Impact of a Selective Narrow Network with Comprehensive Patient Navigation on Risk Scores, Expenditures, and Enrollee Experiences

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Background

- This study examines the addition of a high-performance ACO-HMO into the plan offerings of a metropolitan organization.
  - The original offering included a broad-network ACO-HMO with a standard customer support system.
  - To this was added a high-performance ACO-HMO with a narrow network of physicians and a comprehensive patient navigation/customer support system.
- The benefit packages of both ACO-HMO plans were identical apart from the narrow network and comprehensive patient navigation system (both plans had customer support systems, but the high-performance plan integrated its customer support with a comprehensive patient navigation system).
- The same set of hospitals was available in both ACO-HMOs.
- The comprehensive patient navigation/customer support system of the high-performance ACO-HMO included RNs, pharmacists, pharmacy techs, health coaches, social workers, and customer representatives. Primary tasks included helping enrollees (1) find a new doctor/specialist within the network, (2) continue receiving uninterrupted care, (3) obtain answers to questions regarding doctor's instructions, (4) obtain answers to drug/supplement questions, (5) transfer medical records and prescriptions, and (6) understand health benefits. Only a single call was necessary to receive services.
- IPAs within the high-performance ACO-HMO were incentivized as follows: they received a lower base capitation rate but received additional funding if they achieved improvements in quality and cost. Their resulting implicit capitation rate could thus be larger than the original rate.

Hypotheses

1. No difference in average annual risk scores across the two ACO-HMOs.
2. No difference in average annual expenditures conditional on any utilization occurring.
3. A lower proportion of patients would utilize any care in the high-performance ACO-HMO relative to the broad-network ACO-HMO due to the comprehensive patient navigation and customer support system minimizing unneeded and inappropriate care as well as to promote both timely and preventive care.
4. Lower total annual average expenditures for the high-performance ACO-HMO (product of the annual average propensity to utilize care and average annual expenditures conditional on any utilization occurring).

Data

- We obtained medical expenditure/enrollment data on under-65 continuously enrolled members in the broad-network ACO-HMO (n=24,555), a subset of whom switched into a high-performance ACO-HMO in 2018 (n=7,664).
- We conducted a survey (17% response rate) and the analytic sample includes 512 respondents of which 465 complete responses could be analyzed using regression analyses. Weighted responses reflect the 2020 enrollment of both plans.

Descriptive Statistics

	Pre-Period (2016-2017)	Post-Period (2018-2020)	
	Total Enrollees	High-Performance Network	Broad Network
Proportion of Enrollees Choosing each Network at the Transition Point	-	0.312	0.688
Risk Score (mean/SD)	1.424(3.734)	1.450(4.297)	1.503(4.396)
Any Expenditures (mean)	0.795	0.474	0.562
Annual Expenditures if Expenditures>0 (mean/SD)	6139(31277)	8074(46784)	7737(37694)
Total Annual Expenditures (mean/SD)	4884(28006)	3830(32472)	4347(28514)
Proportion of Year Enrolled	0.985	0.965	0.965
Demographics			
Age (mean/SD)	36.3(18.5)	40.4(RI)	38.1(18.8)
Female (mean)	0.522	0.512	0.526
Employee (mean)	0.490	0.550	0.463
Spouse/Partner (mean)	0.186	0.176	0.191
Dependent (mean)	0.324	0.274	0.346
Instruments			
Same MD Available in High-Performance Network at Transition Point (mean)	0.727	0.979	0.612
Observations	73,655	22,992	50,673
Individual Enrollees	24,555	7,664	16,891

Methods

- Fixed-effects instrumental variable analyses of administrative data, and regression analyses of survey data. Key outcomes included expenditures, access, and risk scores. Background information included interviews of organizational leaders.
- Our instrument was the availability of the same primary care physician (PCP) if an enrollee chose the high-performance ACO-HMO.
- Whether or not a given PCP was available was exogenously determined by the insurer.
- Maintaining PCP continuity may have been correlated with an enrollee's health status (those with lower health status may be more likely to seek PCP continuity), opportunity cost (those with higher earnings may have been more likely to seek PCP continuity to avoid the higher implicit search costs involved in choosing a new PCP), and the quality of an enrollee's current physician. The opportunity cost of an enrollee's time and any residual health status not accounted for by the risk score were accounted for by individual fixed effects. Finally, the quality of each enrollee's current physician was accounted for by individual fixed effects.

Results

	Second-Stage 2SLS		
Variables	Ln (Risk Score)	Any Expenditures	Ln (Total Expenditures)
HP ACO-HMO enrollee	-0.008	-0.155*	-0.035
Year 2018-2020*	0.374*	-0.189*	-0.291*
Age	-0.316*	-0.001*	0.025
Age x Female	0.033*	-0.012*	-0.004
Age x Employee	0.210*	-0.059*	0.242*
Age x Spouse/Partner	0.123*	-0.045*	0.190*
$(Age)^2$	0.004*	-0.001*	0.001*
$(Age)^2$ x Female	-0.001*	0.000*	0.000*
$(Age)^2$ x Employee	-0.005*	0.001*	-0.004*
$(Age)^2$ x Spouse/Partner	-0.004*	0.001*	-0.003*
Proportion of Year Enrolled	0.994*	0.408*	-0.314*
Ln (Risk score)	-	0.123*	0.857*
Observations	122,775	122,775	76,298
Individual Fixed Effects	Yes	Yes	Yes
F-test	241.29*	2385.86*	730.00*
K-P rk LM Statistic	8,869	8,869	5,950

*$p \leq 0.05$

Results (continued)

Administrative Data Results

- Average annual risk scores and Healthcare Effectiveness Data and Information Set (HEDIS) access measures were not different across plans (results no shown).
- Annual utilization dropped by 15.5 (95% CI: 18.1, 12.9) percentage points more in the high-performance ACO-HMO.
- Relative annual expenditures declining by $1251 (95% CI: $1461, $1042) per person per year.

Survey Results

- High Performance ACO-HMO outperformed broad-network ACO-HMO.
- 7.1% higher overall satisfaction (0.069; 95% CI: -0.001, 0.138; p=0.052).
- 10.1 percentage points more likely to be usually/always visit their PCP as soon as needed (0.101, 95% CI: 0.001, 0.201).
- 13.3 percentage points less likely to email their PCP (-0.133, 95% CI: -0.237, -0.030).
- 8.4 percentage points more likely to say it was easy to get a referral their PCP (0.084, 95% CI: 0.002, 0.167)
- 11.2 percentage points more likely to usually/always see a specialist as soon as needed (0.112, 95% CI 0.007, 0.217)
- 33.8 percentage points less likely to state that the specialist they wanted was not in their network (-0.338, 95% CI: -0.494, -0.181).
- 36.5% more satisfied with mental health care they received (0.311, 95% CI: 0.057, 0.565).

Limitations

- Our dataset did not include data from the relevant Pharmacy Benefits Manager (PBM) and mental health carve-outs.
- The external validity of these results only applies to patients who were continuously enrolled.
- Our survey data may be biased due to nonrandom response bias. Although we attempted to minimize any such bias by weighting the data to represent the relevant enrolled population, some bias may remain.

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