

# Information and Consumer Choice: The Value of Publicized Health Plan Ratings

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# Questions...

- Do consumers respond to published information on health plan quality?
- How valuable is the information?
- Do the benefits justify the costs?

# Answers...

- Wedig & Tai-Seale (2002) – federal employees
- Beaulieu (2002) – Harvard employees
- Scanlon et al (2002) – GM employees
- Chernew et al (2004) – GM again, with Bayesian learning

## The fundamental empirical challenge:

Published plan ratings may simply mirror information that's already available.

- If ratings are positively correlated with other (unobserved) quality signals, then estimates of ratings' influence will be upward biased.

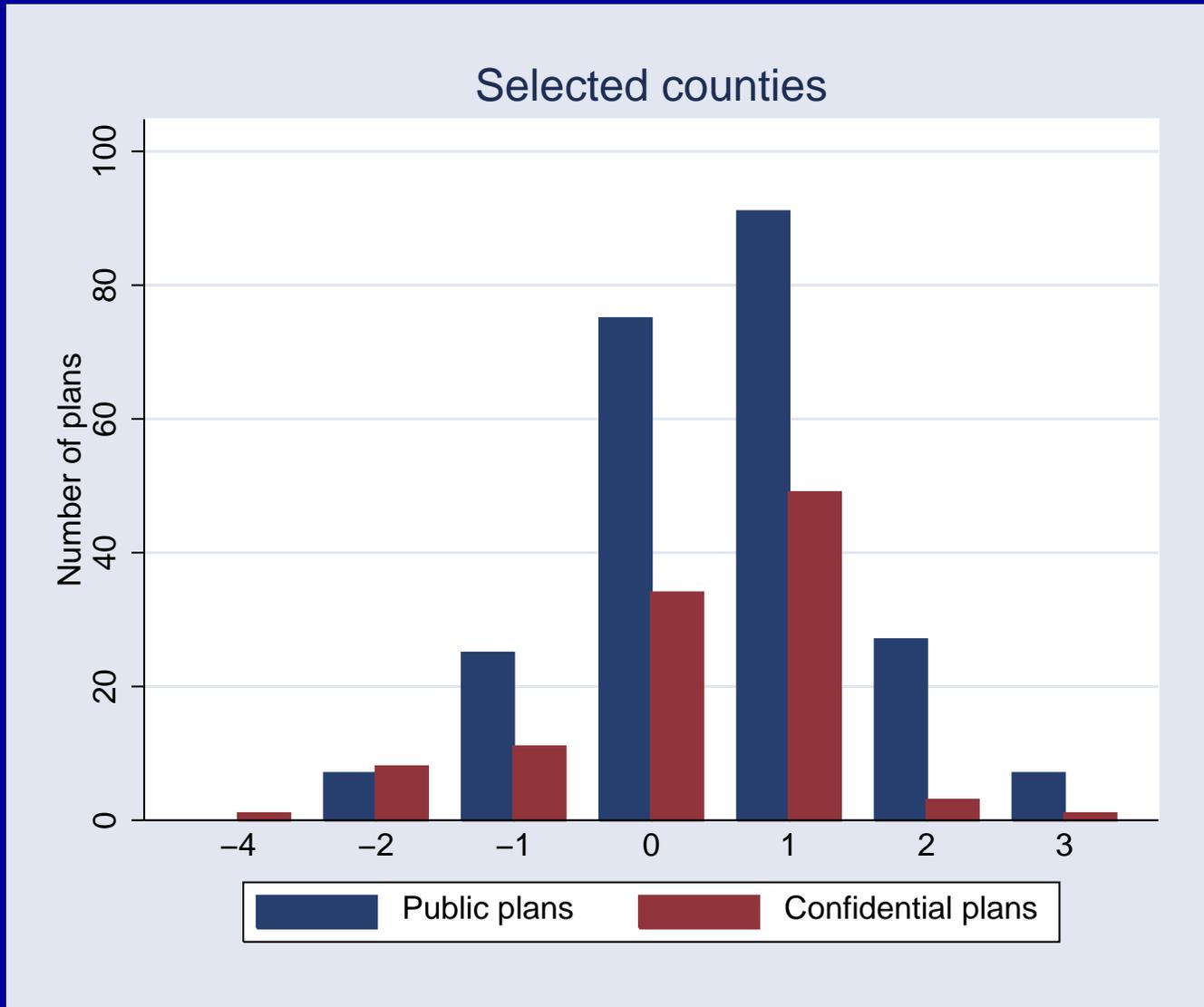
## Solutions (things to control for):

- Inertia in enrollment decisions
- Time-invariant unobserved plan quality (i.e., plan fixed effects)
- “Impact” of unpublished ratings
  - NCQA data for public vs. confidential plans

# Data

- Enrollment decisions of federal annuitants, 1996-1999 (from OPM)
- Sample: 86 counties / 250,000 annuitants
- Plan characteristics from FEHBP guidebooks and brochures (premiums, copays, etc.)
- HEDIS/CAHPS data from NCQA
  - Summarized into a single quality measure using published ratings from *U.S. News & World Report*

Figure 1



# Model

Utility :

$$u_{ijt} = x_{ijt}\beta + E[q_{jt}] + \varepsilon_{ijt}$$

Expected quality :

$$E[q_{jt} | x_{ijt}, w_{jt}] = x_{ijt}\delta_0 + \theta_0 w_{jt}$$

$$E[q_{jt} | x_{ijt}, z_{jt}, w_{jt}] = x_{ijt}\delta_1 + z_{jt}\gamma_1 + \theta_1 w_{jt}$$

$$\Rightarrow u_{ijt} = x_{ijt}(\beta + \delta_1) + z_{jt}\gamma_1 + \theta_1 w_{jt} + \varepsilon_{ijt}$$

(from Table 6)

<b>Coefficient estimates:</b>				
<i>Gross premium</i>	-0.022	-0.027	-0.001	-0.012
<i>NCQA score (public)</i>	1.104	0.647	0.372	0.207
	(0.189)	(0.015)	(0.006)	(0.014)
<i>NCQA score (non-public)</i>	0.189	0.122	0.022	-0.045
	(0.005)	(0.010)	(0.005)	(0.011)

(From Table 7)

<b>Coefficient estimates:</b>				
<b>OLD:</b>				
<i>NCQA score (public)</i>	1.132	0.437	0.383	0.115
	(0.007)	(0.020)	(0.006)	(0.020)
<i>NCQA score (non-public)</i>	0.226	0.315	0.054	0.162
	(0.005)	(0.018)	(0.005)	(0.018)
<b>NEW:</b>				
<i>NCQA score (public)</i>	0.804	0.766	0.302	0.248
	(0.015)	(0.017)	(0.014)	(0.016)
<i>NCQA score (non-public)</i>	-0.077	0.038	-0.185	-0.150
	(0.012)	(0.012)	(0.012)	(0.012)

# Value of information

How much better off are consumers because of the publicized ratings?

For every individual, calculate

$$u(\text{plan chosen} \mid \text{info}) - u(\text{plan chosen} \mid \text{no info})$$

Two interesting numbers:

- How many individuals' choices were affected?
- For those that were affected, what were the implied utility gains?

## Value of Information Calculations (from Table 8)

	old/new pooled		old	new
Number of choices changed	2037		24	2747
Percent of choices changed	0.4		0.0	8.7
Average value   choices changed	\$110.57		\$13.40	\$352.91
Average value	\$0.44		\$0.01	\$30.53
			( Overall: \$1.89 )	