Public Policy for the Poor? A Randomized Evaluation of the Mexican Universal Health Insurance Program

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Joint work with Emmanuela Gakidou, Kosuke Imai, Jason Lakin, Ryan T. Moore, Clayon Nall, Nirmala Ravishankar, Manett Vargas, Martha María Téllez-Rojo, Juan Eugenio Hernández Ávila, Mauricio Hernández Ávila, Héctor Hernández Llamas

(Talk at USAID Conference, "Mind the Gap: Research & Evaluation Methods for Scaling Up Evidenced-Based Interventions" 6/1/10)

Project References

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- New Evaluation Design: Gary King et al., A 'Politically Robust' Experimental Design for Public Policy Evaluation, with Application to the Mexican Universal Health Insurance Program *Journal of Policy Analysis and Management*, 26, 3 (2007): 479-506.

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- Results: Gary King et al., Public Policy for the Poor? A Randomized 10-Month Evaluation of the Mexican Universal Health Insurance Program *The Lancet*, 373 (25 April 2009): 1447-1454.

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- Solution: New evaluation design with fail-safe components

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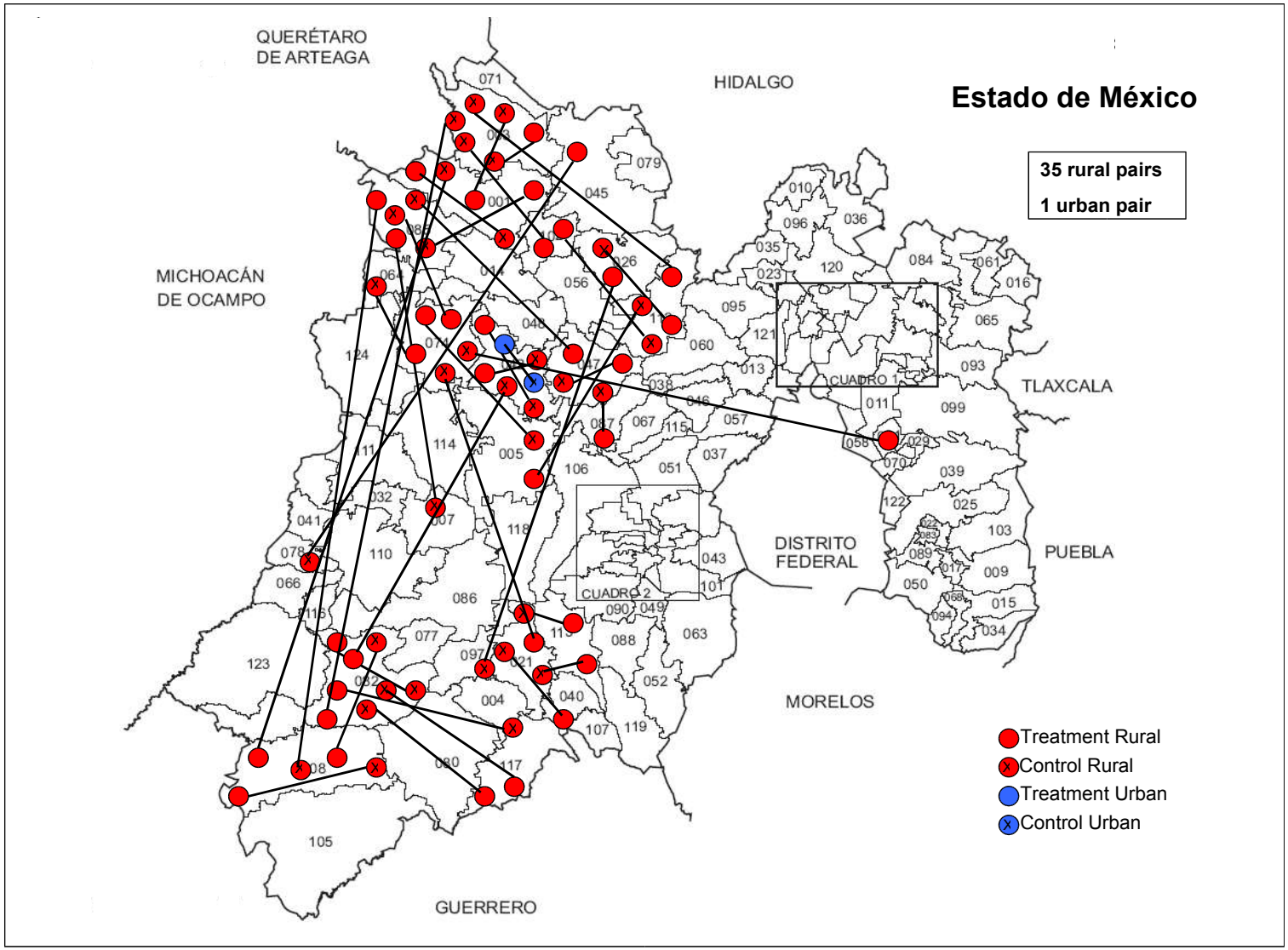
6. Survey $\approx$32,000 random households in 50 of the 74 treated and control unit pairs
7. Repeat surveys in 10 months and subsequently to see effects

Remaining in study: 148 clusters (74 pairs) in 7 states

Matched Pairs, Estado de México



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2. If we lose pairs, we check for selection bias by rerunning this check

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  - Developed new and more powerful evaluation design and statistical methods, tuned to the needs of Mexico
  - Evaluation design: being adopted around the world

For more information

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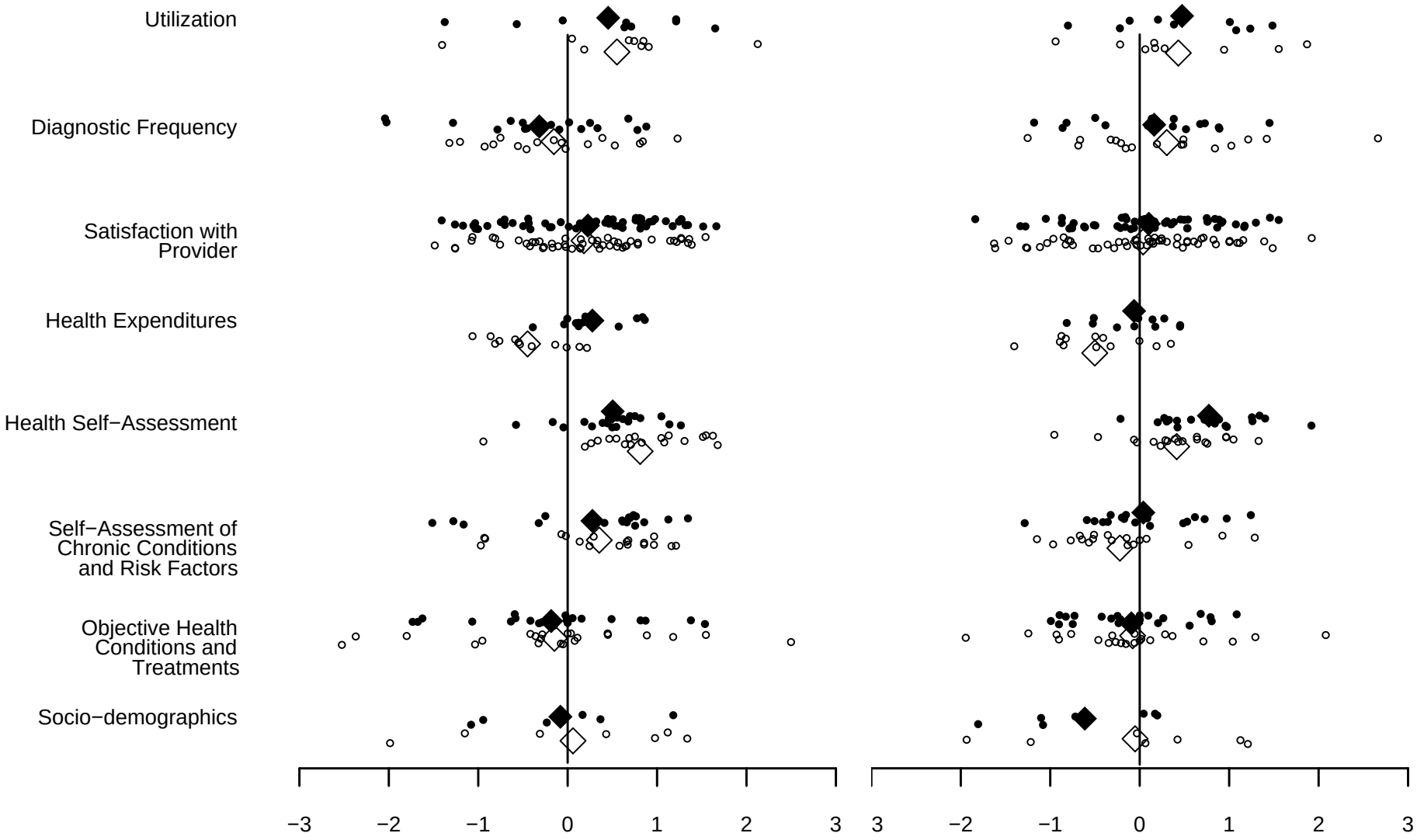
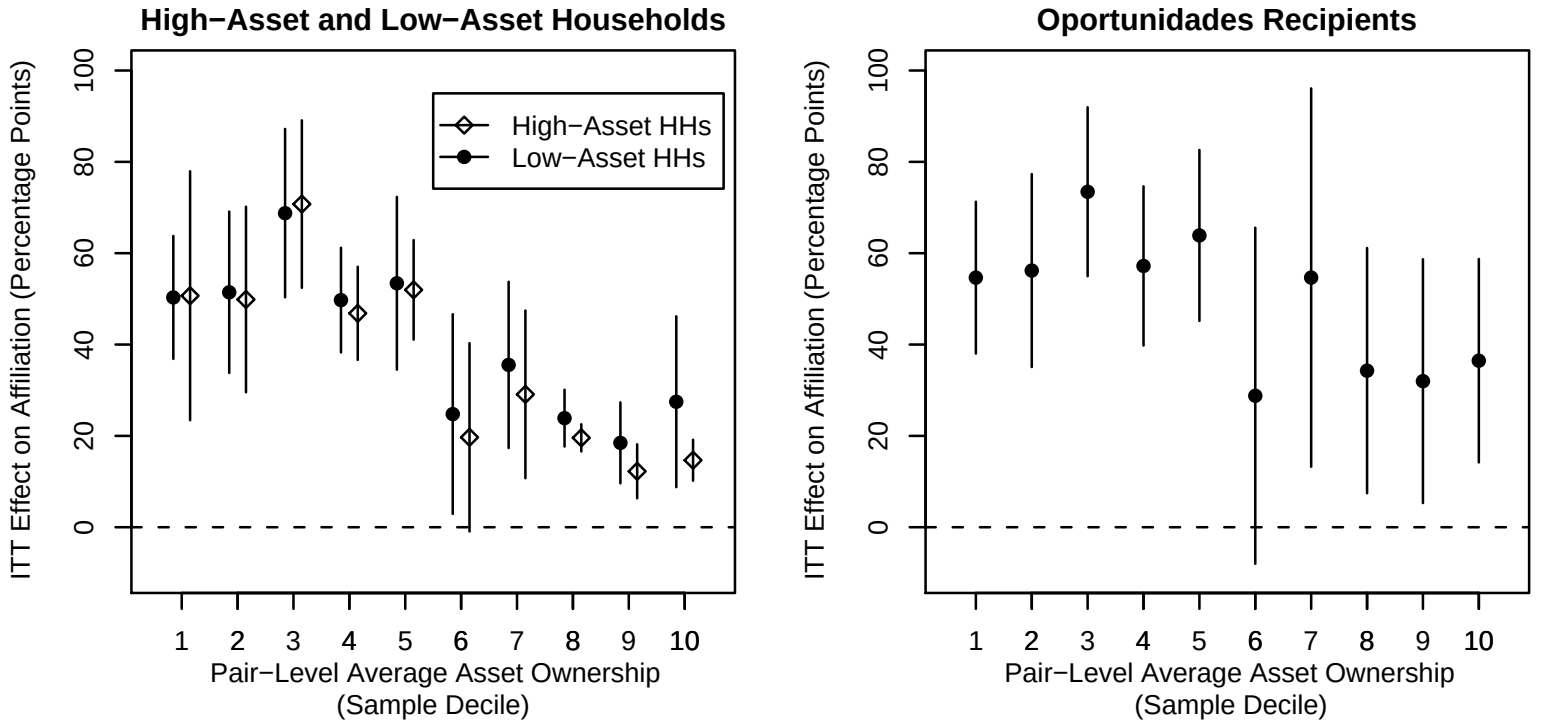
ITT on Outcome Measures at Baseline, for all families (left) and poor families, in Oportunidades (right)



Effect of Encouragement on Seguro Popular Affiliation



Horizontal axes: per-capita asset ownership deciles of areas (poorer to the left). Vertical axes: percentage point causal effect of encouragement to affiliate on Seguro Popular affiliation.

Poor areas, not poor households, are affiliated the most

Effect on % of Households with Catastrophic Health Expenditures

	All Study Participants			Experimental Compliers		
	Average (Control)	ITT	SE	Average (Control)	CACE	SE
All	8.4	1.9*	(.9)	9.5	5.2*	(2.3)
Low Asset	9.9	3.0*	(1.3)	11.0	6.5*	(2.5)
High Asset	7.1	0.9	(0.8)	7.9	3.0	(2.7)
Female-Headed	8.5	1.4	(1.1)	10.6	3.8	(3.0)

"Catastrophic expenditures": out-of-pocket health expenses $>$ 30% of post-subsistence income

Effect on Out-of-pocket Health Expenditures, I (in pesos)

	All Study Participants			Experimental Compliers		
	Average (Control)	ITT	SE	Average (Control)	CACE	SE
Overall:						
All	$1631.3	$258.0	($175)	$1712.7	$689.7	($453)
Low Asset	1360.2	425.6*	(197)	1502.6	915.3*	(392)
High Asset	1867.9	128.4	(201)	1933.2	428.2	(669)
Female-Headed	1509.1	156.5	(207)	1689.9	428.6	(566)
Inpatient Care:						
All	532.5	96.9*	(44)	557.1	259.1*	(112)
Low Asset	527.1	188.2*	(73)	579.0	404.8*	(142)
High Asset	537.2	31.1	(52)	536.2	103.6	(173)
Female-Headed	452.5	115.1*	(68)	510.0	315.2*	(182)
Outpatient Care:						
All	448.3	116.7*	(63)	499.1	312.0*	(161)
Low Asset	412.3	176.7*	(73)	466.3	380.0*	(147)
High Asset	479.7	81.9	(69)	533.0	272.9	(230)
Female-Headed	416.3	110.4	(75)	496.8	302.4	(202)

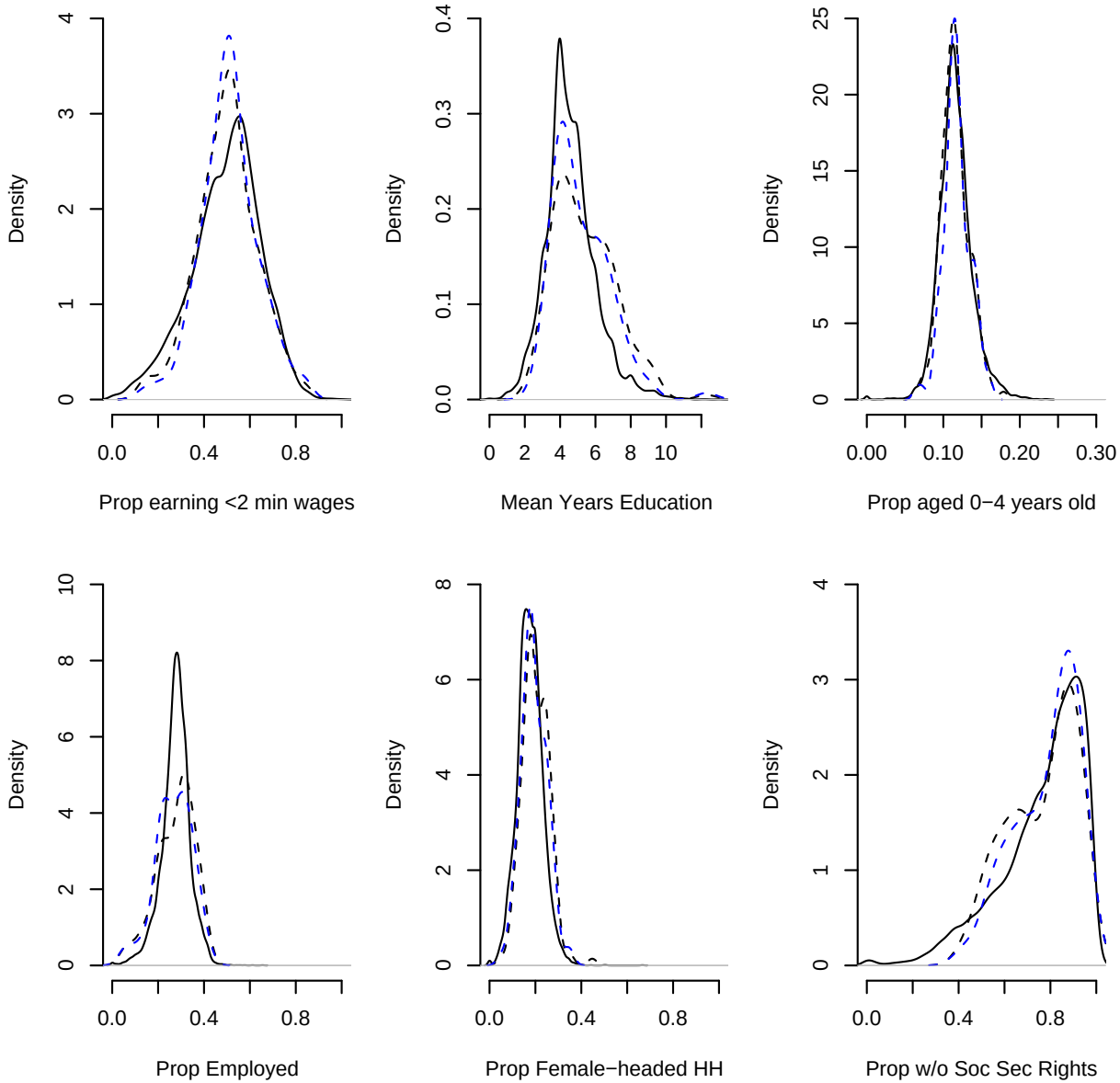
Effect on Out-of-pocket Health Expenditures, II (in pesos)

	All Study Participants			Experimental Compliers		
	Average (Control)	ITT	SE	Average (Control)	CACE	SE
Medicine:						
All	521.1	20.0	(41)	534.5	53.3	(109)
Low Asset	427.3	17.8	(46)	444.7	38.3	(100)
High Asset	603.0	29.4	(47)	627.5	98.1	(157)
Female-Headed	625.6	53.6	(55)	738.9	146.8	(151)
Medical Devices:						
All	139.7	−8.8	(23)	117.8	−23.4	(62)
Low Asset	72.0	−0.2	(20)	72.8	−0.5	(43)
High Asset	198.8	−16.5	(29)	165.6	−55.1	(98)
Female-Headed	155.5	10.9	(34)	162.8	30.0	(94)

Utilization: Overall

	All Study Participants			Experimental Compliers		
	Average (Control)	ITT	SE	Average (Control)	CACE	SE
Utilization (Procedures):						
Used Outpatient Services (%)	62.6	−1.5	(1.9)	64.8	−4.0	(5.2)
Outpatient Visits (count)	1.6	−0.03	(0.09)	1.7	−0.08	(0.23)
Hospitalized (%)	7.6	−0.2	(0.5)	7.9	−0.5	(1.5)
Hospitalizations (count)	0.1	−0.003	(0.006)	0.1	−0.01	(0.02)
Satisfaction with Provider (%)	68.0	−1.0	(1.6)	69.8	−2.6	(4.5)
Utilization (Preventative) (%):						
Eye Exam Last Yr.	10.0	−0.7	(0.7)	9.8	−1.8	(1.9)
Flu Vaccine	25.7	−1.8	(1.4)	27.2	−4.9	(3.7)
Mammogram Last Yr.	5.1	−0.9	(0.6)	5.2	−2.3	(1.6)
Cervical Last Yr.	21.8	−1.3	(2.0)	22.2	−3.2	(4.8)
Pap Test Last Yr.	31.9	−2.3	(2.1)	33.2	−5.8	(5.0)

Clusters are Representative On Measured Variables



Each graph gives three histograms of the health clusters in the national