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WI ETF ROI Analysis, Analysis Year 2024

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1 Descriptive Results

Results of data before matching

Descriptive Statistics by Group		
Baseline Year 2021, Pre-Match		
Characteristic	Study Group N = 26,369 [†]	Control Group N = 36,840 [†]
Gender		
Male	11,469 (43%)	19,222 (52%)
Female	14,900 (57%)	17,618 (48%)
Age		
Mean (SD)	44 (11)	49 (14)
Median (Q1, Q3)	43 (35, 52)	49 (39, 58)
Relationship		
Employee/Self	17,486 (66%)	23,243 (63%)
Spouse/Partner	8,883 (34%)	13,597 (37%)
Health Plan Type		
[†] n (%)		

Descriptive Statistics by Group

Baseline Year 2021, Pre-Match

Characteristic	Study Group N = 26,369 [†]	Control Group N = 36,840 [†]
IYC Health	20,465 (78%)	28,695 (78%)
IYC HDHP	5,016 (19%)	2,933 (8.0%)
IYC Medicare	691 (2.6%)	4,101 (11%)
Medicare Plus	67 (0.3%)	700 (1.9%)
Access HDHP Plan	36 (0.1%)	92 (0.2%)
Access Plan	94 (0.4%)	319 (0.9%)
Health Plan Type (IYC vs. all other)		
IYC Health	20,465 (78%)	28,695 (78%)
Other	5,904 (22%)	8,145 (22%)
Medicare	767 (2.9%)	4,814 (13%)
Social Vulnerability Index Percentile		
Mean (SD)	16 (1,066)	13 (1,275)
Median (Q1, Q3)	23 (11, 41)	25 (12, 44)
Relative Risk Score		
Mean (SD)	92 (155)	110 (211)
Median (Q1, Q3)	40 (16, 99)	42 (16, 113)
Relative Risk Category		
Healthy	10,938 (41%)	15,305 (42%)
Stable	7,592 (29%)	9,518 (26%)
At Risk	4,453 (17%)	6,485 (18%)
Struggling	3,087 (12%)	4,700 (13%)
[†] n (%)		

Descriptive Statistics by Group

Baseline Year 2021, Pre-Match

Characteristic	Study Group	Control Group
	N = 26,369 ¹	N = 36,840 ¹
In Crisis	299 (1.1%)	832 (2.3%)
Any Preventative Visit	12,207 (46%)	13,328 (36%)
Covid-19 Dx	1,041 (3.9%)	1,381 (3.7%)
¹ n (%)		

Standardized Differences

Covariate Balance Summary, Pre-Match

Standardized Mean Differences, Variance Ratios, and KS Statistics

Characteristic	Std. Mean Diff (Unmatched)	Variance Ratio (Unmatched)	KS Statistic (Unmatched) ¹
Gender: Female	0.18	NA	0.09
Age (years)	0.50	1.60	0.17
Relationship: Spouse/Partner	0.07	NA	0.03
Health Plan: IYC Health	0.01	NA	0.00
Health Plan: IYC HDHP	0.28	NA	0.11
Health Plan: Medicare	0.53	NA	0.09
Health Plan: Medicare Plus	0.33	NA	0.02
Health Plan: Access HDHP Plan	0.03	NA	0.00
Health Plan: Access	0.09	NA	0.01

¹ KS = Kolmogorov-Smirnov statistic, measuring the maximum difference between cumulative distributions.

Covariate Balance Summary, Pre-Match

Standardized Mean Differences, Variance Ratios, and KS Statistics

Characteristic	Std. Mean Diff (Unmatched)	Variance Ratio (Unmatched)	KS Statistic (Unmatched) ⁷
Health Plan: IYC vs. Other	0.01	NA	0.00
Medicare: Yes	0.60	NA	0.10
SVI Percentile	0.00	1.43	0.04
Relative Risk Score	0.12	1.86	0.03
Relative Risk: Healthy	0.00	NA	0.00
Relative Risk: Stable	0.07	NA	0.03
Relative Risk: At Risk	0.02	NA	0.01
Relative Risk: Struggling	0.03	NA	0.01
Relative Risk: In Crisis	0.11	NA	0.01
Any preventative visits	0.20	NA	0.10
Covid DX	0.01	NA	0.00

⁷ KS = Kolmogorov-Smirnov statistic, measuring the maximum difference between cumulative distributions.

2 Matching Process

Initial model for propensity score is was estimated using logistic regression. Study participants and controls were matched using greedy nearest neighbor with caliper of 0.2 on standard logit propensity score scale. This is resulted in considerable data loss in study participants. Caliper was widened gradually up to 0.4. While more participants were retained, sufficient balance was lost on age and health plan.

New model involves estimating propensity score using a generalized method of moments estimation framework, aptly named “Covariate Balancing Propensity Score, CBPS”. This method aims to optimize prediction of group assignment and covariate balancing conditions. With the updated propensity score, study participants were matched using greedy nearest neighbor matching.

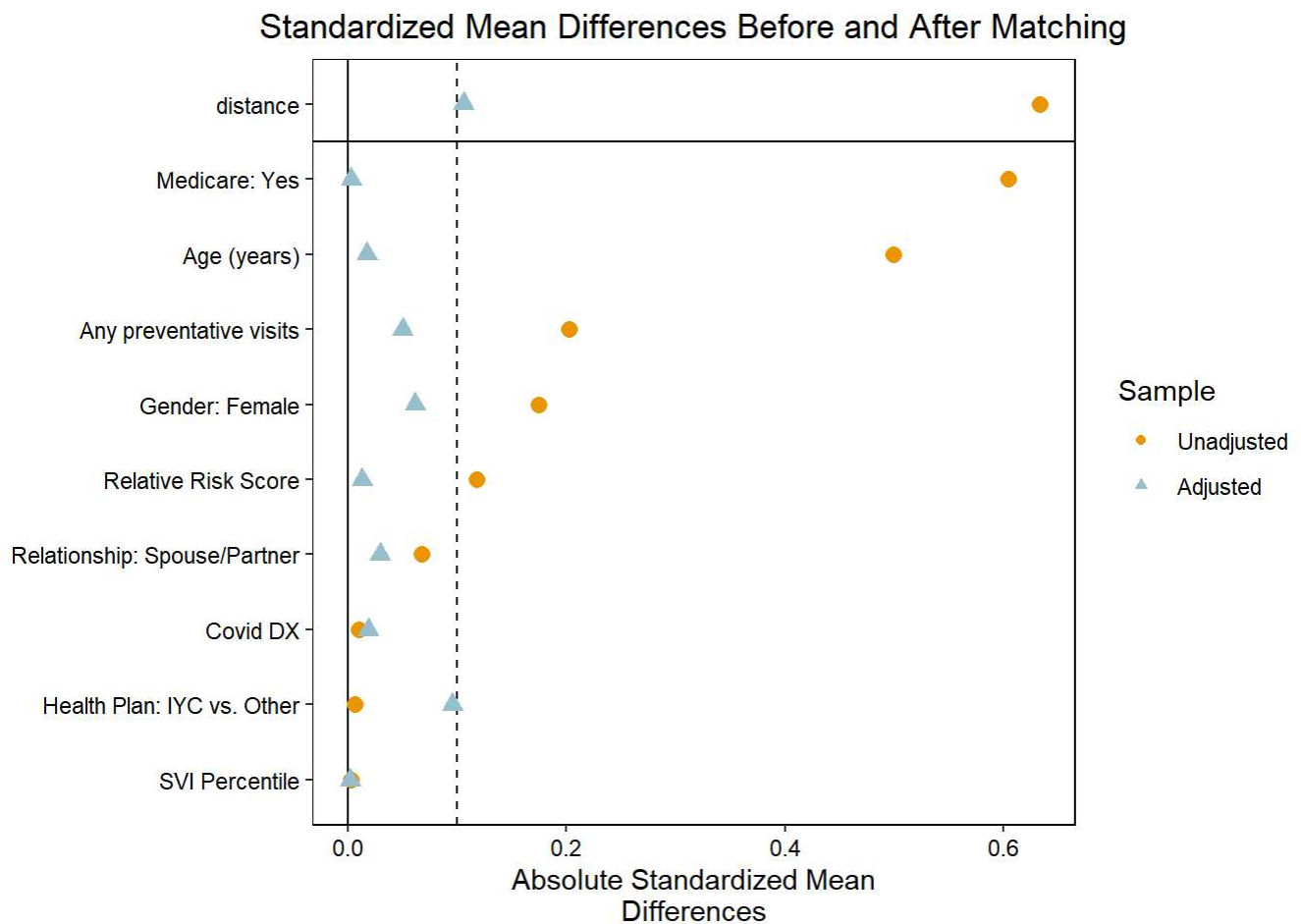
Sample Sizes by Matching Status

Sample Type	Study Group	Control Group
All	26,369	36,840
Matched	25,311	25,311
Unmatched	1,058	11,529

Covariate Balance Before and After Matching

Characteristic	Std. Mean Diff (Unmatched)	Variance Ratio (Unmatched)	KS Statistic (Unmatched) ¹	Std. Mean Diff (Matched)	Variance Ratio (Matched)	KS Statistic (Matched)
Age (years)	0.50	1.60	0.17	0.02	1.10	0.02
Gender: Female	0.18	NA	0.09	0.06	NA	0.03
Relationship: Spouse/Partner	0.07	NA	0.03	0.03	NA	0.01
Health Plan: IYC vs. Other	0.01	NA	0.00	0.10	NA	0.04
Medicare: Yes	0.60	NA	0.10	0.00	NA	0.00
Any preventative visits	0.20	NA	0.10	0.05	NA	0.03
Relative Risk Score	0.12	1.86	0.03	0.01	1.03	0.02
SVI Percentile	0.00	1.43	0.04	0.00	1.33	0.03
Covid DX	0.01	NA	0.00	0.02	NA	0.00

¹ KS = Kolmogorov-Smirnov statistic, measuring the maximum difference between cumulative distributions.



3 Matched Data Characteristics

Descriptive Statistics by Group

Baseline Year 2021, Post-Match

Characteristic	Study Group N = 25,311 [†]	Control Group N = 25,311 [†]
Gender		
Male	11,202 (44%)	11,976 (47%)
Female	14,109 (56%)	13,335 (53%)
Age		
Mean (SD)	44 (11)	44 (11)
Median (Q1, Q3)	43 (36, 52)	44 (36, 53)
[†] n (%)		

Descriptive Statistics by Group

Baseline Year 2021, Post-Match

Characteristic	Study Group N = 25,311 [†]	Control Group N = 25,311 [†]
Relationship		
Employee/Self	16,656 (66%)	16,300 (64%)
Spouse/Partner	8,655 (34%)	9,011 (36%)
Health Plan Type		
IYC Health	20,243 (80%)	21,253 (84%)
IYC HDHP	4,196 (17%)	2,907 (11%)
IYC Medicare	691 (2.7%)	663 (2.6%)
Medicare Plus	67 (0.3%)	87 (0.3%)
Access HDHP Plan	31 (0.1%)	90 (0.4%)
Access Plan	83 (0.3%)	311 (1.2%)
Health Plan Type (IYC vs. all other)		
IYC Health	20,243 (80%)	21,253 (84%)
Other	5,068 (20%)	4,058 (16%)
Medicare	767 (3.0%)	753 (3.0%)
Social Vulnerability Index Percentile		
Mean (SD)	16 (1,088)	13 (1,256)
Median (Q1, Q3)	23 (11, 41)	24 (12, 43)
Relative Risk Score		
Mean (SD)	92 (156)	90 (154)
Median (Q1, Q3)	40 (16, 99)	38 (14, 95)
Relative Risk Category		
[†] n (%)		

Descriptive Statistics by Group

Baseline Year 2021, Post-Match

Characteristic	Study Group N = 25,311 ¹	Control Group N = 25,311 ¹
Healthy	10,501 (41%)	10,997 (43%)
Stable	7,272 (29%)	7,001 (28%)
At Risk	4,308 (17%)	4,196 (17%)
Struggling	2,938 (12%)	2,825 (11%)
In Crisis	292 (1.2%)	292 (1.2%)
Any Preventative Visit	11,452 (45%)	10,815 (43%)
Covid-19 Dx	1,017 (4.0%)	923 (3.6%)
¹ n (%)		

4 Program Year 2024: ROI

4.1 Allowed Amounts

Allowed Amount ROI Calculation			
	Study Group	Control Group	Formula ID
Program Year 2024			
Members	25,311	25,311	B
Relevant Exposure (Member Months)	303,732	303,732	C
Total Allowed Spend (Medical + Rx)	\$197,649,789	\$187,324,707	D
Total Allowed PMPM (Medical + Rx)	\$650.74	\$616.74	E
Baseline Year 2021			
Total Exposure	303,732	303,732	F
Total Allowed Spend (Medical + Rx)	\$153,295,266	\$144,685,137	G
Total Allowed PMPM (Medical + Rx)	\$504.71	\$476.36	H

Allowed Amount ROI Calculation			
	Study Group	Control Group	Formula ID
Trend			
Total Allowed Spend PMPM	28.934%	29.471%	I
Financial Impact			
Target Total Allowed Spend PMPM	\$653.45	NA	J
PMPM Impact/(Savings)	\$2.71	NA	K
Program Impact/(Savings)	\$822,503	NA	L
Program Cost PMPM	\$3.52	NA	M
Incentives Paid PMPM	\$12.50	NA	N
Total program costs excluding incentives	\$1,069,896	NA	O
Total program costs including incentives	\$4,866,546	NA	P
ROI (excluding paid incentives)	0.769	NA	Q
ROI (overall)	0.169	NA	R

4.2 Net Payments

Net Pay ROI Calculation			
	Study Group	Control Group	Formula ID
Program Year 2024			
Members	25,311	25,311	B
Relevant Exposure (Member Months)	303,732	303,732	C
Total Net Payments Spend (Medical + Rx)	\$175,397,960	\$165,652,361	D
Total Net Payments PMPM (Medical + Rx)	\$577.48	\$545.39	E
Baseline Year 2021			
Total Exposure	303,732	303,732	F
Total Net Payments Spend (Medical + Rx)	\$136,727,836	\$128,754,288	G
Total Net Payments PMPM (Medical + Rx)	\$450.16	\$423.91	H
Trend			

Net Pay ROI Calculation

	Study Group	Control Group	Formula ID
Total Net Payments PMPM	28.283%	28.658%	I
Financial Impact			
Target Total Net Pay PMPM	\$579.17	NA	J
PMPM Impact/(Savings)	\$1.69	NA	K
Program Impact/(Savings)	\$512,989	NA	L
Program Cost PMPM	\$3.52	NA	M
Incentives Paid PMPM	\$12.50	NA	N
Total program costs excluding incentives	\$1,069,896	NA	O
Total program costs including incentives	\$4,866,546	NA	P
ROI (excluding paid incentives)	0.479	NA	Q
ROI (overall)	0.105	NA	R