



Insights on Formularies and Patient Discrimination

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Potential for Discrimination

- By steering patients to cost-effective substitutes within a therapeutic class of prescription drugs, formulary design can improve the efficiency of healthcare consumption.
- However, formularies can also be used to systematically screen out certain chronically ill consumers/patients.
 - Would manifest as benefits that are intentionally unattractive to patients
 - Would conflict with prohibition against discrimination
- In this paper we show why and how patients face discrimination on the basis of prescription medication needs

Why might this be happening?

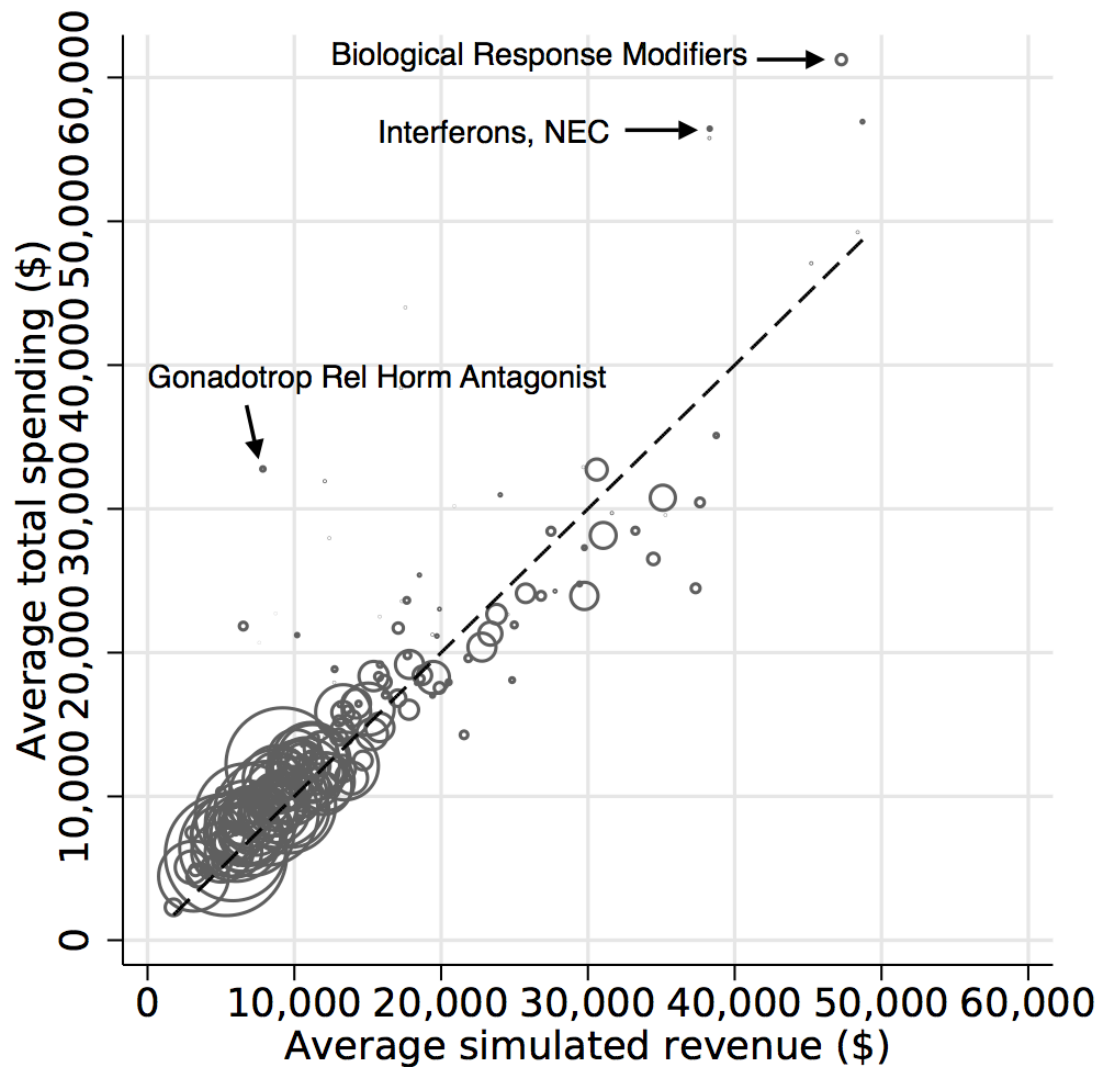
- Insurers required to
 - Enroll anyone who wants to join a plan
 - Charge all individuals the same price
- Uniform pricing implies some consumers will be unprofitable and insurers will avoid them *unless there are complementary regulations*
- Complementary regulations aimed at guaranteeing non-discrimination:
 - Direct coverage mandates:
 - e.g. Essential Health Benefits
 - “Fixing” the unprofitability of chronically ill patients:
 - e.g., risk adjustment and reinsurance
- *If we observe insurers avoiding certain patient types, it means that the risk adjustment and reinsurance do not adequately compensate the plan for enrolling such patients...*

The important question is whether some patient types are predictably unprofitable, even after potentially large risk adjustment and reinsurance payments

Patient Taking: Antidiabetic Agents, Insulin		Patient Taking: Biological Response Modifiers	
Premium	\$9,800	Premium	\$9,800
Risk Adjustment Payment	\$7,590	Risk Adjustment Payment	\$28,820
Reinsurance Payment	\$2,076	Reinsurance Payment	\$8,648
Cost of Providing Care	-\$18,269	Cost of Providing Care	-\$61,245
Net	\$1,196	Net	-\$13,977
No Incentive to avoid		Large Incentive to avoid	

- Note that both patients are expensive
- But what matters is the net
- Risk adjustment and reinsurance payment is far too small for the patient needing biological response modifier medications

Some patient types are predictably unprofitable, even after large RA transfers



We look at a large sample of (non-Marketplace) employer claims data

Observe total costs directly

Calculate the risk adjustment and reinsurance payment that would have been paid to a plan enrolling the patient

Group by therapeutic class of drugs.

Class level appropriate because asking about screening patient types

Some patient types are predictably unprofitable, even after large RA transfers

Selection Rank	Class	Most Used Drug in Class	Per Capita Enrollee Spending	Per Capita Enrollee Revenue	Net Loss: Cost - Revenue
(1)	(2)	(3)	(4)	(5)	(6)

Largest Incentives to Avoid

1	Gonadotropins, NEC	Ovidrel	\$21,848	\$6,522	\$15,326
2	Biological Response Modifiers	Copaxone	\$61,245	\$47,268	\$13,977
3	Opiate Antagonists, NEC	naltrexone	\$23,639	\$17,662	\$5,977
4	Ovulation Stimulants, NEC	clomiphene citrate	\$10,306	\$5,003	\$5,304
5	Pituitary Hormones, NEC	desmopressin	\$21,711	\$17,078	\$4,633
6	Vitamin A and Derivatives, NEC	Claravis	\$7,472	\$3,044	\$4,428
7	Bioflavonoids and Comb, NEC	Metanx (algal oil)	\$19,170	\$15,840	\$3,329
8	Oxytocics, NEC	methylergonovine	\$11,183	\$8,112	\$3,071
9	Analg/Antipyr, Opiate Agonists	hydrocodone-acetaminophen	\$12,214	\$9,212	\$3,001
10	CNS Agents, Misc.	Lyrica	\$18,369	\$15,405	\$2,965

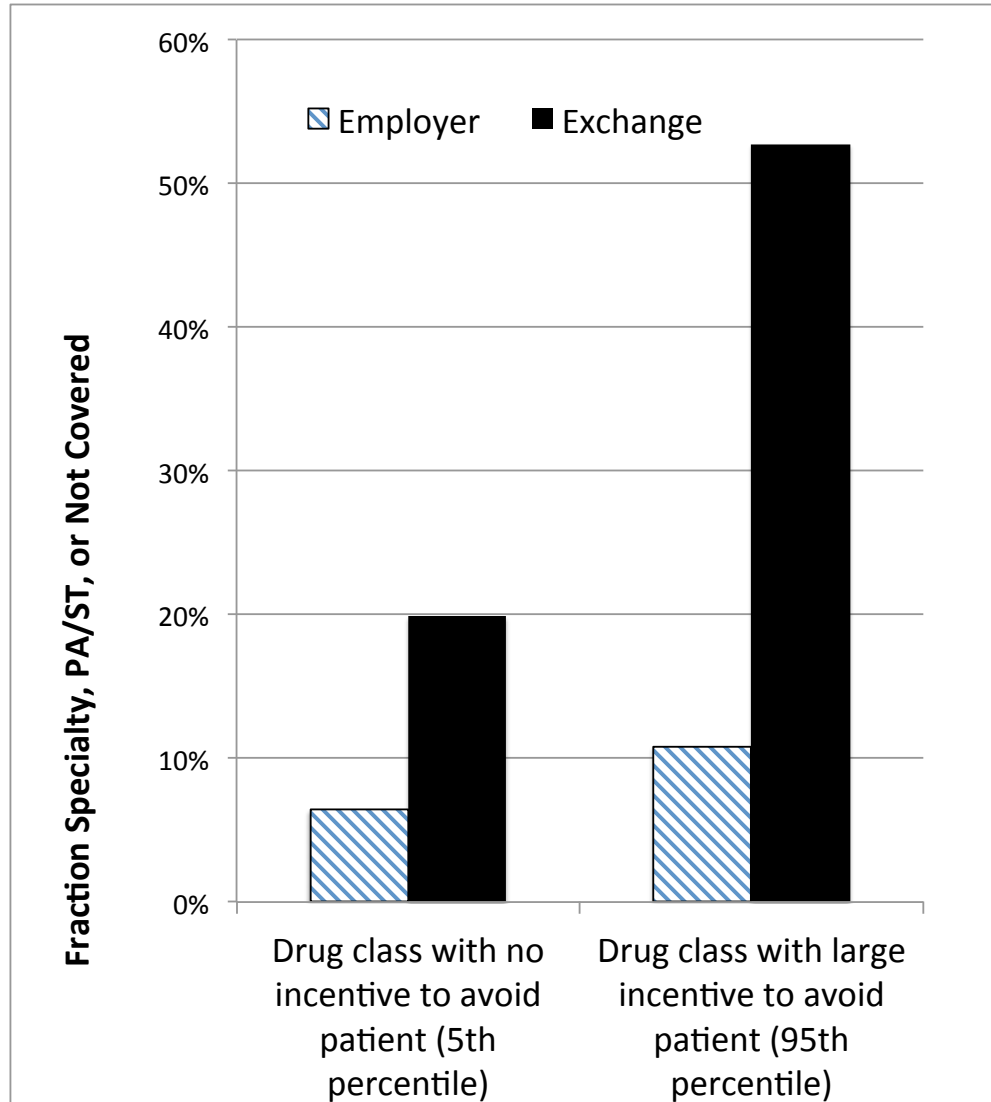
We ask whether tiering of drugs classes track the profitability patterns.

- Use data on the universe of 2015 Marketplace formularies, and 2015 Employer plans
- We group into *restrictive* and *non-restrictive* tiers

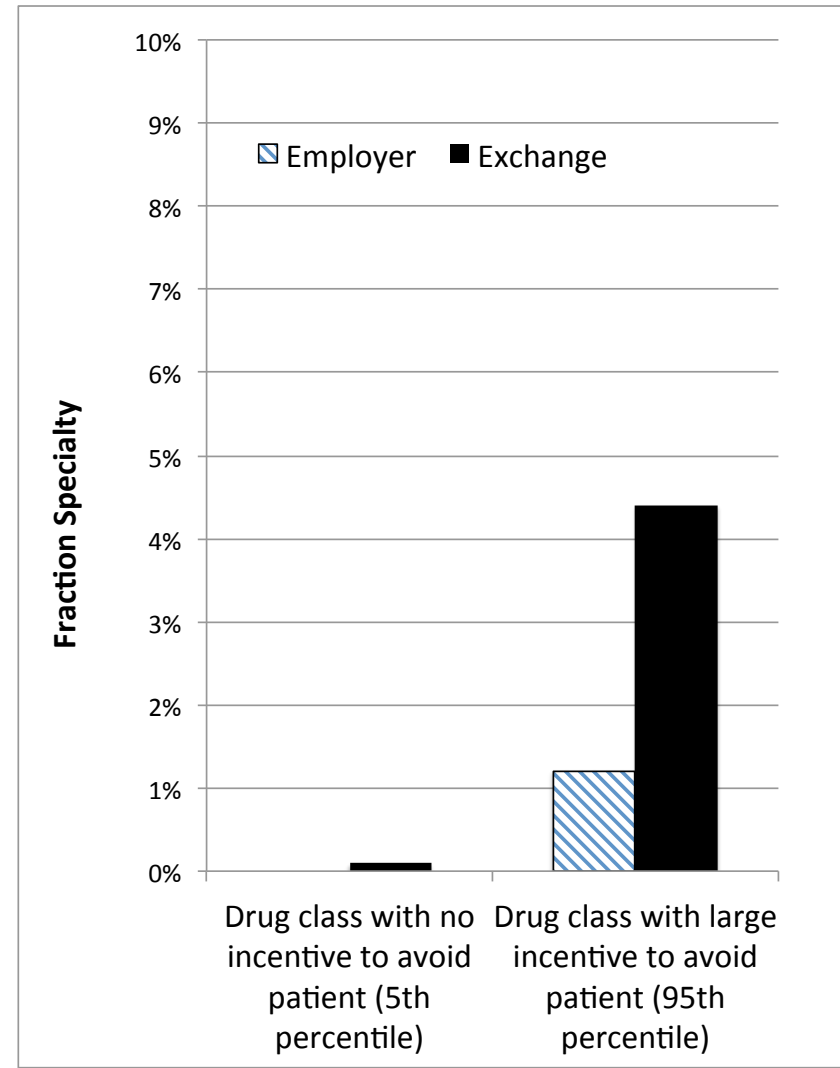
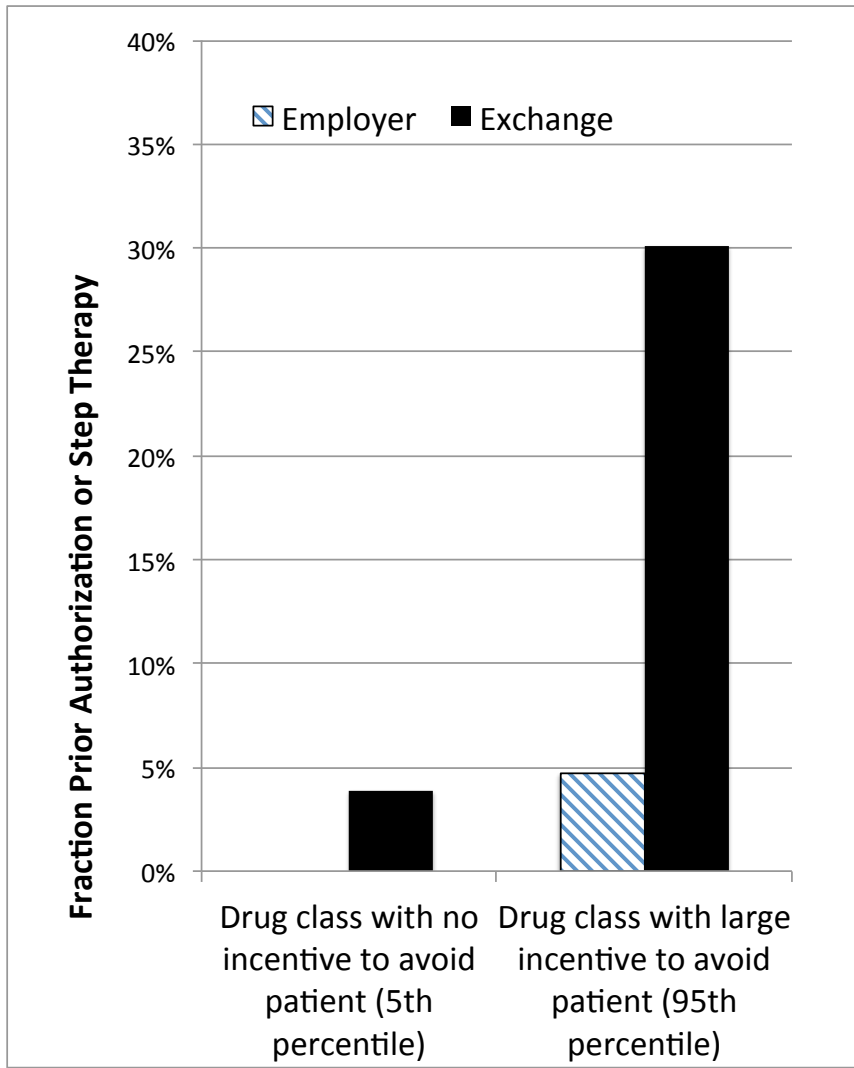
	Formulary Data		CCIIO Cost-Sharing Data	
	Employer Plans (1)	Exchange Plans (2)	Mean Silver Copay, if no Coinsurance (3)	Fraction Subject to Coinsurance (4)
Number of plans	3194	501		
Covered lives per plan	14,723	20,343		
Non-Retrictive Tiers Total:	0.57	0.41		
Generic preferred	0.21	0.17	\$10	11%
Generic	0.00	0.05		
Preferred brand	0.09	0.05	\$41	18%
Covered/ Non-preferred brand	0.28	0.14	\$73	30%
Restrictive Tiers Total:	0.43	0.59		
Specialty	0.00	0.01	\$117	66%
Not listed	0.33	0.27		
Medical	0.00	0.01		
Prior Authorization/Step (PA/ST)	0.01	0.10		
Not covered	0.08	0.20		
Therapeutic Classes	220	220		

Exchange plans appear to respond to incentive to avoid patients

We are interested in differences *within* plans *across* classes. Not in overall generosity



Prior Authorization and Step Therapy Appear Important



Summary of Results

- The least profitable 5% of drug classes are 30 percentage points (50 percent) more likely to be placed on a specialty tier, to face utilization management, or simply to not be covered. Everything is calculated relative to the same drugs in employer plans.
- Utilization management and/or dropping the drug from coverage appears to be an important part of this.
- What we observe is not simply a matter of insurers passing on underlying drug costs to the consumer, or of nudging consumers toward lower-cost substitutes within a therapeutic class of alternatives. *Cheap* drugs that treat *expensive* patients face higher tiering.
- Popular drugs within a class especially likely to be placed on higher tiers.
- The bottom-line impact on out-of-pocket consumer costs for certain patient groups is substantial—potentially thousands of dollars per year.
- While the current regulatory framework goes a long way toward weakening insurer incentives to avoid unhealthy enrollees, some selection incentives remain and lead to an equilibrium in which the offered contracts expose consumers to significant drug cost sharing risk.