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Patient Loyalty in a Mature ACO Market

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Shifts in Payment and Quality Focus

- Movement to shared savings (SS) contracts - private and Medicare ACO - and new quality incentives
- Minnesota is further along the path than many markets
  - Medica has been using SS contracts since 2009
  - All major payers and IDSs in MN now contract using SS
  - Medicare PGP demonstration project 2005-2010
  - Medicare Shared Savings Program/Pioneer ACOs (5 in MN)
  - Minnesota Community Measurement has published quality metrics since 2003
- In this market, the attention is beginning to shift from managing episodes of care to population health management (PHM)

Why do we care about patient loyalty?

- Population health management is ineffective without a consistent, usual source of care
- Continuity of care has been linked to
  - Reduced hospitalizations
  - Reduced ED use
  - Improved preventive services
  - Better diabetic outcomes
  - Higher weight loss attempts
- But provider investments in population health may have a long window before savings emerge

Policymakers, payers and providers hope to have patients develop long-term relationships

What do we want to know about loyalty?

- **What predicts patient-provider affiliation?**
  - ***We're focusing on affiliation at the clinic system level***
- **What predicts consistency in patient-provider relationships?**
- **How long do relationships last?**

How do we define a patient-provider relationship?

- Many P4P incentives and most shared savings arrangements use retrospective attribution
- We look at dollars spent on primary care E&M visits, attributing patients to the integrated delivery system or clinic system where the majority of dollars are spent
- In Medica's population 2006-2011:
  - Approximately 60% are attributed in any one year
  - Approximately 50% of those attributed are affiliated with the state's 7 largest IDSs [4 metro, 3 non-metro]
  - From one attribution year to the next, on average 83% stay with the same system as the prior attribution

Data Used

- Medica enrollees residing in the state of Minnesota from 2006-2011
- Includes commercial (employment-based), individual and managed Medicaid populations
- 10% are in a “medical home” plan, the remainder (including Medicaid) in a broad PPO network with open access to specialty care.
- Enrollee characteristics include
  - Age, sex
  - Product type
  - Health status indicators (ACG system’s RUB)
  - U.S. Census-based neighborhood effects (% white, % nuclear families, % homes owner-occupied, % foreign born, % English only, % with HS/4-year degrees, % below FPL, % SNAP participation, urban)

What predicts attribution?

- Predicting P(attributed) using population for whom PY health status is available
- Lowest provider attribution during early adulthood
- Women are more likely to be attributed to a care system

		ΔP(Attr)	p-val
Age			
	1-4	0.209	0.000
	5-12	0.113	0.000
	13-17	0.070	0.000
	18-22	omitted	
	23-29	0.027	0.000
	30-49	0.025	0.000
	50-64	0.035	0.000

Marginal effects are relative to an average 66% attribution

		ΔP(Attr)	p-val
Female		0.097	0.000

What predicts attribution?

- Higher attribution for those with greater health risk in prior year
- Product matters – though probably not causal
- No policy-relevant neighborhood effects

		ΔP(Attr)	p-val
Product			
	Group - broad PPO	omitted	
	Group - medical home	0.048	0.000
	Individual	-0.040	0.000
	Medicaid	0.049	0.000

		ΔP(Attr)	p-val
Prior year overall health status			
	No diagnosis recorded	-0.162	0.000
	Healthy user	omitted	
	Low risk	0.063	0.000
	Moderate risk	0.128	0.000
	High risk	0.152	0.000
	Very high risk	0.122	0.000
Prior year diagnoses			
	Frailty	0.000	0.965
	Diabetes	0.044	0.000
	Depression	0.041	0.000
	Hypertension	0.071	0.000
	Hyperlipidemia	0.072	0.000

Marginal effects are relative to an average 66% attribution

What predicts consistency of affiliation?

- Predicting P(switch system) in next observed attributed year
- Young adults are most likely to switch
- Impact of health status is more complex
- Again no real neighborhood effects

		ΔP(Sw)	p-val
Age			
	1-4	-0.164	0.000
	5-12	-0.146	0.000
	13-17	-0.087	0.000
	18-22	omitted	
	23-29	-0.041	0.000
	30-49	-0.077	0.000
	50-64	-0.117	0.000

Marginal effects are relative to an average 17% probability of switching

		ΔP(Sw)	p-val
Current overall health status			
	Healthy user	omitted	
	Low risk	0.000	0.689
	Moderate risk	0.000	0.892
	High risk	0.026	0.000
	Very high risk	0.064	0.000
Current diagnoses			
	Frailty	0.018	0.000
	Diabetes	-0.015	0.000
	Depression	0.001	0.143
	Hypertension	-0.022	0.000
	Hyperlipidemia	-0.042	0.000

What predicts consistency of affiliation?

- **Those in the largest IDSs are much less likely to switch**

Marginal effects are relative to an average 17% probability of switching

		ΔP(Sw)	p-val
Current care system attribution			
	Other Systems	omitted	
	Metro IDS 1	-0.097	0.000
	Metro IDS 2	-0.098	0.000
	Metro IDS 3	-0.071	0.000
	Metro IDS 4	-0.057	0.000
	Non-metro IDS 1	-0.085	0.000
	Non-metro IDS 2	-0.099	0.000
	Non-metro IDS 3	-0.058	0.000

- **If we restrict the population to those for whom we can observe the prior "switch" decision, we see that previous switching is very important in predicting future decisions**

		ΔP(Sw)	p-val
Didn't switch last time		-0.268	0.000

How long can a provider system expect the relationship to last?

- We use a duration model to predict the lifetime of the patient-provider affiliation
  - Model adjusts for “censoring” caused by loss of insurance coverage
- The predicted “lifetime” of the patient-provider relationship has a long tail
  - Mean projected lifetime is 7.7 years
  - Median projected lifetime is 5.9 year
- Long enough to reap the benefit of population health management!

Marginal effects (ΔMedian) from model

- **Lifetime is shortest for young adults**

		ΔMedian	p-val
Age			
	1-4	1.636	0.000
	5-12	1.843	0.000
	13-17	0.601	0.000
	18-22	omitted	
	23-29	0.117	0.091
	30-49	0.832	0.000
	50-64	1.433	0.000

- **Shorter for women**

		ΔMedian	p-val
Female		-1.301	0.000

- **Significant selection by product type**

		ΔMedian	p-val
Product			
	Group - broad PPO	omitted	
	Group - medical home	1.086	0.000
	Individual	-1.618	0.000
	Medicaid	-1.312	0.000

Relative to average median lifetime of 5.9 years

Marginal effects (ΔMedian) from model

- **Initial attribution to large IDS predicts longer lifetime, with significant variation across IDS**
- **Impact of health status is generally a decline in lifetime of relationship**
- **Again, little impact of neighborhood effects**

Relative to average median lifetime of 5.9 years

		ΔMedian	p-val
Initial care system attribution			
	Other Systems	omitted	
	Metro IDS 1	2.182	0.000
	Metro IDS 2	2.435	0.000
	Metro IDS 3	1.554	0.000
	Metro IDS 4	0.752	0.000
	Non-metro IDS 1	0.580	0.000
	Non-metro IDS 2	1.732	0.000
	Non-metro IDS 3	0.602	0.000

		ΔMedian	p-val
Initial overall health status			
	Healthy user	omitted	
	Low risk	-0.365	0.000
	Moderate risk	-0.837	0.000
	High risk	-1.032	0.000
	Very high risk	-1.797	0.000
Initial diagnoses			
	Frailty	-0.382	0.001
	Diabetes	-0.159	0.143
	Depression	-0.427	0.000
	Hypertension	-0.034	0.635
	Hyperlipidemia	0.422	0.000

Investing in PHM makes sense!

- There is significant persistency in patient-provider relationships
  - Increases with age
  - Decreases for females
    - Interaction between general medicine and OBGYN relationships?
  - Decreases with complexity of health status
    - Diffuse specialty relationships straining strength of primary care relationship?
  - Increases with breadth of care system
    - More likely to provide both primary and specialty care
  - Decreases for less stable coverages (individual, Medicaid)
    - Will ACA facilitate more stable provider access?
  - When they've stuck with you in the past, you can expect them to stay in the future