

**Analysis of covariance of utilization and cost outcome between treatment and control groups with
baseline outcome adjusted**

					Control	Treatment	Diff.	p	Diff. %
Total	Self-directed	Penetration	Y1	.930	.971	.040	.000	4.3%	
		Rate	Y2	.910	.936	.027	.012	2.9%	
		PMPM	Y1	\$1,724	\$1,482	-\$243	.118	-14.1%	
		Expenditure	Y2	\$1,890	\$1,391	-\$498	.020	-26.4%	
	Provider-supported	Penetration	Y1	.903	.964	.061	.000	6.8%	
		Rate	Y2	.885	.927	.042	.000	4.7%	
		PMPM	Y1	\$1,613	\$1,484	-\$129	.299	-8.0%	
		Expenditure	Y2	\$1,635	\$1,391	-\$244	.011	-14.9%	
General medical	Self-directed	Penetration	Y1	.530	.731	.201	.000	38.0%	
		Rate	Y2	.539	.695	.156	.000	29.0%	
		PMPM	Y1	\$611	\$552	-\$58	.536	-9.5%	
		Expenditure	Y2	\$695	\$540	-\$155	.036	-22.2%	
	Provider-supported	Penetration	Y1	.498	.761	.263	.000	52.9%	
		Rate	Y2	.510	.728	.218	.000	42.8%	
		PMPM	Y1	\$634	\$559	-\$75	.295	-11.8%	
		Expenditure	Y2	\$616	\$601	-\$15	.766	-2.4%	
Behavioral health (BH)	Self-directed	Penetration	Y1	.787	.931	.144	.000	18.2%	
		Rate	Y2	.744	.856	.112	.000	15.0%	
		PMPM	Y1	\$833	\$699	-\$134	.079	-16.1%	
		Expenditure	Y2	\$894	\$631	-\$263	.170	-29.4%	
	Provider-supported	Penetration	Y1	.769	.910	.141	.000	18.4%	
		Rate	Y2	.720	.819	.098	.000	13.7%	
		PMPM	Y1	\$767	\$669	-\$98	.352	-12.7%	
		Expenditure	Y2	\$758	\$546	-\$212	.010	-28.0%	
Pharmacy	Self-directed	Penetration	Y1	.752	.583	-.169	.000	-22.5%	
		Rate	Y2	.749	.557	-.192	.000	-25.7%	
		PMPM	Y1	\$258	\$218	-\$40	.250	-15.3%	
		Expenditure	Y2	\$272	\$209	-\$63	.000	-23.1%	
	Provider-supported	Penetration	Y1	.713	.536	-.178	.000	-24.9%	
		Rate	Y2	.721	.502	-.219	.000	-30.4%	
		PMPM	Y1	\$226	\$268	\$42	.016	18.7%	
		Expenditure	Y2	\$270	\$256	-\$15	.766	-5.4%	
Inpatient	Self-directed	Penetration	Y1	.038	.032	-.006	.142	-15.0%	
		Rate	Y2	.040	.027	-.014	.000	-34.2%	
		PMPM	Y1	\$321	\$320	-\$1	.983	-0.4%	
		Expenditure	Y2	\$430	\$241	-\$189	.035	-43.9%	
	Provider-supported	Penetration	Y1	.031	.024	-.008	.174	-24.1%	

		Rate	Y2	.031	.020	-.011	.000	-36.3%
		PMPM	Y1	\$295	\$214	-\$81	.338	-27.5%
		Expenditure	Y2	\$287	\$221	-\$66	.018	-23.0%
Medical inpatient	Self-directed	Penetration	Y1	.018	.032	.014	.000	74.7%
		Rate	Y2	.021	.025	.004	.142	18.6%
		PMPM	Y1	\$154	\$224	\$70	.108	45.8%
		Expenditure	Y2	\$197	\$183	-\$14	.700	-7.3%
	Provider-supported	Penetration	Y1	.015	.022	.007	.161	49.9%
		Rate	Y2	.013	.017	.004	.083	33.0%
		PMPM	Y1	\$160	\$161	\$1	.984	0.6%
		Expenditure	Y2	\$123	\$139	\$16	.533	12.8%
Inpatient BH	Self-directed	Penetration	Y1	.022	.022	.000	.992	0.2%
		Rate	Y2	.022	.016	-.006	.111	-28.8%
		PMPM	Y1	\$167	\$99	-\$68	.026	-40.7%
		Expenditure	Y2	\$233	\$61	-\$172	.054	-73.8%
	Provider-supported	Penetration	Y1	.016	.011	-.005	.170	-29.8%
		Rate	Y2	.018	.011	-.008	.000	-41.4%
		PMPM	Y1	\$133	\$54	-\$79	.035	-59.1%
		Expenditure	Y2	\$161	\$82	-\$79	.005	-48.9%
Emergency room^a	Self-directed	Penetration	Y1	.127	.161	.034	.000	26.7%
		Rate	Y2	.141	.150	.009	.504	6.5%
		PMPM	Y1	\$78	\$44	-\$34	.000	-43.2%
		Expenditure	Y2	\$96	\$47	-\$49	.000	-51.0%
	Provider-supported	Penetration	Y1	.117	.127	.010	.532	8.2%
		Rate	Y2	.116	.127	.011	.420	9.6%
		PMPM	Y1	\$73	\$45	-\$28	.000	-38.7%
		Expenditure	Y2	\$79	\$44	-\$35	.000	-44.4%
Total case management	Self-directed	Penetration	Y1	.564	.755	.191	.001	33.9%
		Rate	Y2	.532	.654	.122	.067	23.0%
		PMPM	Y1	\$177	\$236	\$59	.012	33.3%
		Expenditure	Y2	\$171	\$217	\$45	.058	26.4%
	Provider-supported	Penetration	Y1	.576	.714	.137	.002	23.9%
		Rate	Y2	.532	.576	.044	.490	8.3%
		PMPM	Y1	\$173	\$194	\$20	.172	11.8%
		Expenditure	Y2	\$165	\$137	-\$28	.041	-16.9%

^a Matched cohort is not comparable to intervention groups for ER analysis and results thus are not applicable.

The year 1 medical inpatient utilization rate coefficient (+75%**) for the self-directed

approach is the result of an anomalous drop in the year 1 comparison cohort group medical inpatient utilization. In Year 2, the comparison cohort penetration rate returned to a level close to its baseline year value, while the self-directed cohort continued to drop. By year 2, the self-directed cohort medical inpatient utilization fell by 34% relative to its baseline year level, while its matched cohort dropped by 11% over the same period; however, this difference was not statistically significant.

Difference in utilization and costs over time within treatment and control arms

				Baseline	Year 1	Year 2	Year 1 - baseline	Year 2 - baseline
Total cost	Self-directed	Penetration Rate	Est.	0.965	0.974	0.936	0.008	-0.029
			p				0.066	0.000
			Diff. %				0.9%	-3.0%
		PMPM Expenditure	Est.	\$2,144	\$2,186	\$1,969	\$42	-\$175
			p				0.579	0.023
		Diff. %				2.0%	-8.2%	
	Provider-supported	Penetration Rate	Est.	0.968	0.965	0.925	-0.003	-0.043
			p				0.373	0.000
			Diff. %				-0.3%	-4.4%
		PMPM Expenditure	Est.	\$2,060	\$2,072	\$1,810	\$12	-\$251
p						0.838	0.000	
	Diff. %				0.6%	-12.2%		
General medical	Self-directed	Penetration Rate	Est.	0.648	0.746	0.704	0.098	0.056
			p				0.000	0.000
			Diff. %				15.1%	8.6%
		PMPM Expenditure	Est.	\$652	\$618	\$596	-\$34	-\$56
			p				0.530	0.318
		Diff. %				-5.2%	-8.5%	
	Provider-supported	Penetration Rate	Est.	0.617	0.756	0.719	0.138	0.101
			p				0.000	0.000
			Diff. %				22.4%	16.4%
		PMPM Expenditure	Est.	\$500	\$497	\$544	-\$3	\$44
p						0.935	0.247	
	Diff. %				-0.6%	8.9%		
Behavioral health (BH)	Self-directed	Penetration Rate	Est.	0.891	0.932	0.850	0.042	-0.041
			p				0.000	0.000

			Diff. %				4.7%	-4.6%
			Est.	\$1,268	\$1,333	\$1,146	\$65	-\$122
		PMPM Expenditure	p				0.154	0.009
			Diff. %				5.1%	-9.6%
	Provider-supported							
		Penetration Rate	Est.	0.922	0.912	0.820	-0.010	-0.103
			p				0.088	0.000
			Diff. %				-1.0%	-11.1%
			Est.	\$1,375	\$1,326	\$1,030	-\$50	-\$346
		PMPM Expenditure	p				0.183	0.000
			Diff. %				-3.6%	-25.1%
Pharmacy	Self-directed							
		Penetration Rate	Est.	0.599	0.578	0.551	-0.021	-0.048
			p				0.009	0.000
			Diff. %				-3.5%	-8.0%
			Est.	\$225	\$236	\$226	\$11	\$2
		PMPM Expenditure	p				0.426	0.899
			Diff. %				5.0%	0.8%
	Provider-supported							
		Penetration Rate	Est.	0.549	0.507	0.477	-0.041	-0.071
			p				0.000	0.000
			Diff. %				-7.5%	-13.0%
			Est.	\$185	\$250	\$236	\$65	\$50
		PMPM Expenditure	p				0.000	0.004
			Diff. %				34.8%	27.2%
Inpatient	Self-directed							
		Penetration Rate	Est.	0.039	0.034	0.028	-0.005	-0.011
			p				0.281	0.018
			Diff. %				-12.5%	-28.1%
			Est.	\$369	\$354	\$272	-\$15	-\$97
		PMPM Expenditure	p				0.790	0.088
			Diff. %				-4.0%	-26.2%
	Provider-supported							
		Penetration Rate	Est.	0.028	0.023	0.019	-0.004	-0.009
			p				0.185	0.010
			Diff. %				-16.2%	-32.3%

			Est.	\$213	\$203	\$206	-\$10	-\$7
		PMPM Expenditure	p				0.802	0.867
			Diff. %				-4.8%	-3.3%
Medical inpatient	Self-directed	Penetration Rate	Est.	0.038	0.034	0.026	-0.004	-0.012
			p				0.302	0.002
			Diff. %				-10.4%	-31.8%
		PMPM Expenditure	Est.	\$246	\$244	\$201	-\$2	-\$45
			p				0.952	0.241
			Diff. %				-0.9%	-18.3%
	Provider-supported	Penetration Rate	Est.	0.025	0.022	0.017	-0.003	-0.008
			p				0.187	0.002
			Diff. %				-13.4%	-32.3%
		PMPM Expenditure	Est.	\$161	\$160	\$142	-\$1	-\$20
			p				0.957	0.438
			Diff. %				-0.8%	-12.2%
Inpatient BH	Self-directed	Penetration Rate	Est.	0.027	0.022	0.016	-0.005	-0.011
			p				0.174	0.003
			Diff. %				-17.9%	-39.8%
		PMPM Expenditure	Est.	\$123	\$110	\$71	-\$12	-\$52
			p				0.725	0.156
			Diff. %				-10.2%	-42.0%
	Provider-supported	Penetration Rate	Est.	0.014	0.011	0.009	-0.003	-0.005
			p				0.194	0.085
			Diff. %				-24.3%	-32.8%
		PMPM Expenditure	Est.	\$52	\$43	\$64	-\$9	\$13
			p				0.768	0.677
			Diff. %				-17.1%	24.7%
Emergency room	Self-directed	Penetration Rate	Est.	0.164	0.150	0.141	-0.014	-0.024
			p				0.075	0.004
			Diff. %				-8.6%	-14.4%
		PMPM	Est.	\$42	\$36	\$39	-\$7	-\$3

		Expenditure				0.432	0.727	
			p					
			Diff. %			-15.5%	-7.1%	
	Provider-supported							
		Penetration Rate	Est.	0.114	0.108	0.107	-0.006	-0.006
			p					
			Diff. %					
			Est.	\$29	\$30	\$29	\$1	\$0
		PMPM Expenditure	p					
			Diff. %					
						0.849	0.934	
						2.9%	-1.3%	
Total case management	Self-directed							
		Penetration Rate	Est.	0.686	0.763	0.657	0.078	-0.028
			p					
			Diff. %					
			Est.	\$272	\$350	\$312	\$78	\$40
		PMPM Expenditure	p					
			Diff. %					
						0.000	0.002	
						11.4%	-4.1%	
						0.000	0.000	
						28.8%	14.8%	
	Provider-Supported							
		Penetration Rate	Est.	0.731	0.728	0.592	-0.004	-0.139
			p					
			Diff. %					
			Est.	\$297	\$306	\$222	\$9	-\$75
		PMPM Expenditure	p					
			Diff. %					
						0.045	0.000	
						3.2%	-25.4%	

PMPM = per-member-per-month cost

Analysis of covariance of utilization and costs between self-directed and provider-supported cohorts adjusting for baseline outcome

			Self-directed	Provider-supported	Diff.	p	Diff. %
Total	Penetration	Y1	.971	.965	-.005	.532	-0.6%
	Rate	Y2	.936	.929	-.006	.564	-0.7%
	PMPM	Y1	\$2,223	\$2,100	-\$123	.497	-5.5%
	Expenditure	Y2	\$2,031	\$1,838	-\$193	.128	-9.5%
General medical	Penetration	Y1	.732	.762	.030	.096	4.1%
	Rate	Y2	.689	.725	.036	.156	5.3%
	PMPM	Y1	\$634	\$529	-\$105	.160	-16.6%
	Expenditure	Y2	\$600	\$544	-\$56	.327	-9.3%
Behavioral health (BH)	Penetration	Y1	.934	.910	-.023	.153	-2.5%
	Rate	Y2	.862	.820	-.042	.146	-4.9%
	PMPM	Y1	\$1,348	\$1,327	-\$21	.864	-1.6%
	Expenditure	Y2	\$1,206	nh\$1,059	-\$147	.167	-12.2%
Pharmacy	Penetration	Y1	.559	.520	-.039	.333	-7.0%
	Rate	Y2	.533	.490	-.043	.360	-8.0%
	PMPM	Y1	\$449	\$556	\$108	.037	24.0%
	Expenditure	Y2	\$452	\$551	\$100	.207	22.0%
Inpatient	Penetration	Y1	.032	.026	-.006	.212	-19.8%
	Rate	Y2	.027	.021	-.006	.032	-23.3%
	PMPM	Y1	\$322	\$228	-\$94	.108	-29.2%
	Expenditure	Y2	\$281	\$219	-\$62	.133	-22.1%
Medical inpatient	Penetration	Y1	.031	.024	-.007	.115	-23.4%
	Rate	Y2	.025	.018	-.007	.001	-28.3%
	PMPM	Y1	\$230	\$175	-\$55	.142	-24.1%
	Expenditure	Y2	\$203	\$149	-\$54	.012	-26.4%
Inpatient BH	Penetration	Y1	.021	.012	-.009	.016	-44.3%
	Rate	Y2	.015	.011	-.004	.198	-25.4%
	PMPM	Y1	\$107	\$70	-\$37	.254	-34.4%
	Expenditure	Y2	\$75	\$85	\$9	.793	12.5%
Emergency room	Penetration	Y1	.139	.115	-.024	.058	-17.2%
	Rate	Y2	.131	.114	-.017	.180	-12.6%
	PMPM	Y1	\$44	\$36	-\$8	.088	-18.7%
	Expenditure	Y2	\$46	\$37	-\$9	.087	-19.0%
Total case management	Penetration	Y1	.776	.722	-.054	.425	-7.0%
	Rate	Y2	.684	.587	-.097	.248	-14.2%
	PMPM	Y1	\$365	\$297	-\$68	.023	-18.7%
	Expenditure	Y2	\$332	\$222	-\$110	.002	-33.1%

PMPM = per-member-per-month cost