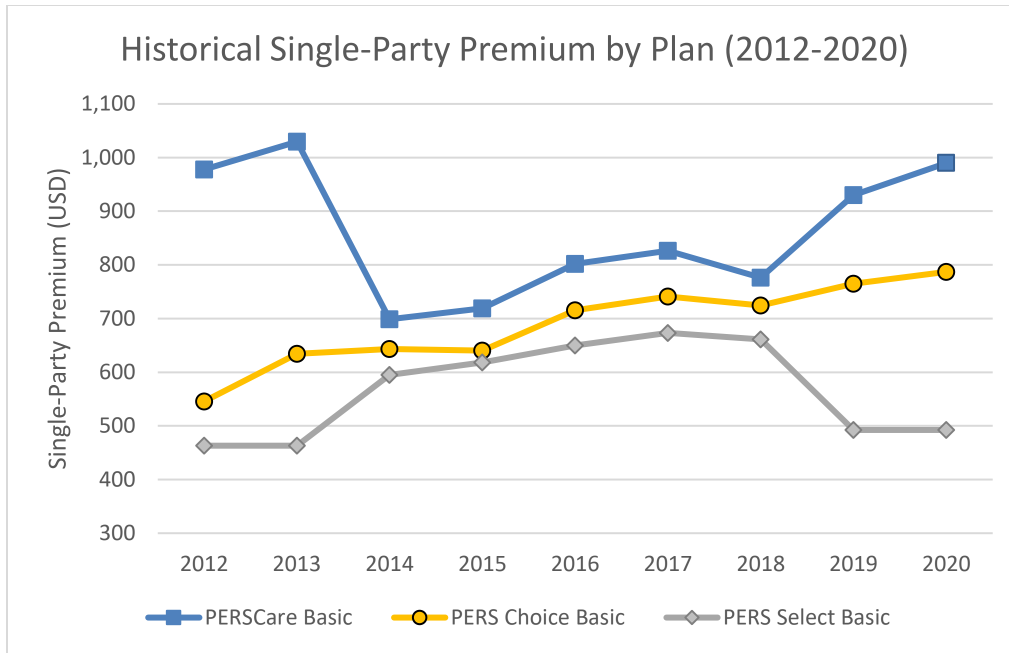


Table 1a; Historical Single-Party Premium by Plan (2012-2020):

Plan Year	2012	2013	2014	2015	2016	2017	2018	2019	2020
PERSCare Basic	978.00	1029.60	698.70	718.90	801.60	826.40	776.20	929.90	989.88
PERS Choice Basic	545.60	634.10	643.50	640.50	715.70	740.90	724.20	764.80	787.00
PERS Select Basic	463.10	463.10	595.00	618.20	649.80	673.30	661.30	492.20	492.24

Table 1b; Percentage Increase in Single-Party Premium from Prior Year by Plan (2012-2020):

Plan Name	2013	2014	2015	2016	2017	2018	2019*	2020*
PERSCare Basic	5%	-32%	3%	11%	3%	-6%	20%	6%
PERS Choice Basic	16%	1%	0%	12%	4%	-2%	6%	3%
PERS Select Basic	0%	28%	4%	5%	4%	-2%	-26%	0%

* Note: the 2019 PERSCare Basic Premium spend-down reduced the 2019 increase from 38% to 20%, and the 2020 PERSCare Basic premium spend-down reduced the 2020 increase from 21% to 6%.

5.2. Historical Enrollment Changes and Migration Patterns for PPO Basic Plans

It appears that the premium changes and other CalPERS policy initiatives have had significant impacts on enrollment in the PPO plans.

Graph 2 and Tables 2a and 2b report the membership changes for each of the three PPO basic plans from 2012 to 2020. While the total enrollment of the three plans has remained relatively stable, the enrollment of each individual plan has changed more considerably.

Graph 2; Historical Enrollment in 10,000's Per Plan by Year (2012-2020):

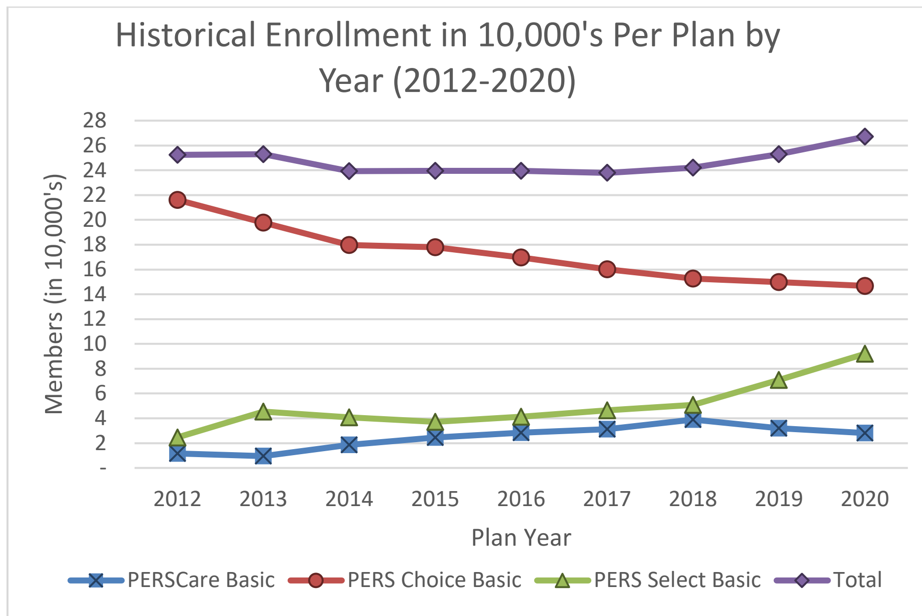


Table 2a; Historical Membership in 10,000's per Plan by Year (2012-2020):

Plan Name	2012	2013	2014	2015	2016	2017	2018	2019	2020
PERSCare Basic	1.18	0.95	1.86	2.45	2.85	3.12	3.90	3.20	2.83
PERS Choice Basic	21.61	19.78	17.98	17.80	16.98	16.02	15.25	14.99	14.68
PERS Select Basic	2.46	4.55	4.09	3.71	4.14	4.65	5.07	7.09	9.20
Total	25.25	25.28	23.93	23.96	23.96	23.79	24.22	25.29	26.70

Table 2b; Percentage Increase in Enrollment from Prior Year per Plan by Year (2012-2020):

Plan Name	2013	2014	2015	2016	2017	2018	2019	2020
PERSCare Basic	-19%	95%	32%	16%	10%	25%	-18%	-12%
PERS Choice Basic	-8%	-9%	-1%	-5%	-6%	-5%	-2%	-2%
PERS Select Basic	85%	-10%	-9%	12%	12%	9%	40%	30%
Total	0%	-5%	0%	0%	-1%	2%	4%	6%

The total PPO Basic membership decreased by 5% in 2014. It appears that the overall decline in membership was due to the introduction of the six new HMO Basic plans. The increases in total membership in 2019 and 2020 were primarily influenced by the relatively low PERS Select Basic premium that resulted from the removal of risk adjustment. Without any major CalPERS policy changes, the total PPO enrollment between 2014 and 2018 remained relatively stable when risk adjustment was in place.

PERSCare enrollment increased considerably from 2014 to 2018. The plan's enrollment increase is likely the result of members' response to premium changes. Due to risk adjustment, PERSCare's premium decreased dramatically in

2014. When risk adjustment was removed after 2018, PERSCare's enrollment experienced a decrease of 18% in 2019 and a decrease of 12% in 2020.

Enrollment in PERS Select increased 85% from 2012 to 2013. This was mainly the result of member migration from PERS Choice, due to the 16% increase in the PERS Choice premium. However, the total membership of the three plans remained about the same for 2012 and 2013.

The enrollment of the PERS Choice plan exhibited a steady decrease between 2012 and 2020. While the year-to-year change may not be as dramatic as other two plans, the cumulative decrease is significant; the plan's enrollment decreased more than 30% from 2012 to 2020.

During risk adjustment, the overall PPO enrollment remained steady, and the PERSCare and PERS Select plans experienced increasing memberships, showing that a portion of members in PERS Choice migrated each year into either PERSCare or PERS Select. This is confirmed in the following section. When risk adjustment was removed, total PPO membership increased by 4% in 2019 and 6% in 2020 due to the large influx of members into PERS Select.

5.3. Migration Analysis

Each year, 6% to 11% of PPO Basic members change their health plan during open enrollment. Though, migration occurred less frequently during active risk adjustment. This means that each year, 89% to 94% of PPO Basic members stayed with their health plan. Of those members who moved, very few moved between the PPO and HMO plans, meaning that most members either stay within the PPOs or stay within the HMOs.

When members move between the three PPO plans, their major considerations are each plan's premium, their medical status, and the medical status of any dependents they may have. The three PPO plans can be categorized as high, medium, and low in terms of benefits offered and provider network available. These tiers influence how high-utilizers, members who most often take advantage of their insurance by seeing a provider, and low-utilizers, members who infrequently or never see a provider, choose which health plan to enroll in.

Since PERSCare is the highest tier PPO plan, the high-utilizers are attracted to the richer benefits and broad provider network and are willing to bear the higher premiums. Those members who migrate out of the PERSCare plan may find that the premium is no longer worth the level of care that they receive. Historically, the members who migrate out of the PERSCare plan are low-utilizers by comparison of the PERSCare population. Those who migrate into PERSCare tend to be high-utilizers. However, during the risk adjustment period, the lower PERSCare premium attracted low-utilizers and improved the average risk level for PERSCare. When risk adjustment was removed in 2019, the premium increase caused low-utilizers to migrate out of the plan and the average risk level worsened.

Since PERS Choice is the medium tier PPO plan, members may see this as a "middle ground" between the richer PERSCare and the leaner PERS Select. Historically, members entering the PERS Choice plan utilize their health insurance benefits about 6% more than the CalPERS Basic average member. Those leaving PERS Choice tend to use their benefits 3% less than the CalPERS Basic average. This is a much less dramatic change in the risk pool compared to the migration patterns in and out of PERSCare.

As the lowest tier PPO plan, PERS Select attracts the lowest-utilization members. Those entering the plan may not need as much medical care, so they are willing to accept the lower benefit and fewer providers. Historically, those entering PERS Select utilize their benefits 30% less than the CalPERS Basic average member, and those exiting utilize

their benefits approximately 20% more. These members may be anticipating changes in their medical needs and therefore migrate to the higher tiered plan.

5.4. Plan Age Demographic with Constantly Changing Enrollment

The following table reports the average age of each plan's membership from 2012 to 2020. Average age of a plan's membership is generally considered a risk indicator for the plan's enrollment. In general, it appears that the average age did not significantly increase or decrease over time. One notable exception is that the average age of PERSCare decreased by 5 years in 2014 when risk adjustment was implemented and when the population nearly doubled.

It is worth noting that the PERSCare Basic average age decreased slightly as risk adjustment continued, and then increased slightly after 2018 when risk adjustment was removed. Likewise, average age remained steady in the PERS Select Basic enrollment but decreased slightly in 2019 and 2020.

Graph 4; Average Age of Plan Membership Per Year by Plan (2012-2020):

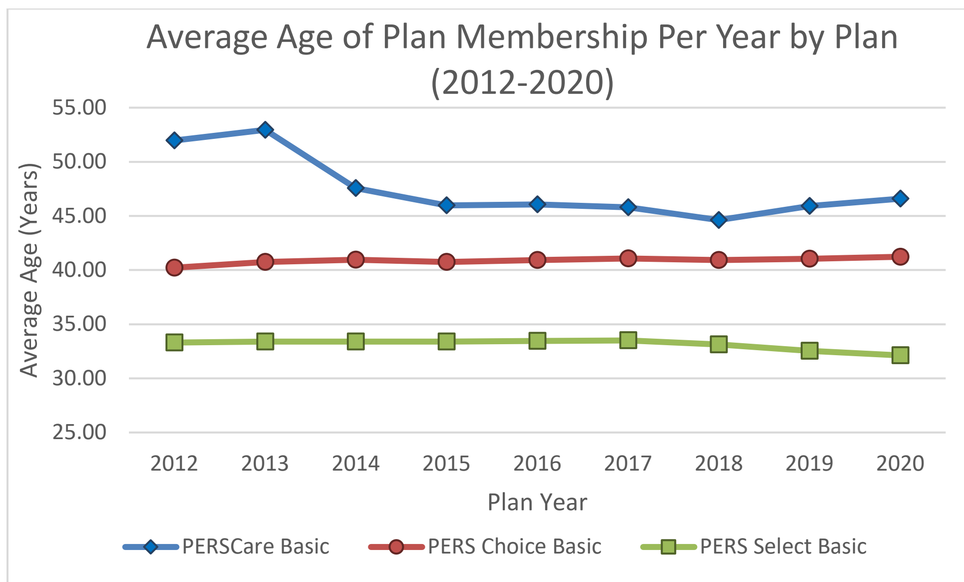


Table 4; Average Age of Plan Membership Per Year by Plan (2012-2020):

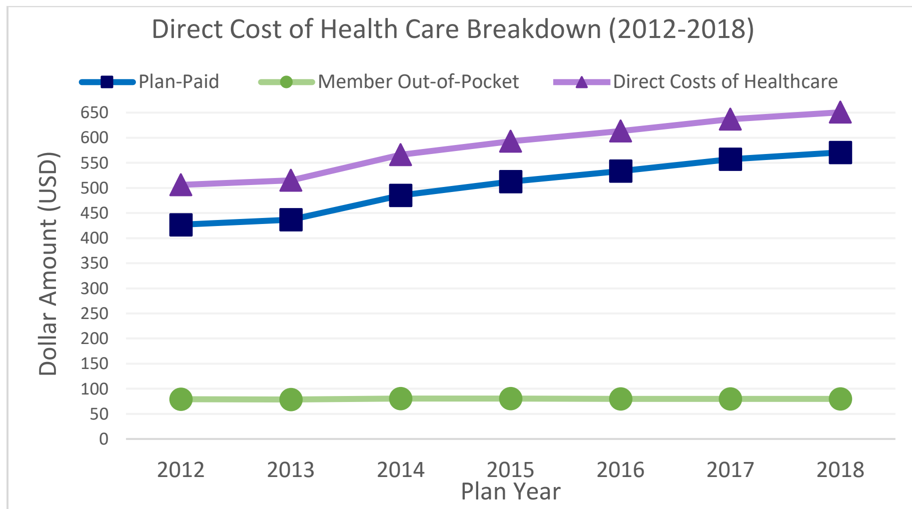
Plan Name	2012	2013	2014	2015	2016	2017	2018	2019	2020
PERSCare Basic	52	53	48	46	46	46	45	46	47
PERS Choice Basic	40	41	41	41	41	41	41	41	41
PERS Select Basic	33	33	33	33	33	34	33	33	32

5.5. PPO Basic Plans Medical and Pharmacy Trends from 2012 to 2018

Direct cost of health care is the total cost for services and products (after pharmacy rebates) required for providers to care for members; it does not include costs associated with third-party administrative fees (ASFs), CalPERS' administrative fees, and so forth. These costs are excluded because they are not directly incurred by providing care to members. More than 85% of direct medical and pharmacy costs for PPO members were covered by their health plan. The health care per-member-per-month (PMPM) costs of the total basic plans are reported in Graph 5a. The

direct cost of health care has increased on an annual basis. The amount that the plans cover on behalf of their members has increased with the direct cost of healthcare. This means that despite medical inflation, members continue to pay relatively stable out-of-pocket costs from year to year.

Graph 5a; Historical Direct Costs of Health Care, Plan-Paid, and Member Out-Of-Pocket PMPMs (2012-2018):



Note that the amount that members pay out-of-pocket for health care services has not changed significantly compared to the increase in the amount that plans pay out per member.

Table 5; Historical PMPM (USD) Trends for PERS Basic Plans (2013-2018):

Parameter	2013	2014	2015	2016	2017	2018
PERSCare PMPM	888.85	823.53	870.10	845.69	870.62	853.71
PERSCare Increase from Prior Year	7.2%	-7.3%	5.7%	-2.8%	2.9%	-1.9%
PERS Choice PMPM	459.14	494.06	503.60	532.22	561.15	575.03
PERS Choice Increase from Prior Year	6.5%	7.6%	1.9%	5.7%	5.4%	2.5%
PERS Select PMPM	260.88	279.34	302.52	326.34	335.27	339.77
PERS Select Increase from Prior Year	19.2%	7.1%	8.3%	7.9%	2.7%	1.3%

We present in this table the PMPM annual direct cost of all medical and pharmacy claims from 2012 to 2018. Additionally, we include the percentage increase in PMPM cost for each year relative to the prior year.

PERS Select's total PMPM costs increased sharply from 2012 to 2013 and stabilized to a mere 1.3% increase in 2018. Despite its increasing PMPM costs, PERS Select still boasts the lowest PMPMs among the PPO Basic plans. In 2018, PERSCare and PERS Choice PMPM costs were 151% and 69% greater than PERS Select PMPM costs respectively.

5.6. PPO Basic Plans' Health Care Cost Distributions

Most health care costs are incurred by a small portion of high-cost individuals. Health insurance mitigates the risk of high-cost claims by spreading this risk among a large population of health insurance subscribers. Table 6a identifies the fraction of medical expenses that were incurred by specific populations for each PPO Basic plan in 2018.

Table 6a; Health care Insurance Cost Distributions Among CalPERS PPO Basic Members in 2018:

Member Group	PERSCare Percentage of Total Plan Paid	PERSCare Plan Paid PMPM (USD)	PERS Choice Percentage of Total Plan Paid	PERS Choice Plan Paid PMPM (USD)	PERS Select Percentage of Total Plan Paid	PERS Select Plan Paid PMPM (USD)
Top 1%	31%	26,287	36%	21,171	42%	13,671
Top 5%	60%	10,153	64%	7,514	70%	4,606
Top 10%	74%	6,259	77%	4,471	82%	2,683
Top 15%	82%	4,610	83%	3,238	87%	1,920
Top 20%	87%	3,668	88%	2,556	91%	1,502
Top 50%	98%	1,673	98%	1,152	99%	663
Bottom 50%	2%	40	2%	25	1%	8
Overall	100%	913	100%	615	100%	360

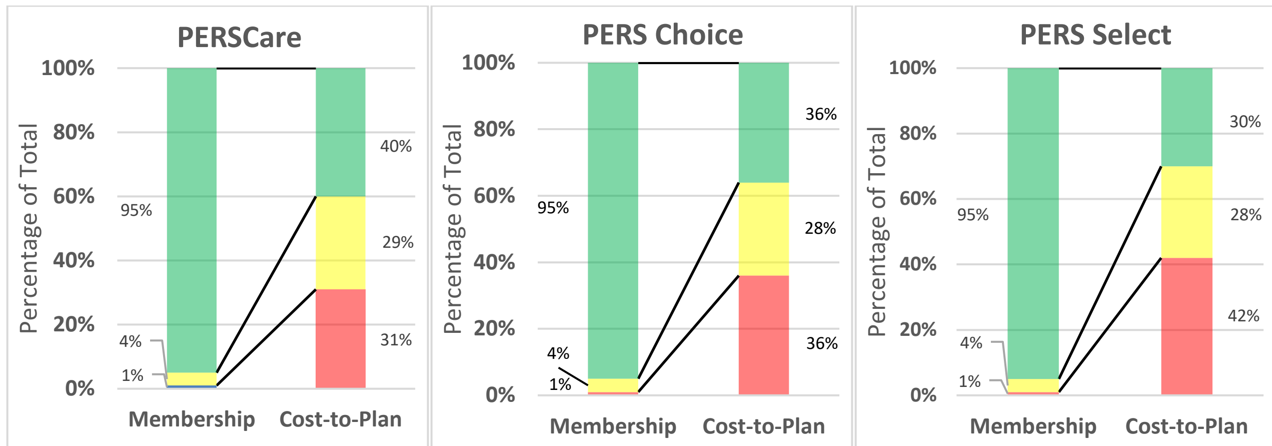
Ordering health care claims from most expensive to least expensive, the "Top 1%" represents members who are the top 1% most expensive spenders on a claims-basis, the "Top 5%" represents members who are the top 5% most expensive spenders, etc. The "Bottom 50%" category contains the 50% of members with the least expensive claims.

The top 1% of PERSCare members ranked by their health care expenditures accounted for $26,287 PMPM (or $315,444 per member per year) and made up 31% of the total health plan costs for all members. The top 5% of PERSCare members accounted for 60% of total health plan costs with an average PMPM cost of $10,153. These are individuals with chronic conditions such as Cancer, Osteoarthritis, Renal Function Failure, Diabetes, and other diseases.

At the other end of the spectrum, the 50% of members with the lowest costs accounted for only 2% of the total health plan spending. The data shows that the health care cost distributions for PERS Choice and PERS Select members more effectively offset high-cost claims. In particular, the top 5% of PERS Select members accounted for 70% of the plan's total costs, while the bottom 50% of the members accounted only for 1% of the total plan costs.

Health care cost distributions have implications in member premiums and premium projections. For example, the average costs of PERS Select are likely to increase significantly if a portion of the high spenders from PERSCare or PERS Choice migrate into PERS Select. Likewise, the average costs of PERSCare might decrease considerably if the plan enrolls a portion of low spenders from other plans.

Graph 6a-c; Percent of Total Costs Incurred by 1% and Next 4% Most Expensive Members by Plan:



These graphs indicate the portion of total claims that each plan pays out on behalf of the top 1% most costly members, the next 4% most costly members, and by the remaining 95% of members.

To see a more detailed view of each plan's condition, we rank each plan's members by highest plan-paid to lowest plan-paid amounts. In Table 6b, we see that 85% of members have lower-than-average claim costs, and we see that the other 15% of members have higher-than-average claim costs. The excess of the 85% least expensive members' premiums over their monthly cost-to-plan effectively subsidizes the excess of the 15% most expensive members' monthly cost-to-plan over their premiums.

Table 6b; Member Cost-to-Plan Percentiles for Each PERS PPO Basic Plan in 2018:

Percentile Rank	**PERSCare** Member Counts	**PERSCare** Average Plan Paid PMPM (USD)	**PERS Choice** Member Counts	**PERS Choice** Average Plan Paid PMPM (USD)	**PERS Select** Member Counts	**PERS Select** Average Plan Paid PMPM (USD)
99-100%	431	26,286.73	1,555	21,170.67	571	13,671.22
95-98%	1,740	6,154.59	6,343	4,166.22	2,280	2,336.07
90-94%	2,183	2,386.55	7,948	1,446.94	2,847	757.09
85-89%	2,173	1,305.16	7,941	779.37	2,834	386.75
80-84%	2,175	840.43	7,943	512.81	2,833	243.33
70-79%	4,341	507.54	15,780	318.39	5,613	144.41
40-69%	12,638	183.85	46,545	117.28	16,436	48.60
25-39%	5,997	47.00	22,572	29.86	7,794	9.47
20-24%	1,920	20.30	7,349	12.25	2,316	0.39
15-19%	1,844	11.05	7,073	5.19	2,138	-
0-14%	4,866	0.75	19,192	-	6,414	-
Total Member Counts	**40,309**		**150,241**		**52,074**	
Overall Average Plan Paid PMPM		**912.66**		**614.91**		**360.13**

5.7. Provider Network and Benefit Differentials Among PPO Basic Plans

5.7.1. Provider Network Differentials

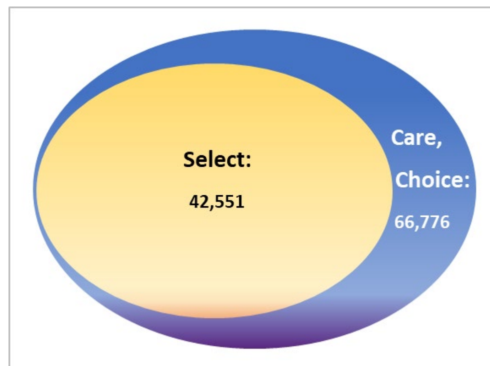
The provider network for a health plan is a list of physicians, hospitals, and other health care professionals that are contracted with said plan to provide medical care to its members. A health plan that has contracts with many doctors and hospitals is referred to as having a broad network while a health plan that contracts with fewer providers is referred to as having a narrow network.

All three PPO Basic plans' networks extend to every county in California. However, PERS Choice and PERSCare are on the same, broad Anthem network; and the PERS Select network is a smaller subset of this broad network. In other words, members who enroll in PERS Choice or PERSCare have more options for access to health care compared to members who enroll in PERS Select.

As shown in Table 7a, the overall PERS Choice and PERSCare network includes over 22,700 primary care physicians and over 44,000 specialists. The network for PERS Select is a subset of approximately 60% of this larger network. Except for a few Sutter and Mills hospitals not included in the PERS Select network, all three plans contract with the same hospitals.

Differentials between the PPO plans' concentrations of providers vary across the counties of California. At the high end, there are 12 counties in which PERS Select contains 90-100% of the same Primary Care Physicians as PERS Choice and PERSCare. At the low end, there are 9 counties in which PERS Select contains 30-40% of the same Primary Care Physicians as PERS Choice and PERSCare. The concentrations of providers in the rest of the counties in California vary. PERS Choice and PERSCare also have out-of-state coverage whereas PERS Select is for members in California only.

Graph 7; Number of Contracted Physicians and Specialists by PERS Basic Plan:



The shapes are scaled according to number of providers. Note: this proportion is for the state-wide average; the number of Select providers proportional to Care/Choice providers vary by county.

Table 7a; PPO Basic Plan Provider Network Differentials by Physicians and Specialists Count:

Provider Type	PERS Select (Narrow Network)	PERS Choice/ PERSCare (Broad Network)	Percentage of Broad Network in Narrow Network
Primary Care Physicians	13,718	22,759	60%
Specialists	28,833	44,017	66%
Total	**42,551**	**66,776**	**64%**

Tabulated are the breakdown of individual providers into Primary Care Physicians (PCP) and Specialists (SPC) counts for both the PERS Select network and the PERSCare and PERS Choice network. Also shown is the percentage of providers from the broader network that also contract with the narrower network.

5.7.2. Benefits Differentials

The three PPO Basic plans offer the same, comprehensive health care coverage with traditional health insurance benefit designs. Members are responsible for paying copays, an annual deductible, and coinsurance when receiving health care services. When comparing benefits among the PPO health plans, a plan with richer benefits would require members to pay less out-of-pocket costs when receiving health care compared to members who enroll in a plan with leaner benefits.

All PPO Basic plans have the same pharmacy benefits and pharmacy out-of-pocket costs but vary with medical benefits. PERSCare has the richest benefit design among all three plans, and PERS Choice and PERS Select were designed with the same, leaner benefit design. PERS Select has a value-based insurance design (VBID) with easy-to-fulfill incentives to reduce the annual deductible from $1,000 to $500 for a single person and the annual deductible from $2,000 to $1,000 for a family. Considering the reductions available to PERS Select members, all three plans have an annual deductible of $500 for a single person or $1,000 for a family. The main differences between these plans comes from the coinsurance percentage and coinsurance maximum.

After satisfying the deductible, PERS Select and PERS Choice members are responsible for 10% more of their in-network medical costs than PERSCare members. Additionally, PERS Select and PERS Choice members must pay a maximum of either $1000 or $2000 more than PERSCare members, for a single person or family respectively, on coinsurance before the plan covers 100% of any subsequent medical costs. Lastly, for skilled nursing facility and home health care services, the PERSCare plan covers a greater portion of costs over an even longer period than the PERS Select or PERS Choice plans. Refer to Table 7b for specific details on each plan's benefit design.

Table 7b; PPO Basic Plan Medical Benefit Comparison:

Benefit Category	PERSCare Benefit Design	PERS Choice and PERS Select Benefit Design
PCP Copay	$20	$20*
SPC Copay	$35	$35
Single-Party Deductible	$500	$500**
Family Deductible	$1,000	$1,000**
In-Network Coinsurance	10%	20%
Out-of-Network Coinsurance	40%	40%
Single-Party Coinsurance Max	$2,000	$3,000
Family Coinsurance Max	$4,000	$6,000
Hospital Admission Deductible	$250 per inpatient admission which does not apply to annual deductible	None
Skilled Nursing Facility	Covers 90% allowable amount for first 10 days and 80% allowable amount for the following 170 days	Covers 80% allowable amount for first 10 days and 70% allowable amount for the following 90 days
Durable Medical Equipment	Requires precertification if it costs more than $1,000	Requires precertification
Home Health Care	Covers up to 100 visits per year	Covers up to 45 visits per year

In this table, we present the benefit designs of all three PPO Basic plans. Note that PERS Choice and PERS Select share a benefit design, and PERSCare is designed with the richest benefits among all three plans. PERS Select's VBID offers incentives to (*) reduce PCP copay from $20 to $10 and to (**) lower the annual deductible from $1,000 to $500 for a single person and from $2,000 to $1,000 for Family.

5.8. Impacts of Adverse Selection on PPO Premiums

The differences between the amount of benefits offered and the size of the provider network among plans has an impact on the value of each plan. A plan with a large network of providers is seen as valuable because members have more choices when getting health care services. Additionally, a plan with a rich benefit design yields lower out-of-pocket costs to members and is therefore seen as valuable. Using these ideas, we can determine the relative value of each of the three PPO Basic plans by comparing purely their network and benefit differentials. In Table 8a, we present the value of each plan based purely on their coverages (networks and benefit design). This represents each plan's value when compared to the average value of all three plans combined. Additionally, Table 8a emphasizes the key variables that impact those calculations and indicate the tier level for each PPO Basic plan, where the "High"-tiered plan is interpreted as the most valuable.

Table 8a; PERS PPO Basic Plan Network and Benefit Differential:

Plan Name	Broad Network	Richest Benefit Design	PERS Tier	Relative Value of Plan to PERS Product Average	2020 Single-Party Premium Based Purely on Coverage
PERSCare	✓	✓	High	+ 7%	$788
PERS Choice	✓	×	Middle	+ 2%	$748
PERS Select	×	×	Low	- 8%	$677

In this table, we present the calculated, relative value of each PPO Basic plan based on the average value of all plans. PERSCare is 7% more valuable than the average, PERS Choice is valued at 2% more than the average, and PERS Select is valued at 8% less than the average. Additionally, we present what would have been the 2020 single-party premium based on provider network and benefit differentials between plans; note that these were not the actual 2020 published premiums.

The PPO plans were designed to offer members a choice between different tiers, each at different-valued costs to members. The green bars in Graph 8 below represent the premium costs if they were based purely on network and benefit differentials. The red bars indicate the actual published single-party premiums for 2020, which represent actual costs as incurred due to the average risk level of each plan's population. It is clear from the graph that these two numbers are greatly misaligned for the PERSCare and PERS Select plans. This discrepancy is a result of adverse selection. In the context of health insurance, adverse selection is a condition in which the aggregate of all members' choice of plan drives premium changes among plans. Those members with the highest medical needs choose the high-tiered plan while those with the lowest medical needs choose the low-tiered plan, causing the disparity between the calculated green bars and the actual red bars in Graph 8. This is the set of conditions in which adverse-selection takes place.

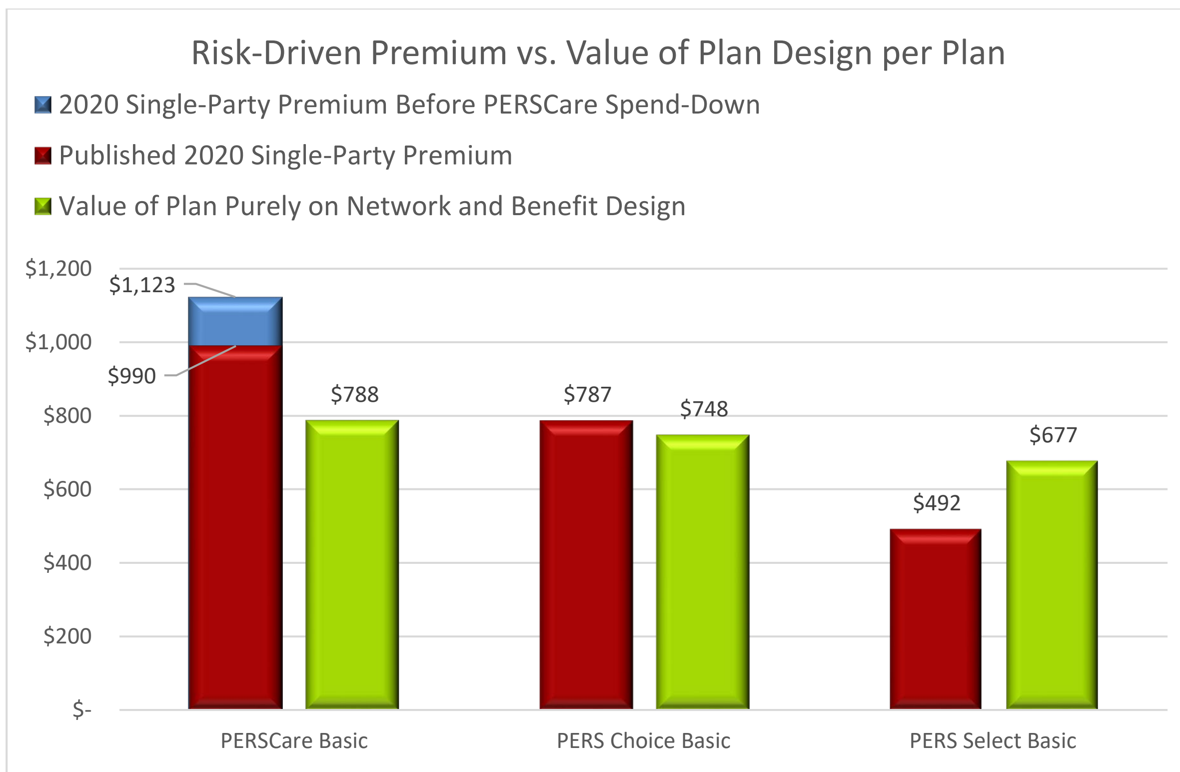
The impact of these trends is that the health plan cost (the total amount the plan pays to providers on behalf of members) for PERSCare increases because more of the members under this plan use its services; and, the health plan cost for PERS Select decreases because fewer members in the plan require utilizing the plan's services. Since the health plan costs are funded through premiums collected from members and their employers, any change in the health plan costs are then reflected in a change to premiums. Hence, we see in Table 8b that PERSCare has a disparity of $202 between the actual premium and the pure value of the plan to account for the additional cost generated by the high-utilization of the PERSCare members, and a disparity of $185 below pure value for PERS Select, driven by the low-utilizations of the PERS Select population. Since PERS Choice is in between these two plans, it contains members with varying medical needs, published premium is just over 5% of the pure value of the product.

Table 8b; Adverse Selection Impact on 2020 Single-Party Premiums:

Plan Name	2020 Published Single-Party Premium (USD)	Value Based on Network and Benefits (USD)	Dollar Difference	Percentage Difference
PERSCare	990*	788	202	25.6%
PERS Choice	787	748	39	5.2%
PERS Select	492	677	-185	-27.3%

In this table, we present the published, single-party 2020 premiums for each plan adjacent to the value of each plan calculated solely based on provider network and benefit design. These numbers indicate adverse selection among member populations. Note: (*) the 2020 PERSCare Premium includes the premium spend-down.

Graph 8; Adverse Selection Impact on 2020 Single-Party Premiums:



In this graph, we visually present the data tabulated in Table 8b to emphasize the scale of the premium impacts adverse selection had on 2020 premiums. Also note that without the 2020 PERSCare spend-down, the 2020 Single-Party premium for Care would have been dramatically greater than the value of the plan based on its network and benefit design alone.

6. Limitations

As stated in the section regarding data collection, these analyses were conducted using my|CalPERS and HCDSS data. Any incompleteness or errors in the data from either source may have influenced these findings. At request, this report can be updated with new, emerging data and adjusted assumptions.

Preferred Provider Organization Health Plan Assessment

Phase I Report

April 21, 2020