

Experience Goods and Expectational Traps:

Bounded Rationality and Consumer Behavior in Markets for Medical Care

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Bayesian Updating of Expectations

$$\Pr(\text{MD}^{\text{bad}} \mid \text{poor outcome}) =$$

$$\frac{\Pr(\text{poor outcome} \mid \text{MD}^{\text{bad}})}{\Pr(\text{poor outcome})} \times \Pr(\text{MD}^{\text{bad}})$$

Data Source for Empirical Analysis

- Yale-NYAM Consumer Experiences Survey
- Health care expectations and experiences of 5,000 Americans with some form of health insurance
- Fielded in the Summer of 2002
- Overall response rate 50 percent
- Sample clustered geographically; standard errors adjusted for clustering

Problem Identification

- Asked about 15 types of problems with treatment or financing, with open-ended final category for “other”
- Problems experienced in past 12 months by 55 percent of all respondents
- 29 percent of problems blamed, to some extent, on MD

Restricted Subsample for Baseline Analyses

- Respondents with a single physician providing care
- Respondents who reported a single problem episode (though could manifest in multiple sequelae)
- Respondents had been with their physician for at least a year prior to the onset of the problem
- Sample size reduction: 5,000 → 3,345
- First two restrictions later relaxed in sensitivity analysis

Restricted Subsample for Baseline Analyses

Category of Attribute	Specific Characteristic	Full Sample	Analytic Subsample
Health Care Experience			
Problem Increased Cost	Percent whose problem caused increased out of pocket costs	41.9 (49.3)	37.3 (48.4)
Problem Caused Health Decline	Percent whose problem caused health decline	19.7 (39.8)	14.1 (34.8)
Healthcare Knowledge	Scale ranging from 0-20 (high) [Cronbach's alpha = 0.74]	13.5 (3.0)	13.7 (2.2)
General Health Status			
Self-Reported Health	Percent in fair or poor health	8.9%	8.5%
Acute Medical Problem	Percent with acute medical problem in past year	19.2%	19.4%
Long-Term Medical Management	Percent with a medical condition that required long-term managed in the last year	43.0%	45.8%

Expectations of Trust in Physicians

Dimension of MD Trust	Description	Type of Expectation	Never <i>None</i>	Sometimes <i>Some</i>	Mostly <i>Most</i>	Always <i>All</i>
Learn (n=3047)	[How often/ <i>How many</i>] take the time and effort to learn about the most up-to-date treatments and drugs?	Dyadic	0.7%	13.1%	34.7%	51.5%
		<i>Generalized</i>	0.5%	38.5%	54.9%	6.1%
Time (n=3099)	[How often/ <i>How many</i>] don't take enough time to talk with you/patients about medical care?	Dyadic	63.3%	22.6%	7.8%	7.2%
		<i>Generalized</i>	2.1%	58.1%	35.2%	4.7%
Insurance (n =2824)	[How often/ <i>How many</i>] will speak up for you/patients in disputes with health insurance plans?	Dyadic	4.1%	17.5%	28.1%	50.4%
		<i>Generalized</i>	5.0%	56.9%	34.0%	4.1%
Errors (n=3034)	[How often/ <i>How many</i>] make too many mistakes in taking care of you/their patients?	Dyadic	63.0%	33.5%	1.9%	1.6%
		<i>Generalized</i>	4.0%	89.4%	5.8%	0.7%
Fairness (n=3071)	[How often/ <i>How many</i>] treat you/patients fairly?	Dyadic	0.2%	2.7%	19.2%	77.9%
		<i>Generalized</i>	0.7%	28.2%	60.1%	11.0%

Estimating Predictors of Trust Expectations

Dyadic Expectation = $\alpha + \theta_{1D}$ Problem_Blame + θ_{2D} Problem_NoBlame + β_{1D} (Demographics and Health Status) + β_{2D} (Representation) + β_{3D} (Retrieval) + β_{4D} (Processing) + β_{6D} (Selection Effects) + μ ;

Generalized Expectation = $\alpha + \theta_{1G}$ Problem_Blame + θ_{2G} Problem_NoBlame + β_{1G} (Demographics and Health Status) + β_{2G} (Representation) + β_{3G} (Retrieval) + β_{4G} (Processing) + β_{6G} (Selection Effects) + μ ;

Estimated Selection Effects

Dimension of MD Trust	Type of Expectation	Coefficient on λ	Standard Error	Prob.
Learn (n=2898)	Dyadic	0.77	0.18	<0.01
	<i>Generalized</i>	<i>0.79</i>	<i>0.23</i>	<i><0.01</i>
Time (n=2952)	Dyadic	0.34	0.21	0.11
	<i>Generalized</i>	<i>0.57</i>	<i>0.22</i>	<i>0.01</i>
Insurance (n =2686)	Dyadic	0.45	0.21	0.03
	<i>Generalized</i>	<i>0.38</i>	<i>0.21</i>	<i>0.07</i>
Errors (n=2883)	Dyadic	0.55	0.20	<0.01
	<i>Generalized</i>	<i>0.56</i>	<i>0.21</i>	<i>0.01</i>
Fairness (n=2916)	Dyadic	0.80	0.19	<0.01
	<i>Generalized</i>	<i>0.66</i>	<i>0.20</i>	<i><0.01</i>

Estimated Influence of Problems on Trust

**Association of Problem Experiences with Dyadic and General Expectations of Physicians
(Respondents With Single Problem Episodes and One Primary Physician)**

Dimension of MD Trust	Dyadic Expectations		Generalized Expectations	
	Blame ¹	No Blame	Blame ¹	No Blame
Learn (n=2460)	-1.69 (0.32)**	-1.28 (0.32)**	-1.56 (0.36)**	-1.51 (0.35)**
Time (n=2508)	-0.86 (0.34)*	-0.61 (0.32)	-1.16 (0.38)**	-1.09 (0.38)**
Insurance (n=2270)	-1.51 (0.32)**	-0.98 (0.34)**	-1.90 (0.39)**	-1.73 (0.37)**
Errors (n=2449)	-1.24 (0.35)**	-0.80 (0.35)**	-0.99 (0.35)**	-1.01 (0.34)**
Fairness (n=2475)	-1.90 (0.28)**	-1.37 (0.30)**	-1.28 (0.34)**	-1.11 (0.32)**

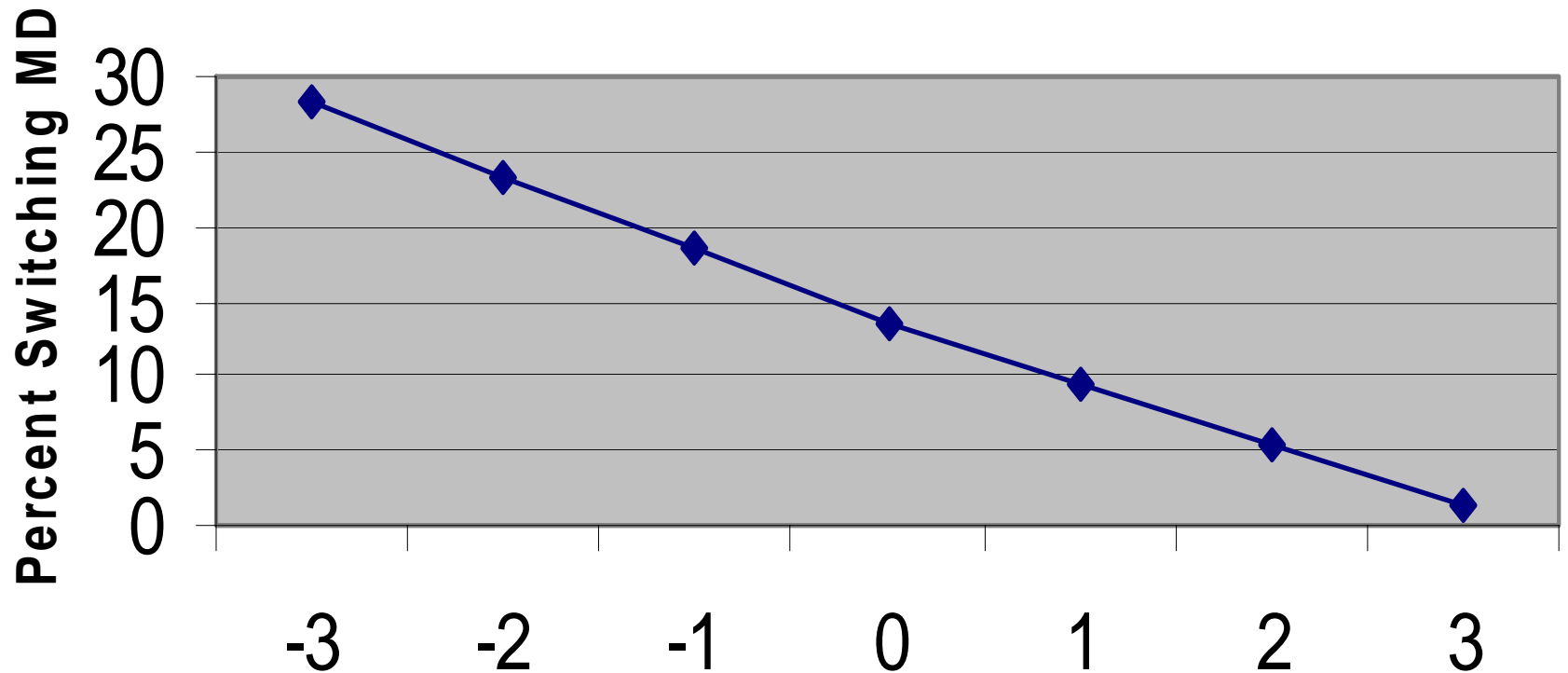
Estimated Impact of Trust Gap on Switching MDs in Response to Perceived Problems

Probability of Switching Doctors Related to Generalized vs. Dyadic Expectations

Dimension of MD Trust	Switch in Response to Problem		Any Change of MD In Past Year	
	Dyadic > Generalized	Generalized > Dyadic	Dyadic > Generalized	Generalized > Dyadic
Learn (n=1607, 3316)	-0.02 (0.01)	0.05 (0.01)**	-0.02 (0.01)*	0.01 (0.01)
Time (n=1652, 3379)	-0.02 (0.01)	0.01 (0.01)	-0.02 (0.01)*	-0.00 (0.01)
Insurance (n=1508,3060)	-0.01 (0.01)	0.02 (0.01)	-0.01 (0.01)	-0.01 (0.01)
Errors (n=1613, 3301)	-0.04 (0.01)**	0.05 (0.01)**	-0.02 (0.01)**	0.02 (0.01)*
Fairness (n=1623,3333)	0.01 (0.01)	0.03 (0.01)**	-0.01 (0.01)	0.01 (0.01)

Estimated Impact of Trust Gap on Switching MDs in Response to Perceived Problems

Expectations and Physician Switching



Simplifying Trust to A One-Dimensional Expectation

Table 8. Association of Problems with Uni-Dimensional Measures of Expectations of Physicians

	Dyadic [†]		General [†]	
	Blame	No Blame	Blame	No Blame
<u>Single Problems</u>				
Aggregated Trust (n = 3028)	-1.49 (0.19) **	-1.09 (0.19) **	-1.40 (0.22) **	-1.27 (0.21) **
<u>Multiple Problems</u>				
Aggregated Trust (n = 3750)	-1.37 (0.15) **	-0.94 (0.15) **	-0.94 (0.14) **	-0.80 (0.15) **

More Experienced Consumers and Learning From Problematic Events

Problem Experiences and Expectations: Respondents With And Without A Chronic Condition				
Dimension of MD Trust	Dyadic Expectations		Generalized Expectations	
	Blame ¹	No Blame	Blame ¹	No Blame
<i>Respondents With Chronic Medical Conditions</i>				
Insurance (n=1225)	-1.30 (0.37)**	-0.64 (0.36)*	-1.18 (0.42)**	-0.95 (0.39)*
Errors (n=1310)	-0.95 (0.34)	-0.44 (0.33)	-0.36 (0.34)	-0.22 (0.31)
Fairness (n=1323)	-1.72 (0.29)**	-1.19 (0.27)**	-0.71 (0.29)*	-0.42 (0.26)
<i>Respondents With No Chronic Medical Conditions</i>				
Insurance (n=1461)	-2.19 (0.63)**	-1.84 (0.62)**	-1.75 (0.55)**	-1.67 (0.54)**
Errors (n=1573)	-1.44 (0.52)*	-1.19 (0.52)*	-1.40 (0.57)*	-1.56 (0.60)**
Fairness (n=1593)	-2.42 (0.45)**	-1.95 (0.43)**	-1.54 (0.61)*	-1.39 (0.59)*