Role of Reinsurance and Risk Adjustment in California's Health Care Reform

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September 29, 2007

CA Market for Individual Health Insurance

- Enrollees:
  - 2 million now (vs. 6 million uninsured)
  - Gruber projects 2.7 million under Gov. plan
- Rate regulation:
  - Currently: insurers charge more for ill + can reject the sick
  - Proposals: Community rating (adjusted only by age, geography) + guaranteed issue

Concerns with Community Rating + Guaranteed Issue

- Creates large predictable insurer profits/losses:
  - This can lead to distorted insurer behavior that hurts consumers.
- Can destabilize insurance market:
  - In the extreme, adverse selection risk spirals can lead to withdrawal of generous plans.
  - Insurers fled some other states, lowering competition
- Can drive healthy people to drop insurance, in absence of individual mandate:
  - Drives premiums up, overall insurance rates down

Outline

- Goal and challenges of individual market reform
- Community rating effects on premiums and insurance coverage
- Reinsurance: promise and limitations
- Risk adjustment: more promising?

Goal: Improve functioning of non-group insurance market

- Equity/affordability:
  - 1% of market “uninsurable” (nationwide)
  - 12% applications rejected (AHIP, 2005)
  - 22% applications rated up (AHIP)
- Efficiency:
  - Insurers should compete on value, not cream-skimming
  - Reduce job lock
  - Minimize moral hazard effects of subsidies

Limited success with current approaches

- State high risk pools:
  - Help only a small portion of those rated up.
  - Poor incentives for appropriate treatment
  - Financing not related to risk status
- Guaranteed renewable long-term contracts:
  - Limited protections for plan switching, takes a generation to achieve
- Rating restrictions:
  - Exacerbated cream-skimming distortions

Premium Effects of Community Rating

- NJ, MA, NY highest premiums in country (pure community rated) [AHIP]; ME, VT also high
  - Consistent with Commonwealth data
  - Current NY rates: $25k family premium

- Herring/Pauly: community rating causes…
  - 6% fewer insured
  - 12-14% fewer insured among low risks
  - 5-10% more insured among high risks

AHIP
Center for Policy and Research

Individual Health Insurance: A Comprehensive Survey of Affordability, Access, and Benefits

Study finds greater affordability and access, broader benefits, and better financial protections than is widely known.

August 2005

In the fall of 2004, America's Health Insurance Plans (AHIP) conducted a comprehensive survey of member companies doing business in the individual health insurance market. The study shows that individually purchased major medical insurance was more affordable and accessible than may be widely known, and offered a broad array of benefits. Most applications for coverage were approved with no restrictions, and the benefits commonly purchased by consumers provided substantial financial protection.

In some states with restrictions on premium variation and underwriting -- often known as "community-rated" states -- overall premiums were significantly higher.

The survey was divided into three components:
- premiums,
- underwriting, and
- benefits.

The survey of individual market premiums included just under 1.9 million policies, covering approximately 3.2 million individuals. The survey of underwriting and offer rates was based on over 925,000 individual applicants and a total of almost 1.1 million applications for coverage. The benefits survey included data on 500,000 single policies and 230,000 family policies. This represents the most extensive industry survey of individual coverage undertaken to date.[1]

Key findings:

- Nationwide, annual premiums averaged $2,268 for single coverage and $4,424 for a family plan in 2004. For single policies, annual premiums ranged from $1,170 for a person aged 18-24 to $4,185 for a person aged 60-64. For family policies, premiums ranged from $1,832 for policies covering only children under age 18 to $7,248 for families headed by a person aged 60-64.

[1] See also Thomas D. Musco, *Individual Medical Expense Insurance Affordable, Serves Young and Old*, Health Insurance Association of America, July 2002; Thomas D. Musco and Thomas F. Wildsmith, *Individual Health Insurance: Access and Affordability*, Health Insurance Association of America, October 2002; and Thomas F. Wildsmith, *Individual Health Insurance: Wide Choice of Benefits Available*, AAHP-HIAA, February 2004.

Table 2
Average Annual Premiums by State – Single Coverage, 2004

State	Policies in Survey	Average Annual Premium
New Jersey	29,198	$6,048
Massachusetts	14,104	$5,257
New York	5,932	$3,743
Arkansas	1,633	$3,435
South Carolina	6,156	$3,328
Maryland	1,285	$3,279
West Virginia	941	$3,141
New Hampshire	3,348	$3,134
South Dakota	1,944	$3,133
Oklahoma	3,748	$3,047
Connecticut	4,358	$2,963
Georgia	5,742	$2,910
Louisiana	2,541	$2,858
Tennessee	7,647	$2,851
Texas	27,132	$2,836
Wyoming	1,586	$2,734
Mississippi	3,100	$2,729
North Carolina	13,953	$2,623
Illinois	22,035	$2,591
Alabama	2,415	$2,548
Florida	162,992	$2,539
Arizona	9,529	$2,440
North Dakota	1,579	$2,420
Montana	4,077	$2,418
Wisconsin	11,876	$2,373
Nevada	10,239	$2,364
Virginia	50,952	$2,332
Indiana	15,402	$2,330
Ohio	20,043	$2,304
Missouri	9,031	$2,299
Nebraska	5,848	$2,295
National	**1,227,147**	**$2,268**
Kansas	3,835	$2,260
Idaho	1,247	$2,207
Colorado	16,482	$2,198
Oregon	6,706	$2,162
Minnesota	12,846	$2,121
Kentucky	13,066	$2,033
Pennsylvania	6,814	$1,989
New Mexico	4,812	$1,982
Iowa	6,915	$1,965
Michigan	12,051	$1,926
California	680,338	$1,885

Source: America's Health Insurance Plans.
Note: Results from states with fewer than 500 policies are included in the totals, but not reported separately.

INSURING THE HEALTHY OR INSURING THE SICK? THE DILEMMA OF REGULATING THE INDIVIDUAL HEALTH INSURANCE MARKET

FINDINGS FROM A STUDY OF SEVEN STATES

Nancy C. Turnbull and Nancy M. Kane
Harvard School of Public Health

February 2005

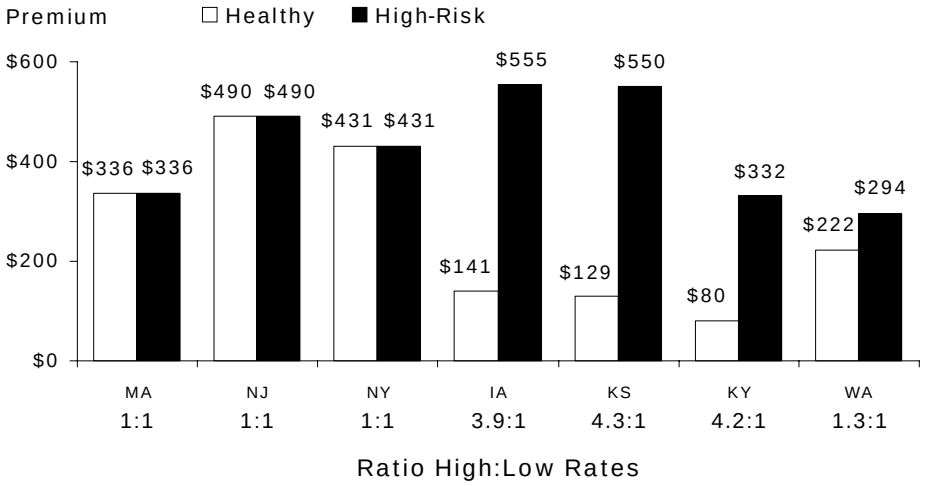
ABSTRACT: The market for people who buy their own coverage has long been a troubled segment of the health insurance industry. Individual policies frequently are unavailable to those with preexisting health conditions, premiums are expensive, and benefits are limited. Many states have attempted to reform their individual health insurance market by requiring carriers to sell coverage to all applicants regardless of age or health; creating high-risk pools for those with preexisting conditions; and placing limits on the extent to which premiums can vary by age, sex, or health status. This study assesses the effectiveness of such regulatory reforms in seven states. The authors endorse reforms that deal with availability and affordability, including requiring insurers to offer coverage to all with reasonable waiting periods for preexisting conditions; requiring standardized benefits; limiting permissible rating factors and rate variation; and most important, finding ways to insure individuals through the group market.

Click here to view the state case studies.

Support for this research was provided by The Commonwealth Fund. The views presented here are those of the authors and should not be attributed to The Commonwealth Fund or its directors, officers, or staff, or to members of the Task Force on the Future of Health Insurance.

Additional copies of this (#771) and other Commonwealth Fund publications are available online at www.cmwf.org. To learn about new Fund publications when they appear, visit the Fund's Web site and register to receive e-mail alerts.

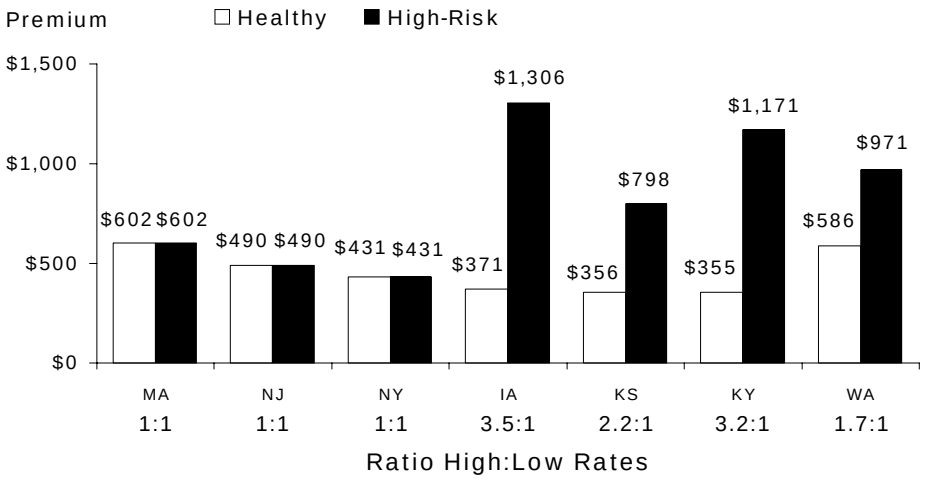
Figure 1. Monthly Premium Rates by Health Risk Category, Single Coverage, 25-Year-Old Male



Notes: Product closest to $500 deductible with coverage for prescription drugs and mental health services. Rate for "healthy" is for dominant carrier in each state's largest county. "High-risk" in the four weaker regulation states that do NOT require community rating is the state's high-risk pool.
Source: Authors' analysis, plan documents and calculations.

As shown in Figure 2, in these states a similar magnitude of rate variation occurs for a 60-year-old but at a much higher premium level. In contrast, in the stronger-regulation states, consumers of the same age pay the same premium rate regardless of their health status. In the states that also permit gender rating, women pay significantly higher premiums than do men.

Figure 2. Monthly Premium Rates by Health Risk Category, Single Coverage, 60-Year-Old Male



Notes: Product closest to $500 deductible with coverage for prescription drugs and mental health services. Rate for "healthy" is for dominant carrier in each state's largest county. "High-risk" in the four weaker regulation states that do NOT require community rating is the state's high-risk pool.
Source: Authors' analysis, plan documents and calculations.

Premium Rates for Standard Individual Health Plans
September 2007

Rates may vary depending upon the month in which you enroll.
To verify the rates listed below, please call applicable HMO directly.

Westchester County

HMO **What You Pay Per Month**

Aetna Health, Inc.
800/435-8742

	HMO	POS
Individual	$822.38	$990.84
Husband/Wife	$1,644.54	$1,981.24
Parent & Child(ren)	$1,455.34	$1,753.43
Family	$2,444.20	$2,944.67

HMO **What You Pay Per Month**

CIGNA HealthCare of New York, Inc.
800/345-9458

	HMO	POS
Individual	$783.40	$1,043.03
Husband/Wife	$1,566.80	$2,086.02
Parent & Child(ren)	$1,331.79	$1,773.10
Family	$2,350.18	$3,129.02

HMO **What You Pay Per Month**

ConnectiCare of New York, Inc.
800/846-8578

	HMO	POS
Individual	$786.73	$1,029.03
Husband/Wife	$1,573.47	$2,058.06
Parent & Child(ren)	$1,340.59	$1,753.47
Family	$2,445.17	$3,198.22

HMO **What You Pay Per Month**

Empire HealthChoice HMO, Inc.
d/b/a Empire BlueCross BlueShield HMO
800/662-5193

	HMO	POS
Individual	$759.49	$1,245.65
Husband/Wife	$1,518.98	$2,491.30
Parent & Child(ren)	$1,367.08	$2,242.17
Family	$2,278.47	$3,736.95

HMO **What You Pay Per Month**

GHI HMO Select, Inc.
d/b/a GHI HMO
914/340-2300
877/244-4466

	HMO	POS
Individual	$1,260.62	$1,512.77
Family	$3,214.58	$3,857.56

HMO **What You Pay Per Month**

Health Insurance Plan
of Greater New York, Inc.
800/447-8255

	HMO		POS
Adult	$501.75	Individual	$982.51
Per Child *	$233.39	Husband/Wife	$1,965.02
* Maximum of $933.56		Parent & children	$1,719.33
for 4 or more children.		Family	$2,831.52

NY vs. CA premiums
Blue Cross HMO (monthly)

	NY	CA-low risk	CA-hi risk
Age 25	760	264	291
Age 60	760	711	1,019

* CA hi-risk premium from MRMIP, limited to $75,000 benefit.

NBER WORKING PAPER SERIES

THE EFFECT OF STATE COMMUNITY RATING REGULATIONS ON PREMIUMS AND COVERAGE IN THE INDIVIDUAL HEALTH INSURANCE MARKET

Bradley Herring
Mark V. Pauly

Working Paper 12504
http://www.nber.org/papers/w12504

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
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August 2006

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TABLE 4
Results for Risk on Coverage in the Individual Market
Unregulated Versus Regulated States

Condition-related Expected Expense:	*Unregulated States: Observed*	*Regulated States: Observed*	*Regulated States: Simulated*[a]
NHIS data for 1997 through 2004:			
Probit coefficient[b]:	- 0.209 [0.029]***	0.007 [0.077]	n/a
Relative Rates of Insurance Coverage			
Average	1.000	1.000	0.926
95th percentile	0.882	1.004	0.930
90th percentile	0.915	1.003	0.929
75th percentile	1.006	1.000	0.926
50th percentile	1.014	0.999	0.926
25th percentile	1.020	0.999	0.925
10th percentile	1.029	0.999	0.925
5th percentile	1.044	0.998	0.925
CTS-HS data for 1998/1999, 2000/2001, and 2003:			
Probit coefficient[b]:	- 0.094 [0.025]***	0.041 [0.061]	n/a
Relative Rates of Insurance Coverage			
Average	1.000	1.000	0.940
95th percentile	0.899	1.046	0.984
90th percentile	0.929	1.032	0.970
75th percentile	0.974	1.011	0.951
50th percentile	1.017	0.992	0.932
25th percentile	1.027	0.988	0.929
10th percentile	1.045	0.980	0.921
5th percentile	1.056	0.975	0.917

p-values: Statistical significance at 0.01 or better (***); between 0.01 and 0.05 (**); between 0.05 and 0.10 (*)
[a] The methods for determining the simulated effect are described in the text
[b] Estimates are derived from an individual-level multivariate model for insurance coverage.

Risk spirals do occur

- Historically: BCBS community rating disappeared.
- Recent example: Harvard 1995-1997 risk spiral.
  - Employer contribution equalized across HMO, PPO. PPO enrollees were sicker, and within 3 years PPO collapsed.

NBER WORKING PAPER SERIES

ADVERSE SELECTION IN HEALTH INSURANCE

David M. Cutler
Richard J. Zeckhauser

Working Paper 6107

NATIONAL BUREAU OF ECONOMIC RESEARCH
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Cambridge, MA 02138
July 1997

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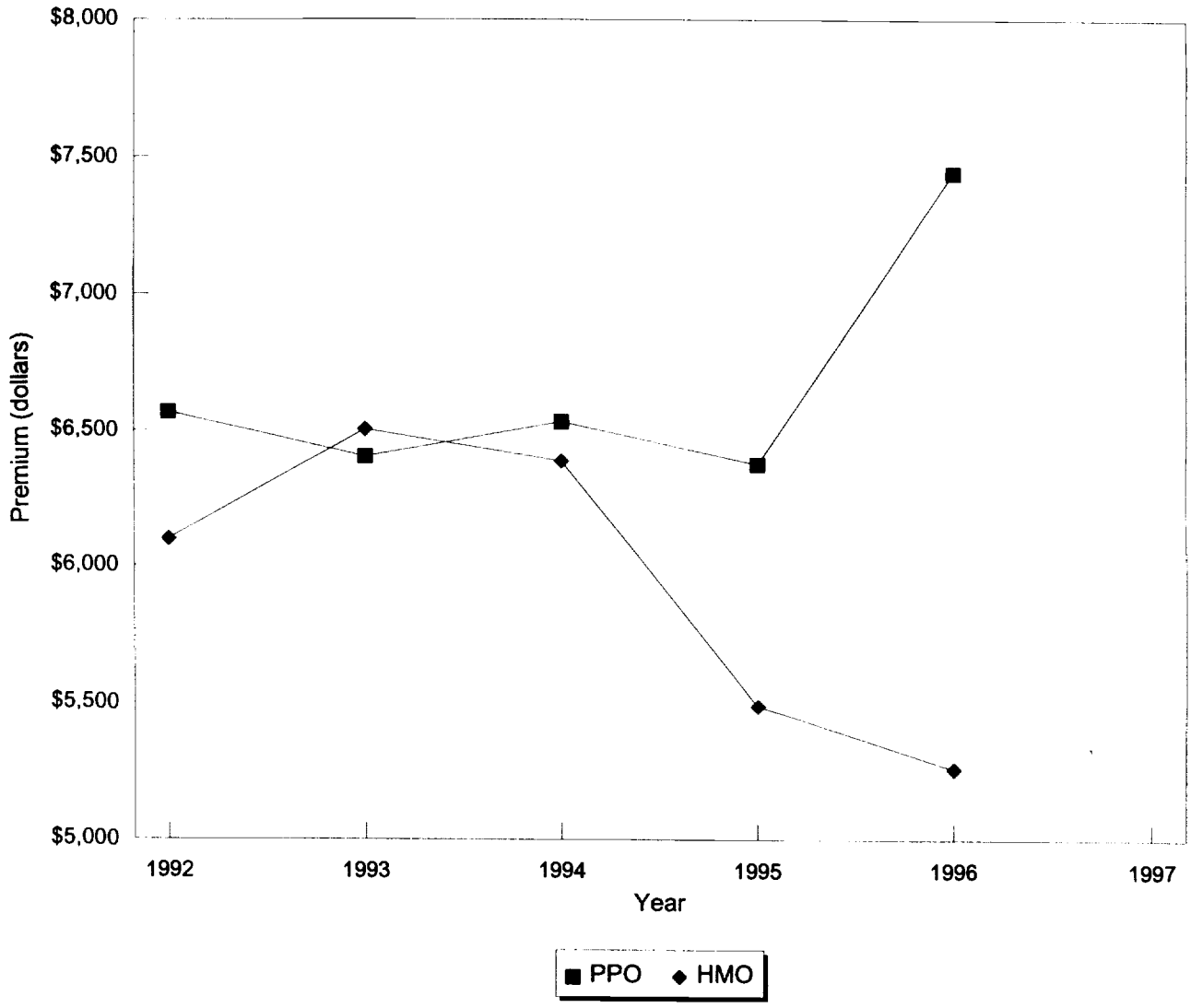
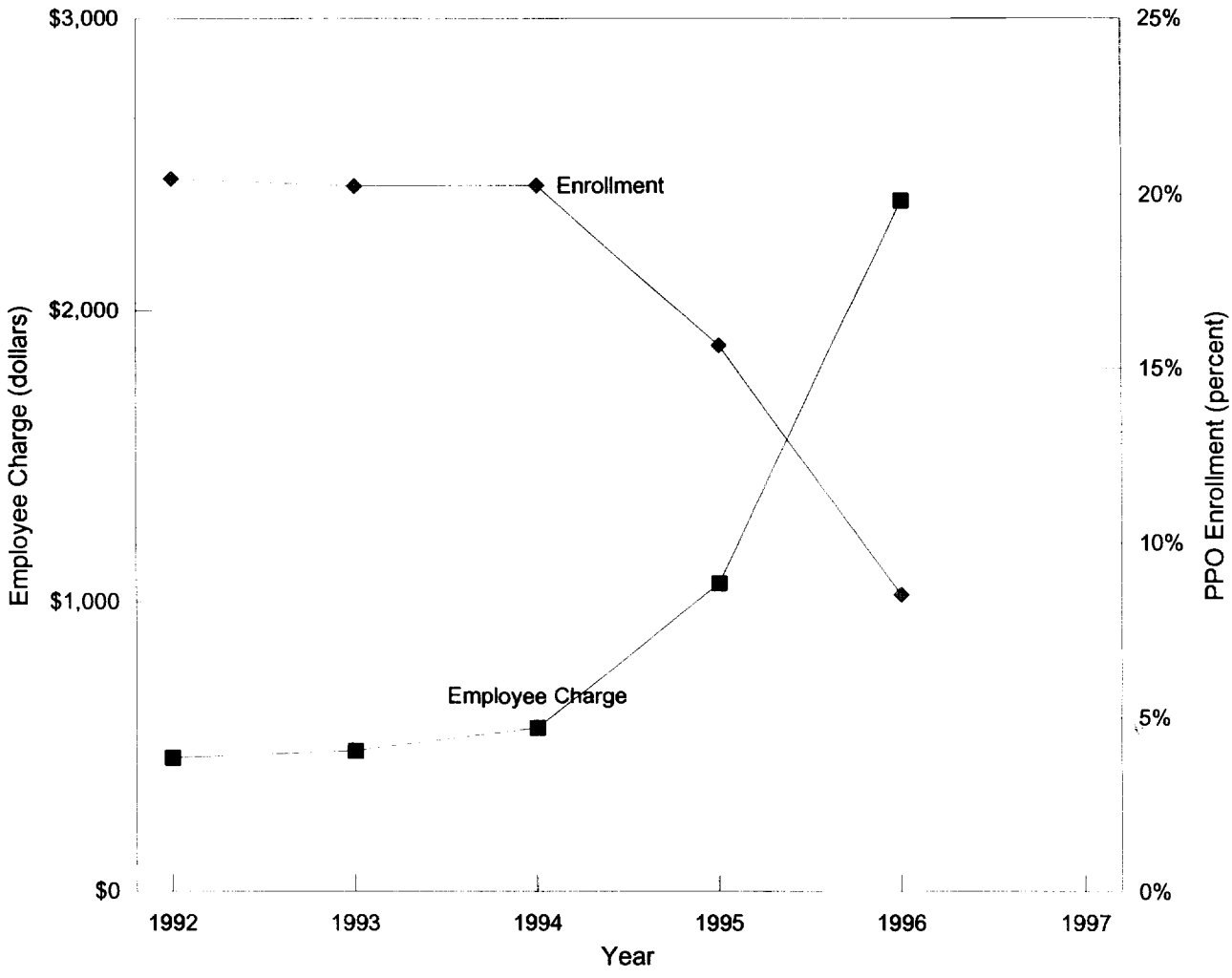
Figure 3: Real Family Premiums at Harvard



Note: Premiums are in 1996 dollars

Figure 4: Real Employee Charge for the PPO and Enrollment in the PPO at Harvard



Note: Employee charge is in 1996 dollars and is for a family policy.

Can an individual mandate + regulation avert risk selection?

- No.
- Even with strong enforcement and no exceptions, problems will still occur.
- Ellis and van de Ven:
  - Catalog long list of distortionary behaviors
  - Figures 9, 10: many diseases have predictably high losses, so strong incentive to avoid those enrollees.

CHAPTER 17, Handbook of Health Economics (eds. A.J. Culyer and J.P. Newhouse)

RISK ADJUSTMENT IN COMPETITIVE HEALTH PLAN MARKETS

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Erasmus University Rotterdam

Randall P. Ellis
Boston University

March 31, 1999

JEL-classification codes: C10, D82, G22, I10, I11, I18

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Table 1. Effects of selection

Effects of *adverse selection:*

- high premiums for high-risk individuals;
- dependent upon the level of the contracting costs either the low-risk individuals or the high-risk individuals cannot obtain as much health plan coverage as they wish;
- welfare loss in the case of an unstable market (including bankruptcy of adversely selected health plans).

Effects of *cream skimming*:

- disincentive for the health plans to respond to the preferences of high-risk consumers;
- incentive to provide poor quality of care and poor service to high-risk individuals;
- disincentives for providers and health plans to acquire the best reputation for treating chronic illness;
- dependent upon the form of premium regulation (per health plan or nation-wide): high premiums for high-risk patients or bankruptcy of non-skimming selected health plans;
- investments in cream skimming have higher returns than investments in improving efficiency;
- investments in cream skimming (e.g., resources to identify and attract high-risk consumers) are a welfare loss.

Table 2
Health Plan Response to Incentives Created by the Way that Health Plans are Reimbursed

Choice of plan benefit features
- Deductibles or copayments for selected conditions.
- Coverage limits (lifetime or annual)
- Coverage of pharmaceuticals or other specific services
- Exclusions for preexisting conditions

Responses to regulated rate classes
- Efforts to attract more profitable rate classes such as:
  - family or individual contracts
  - employee or retiree
  - specific geographic area
- Selection of relative premiums by rate classes

Plan level efforts to attract profitable/avoid unprofitable enrollees
- Denying coverage ("medical underwriting")
- Canceling coverage
- Selective advertising
- Pre-enrollment screening
- Selective enrollment and disenrollment counseling

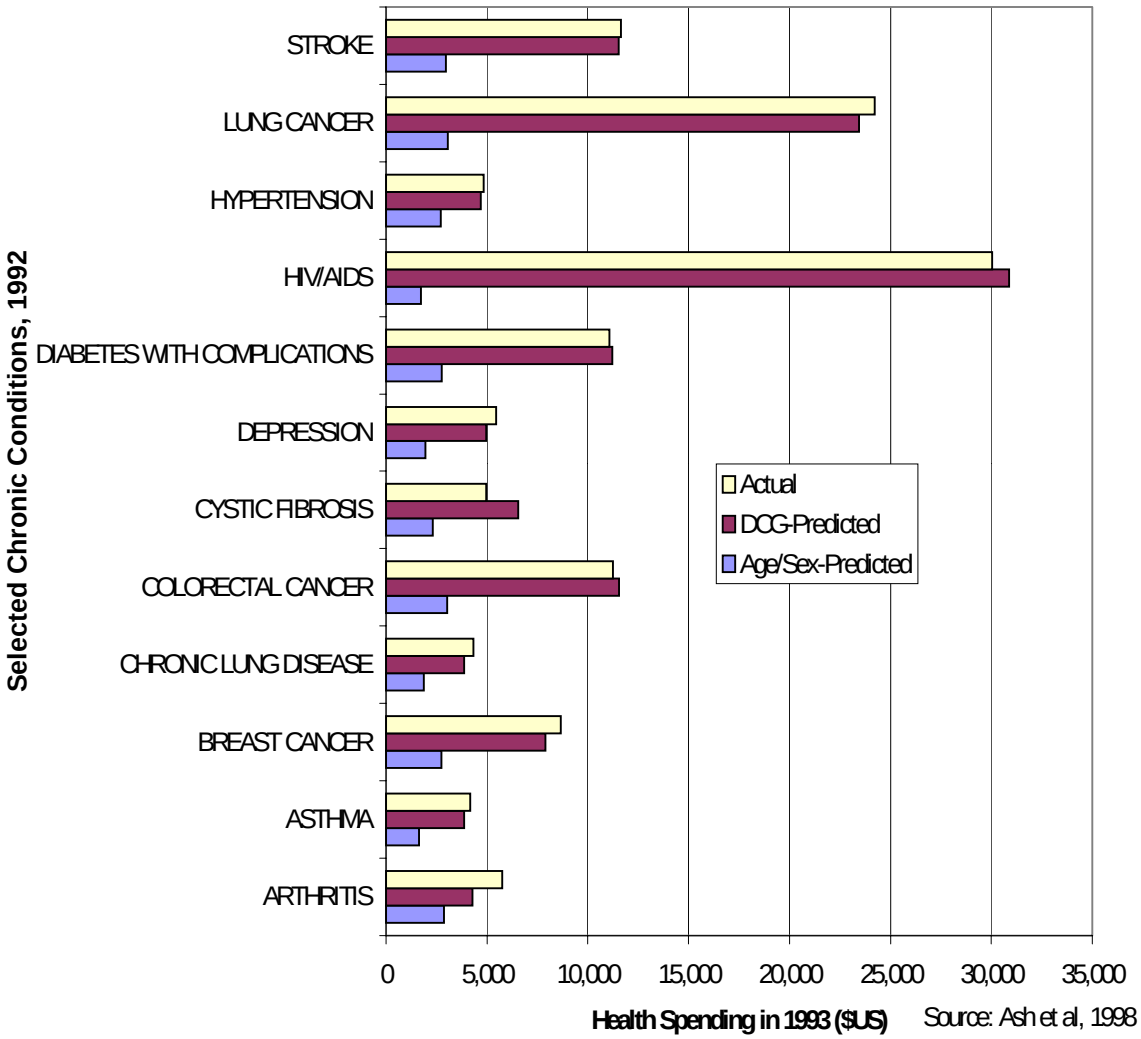
Changes in service offerings
- Selection of specialists to include or exclude from plan network
- Over-provision of services that attract profitable enrollees
- Underprovision of services that attract unprofitable enrollees
- Change of place of service to increase payments
- Unnecessary provision of services to code a diagnosis
- Change in timing of services to increase payment

Changes in diagnostic coding or other claims information
- Upcoding of diagnoses to more serious conditions
- Proliferation of diagnoses
- Fraudulent diagnostic coding
- Coding of "rule out" diagnoses

Attempts to influence survey-based health measures
- Enrollee coaching
- Nonrandom enrollee sampling
- Biased corrections for nonresponse

Figure 9

Comparison of Actual Versus Predicted Health Spending
By Selected Chronic Conditions
US Privately Insured Sample (N=346,466)

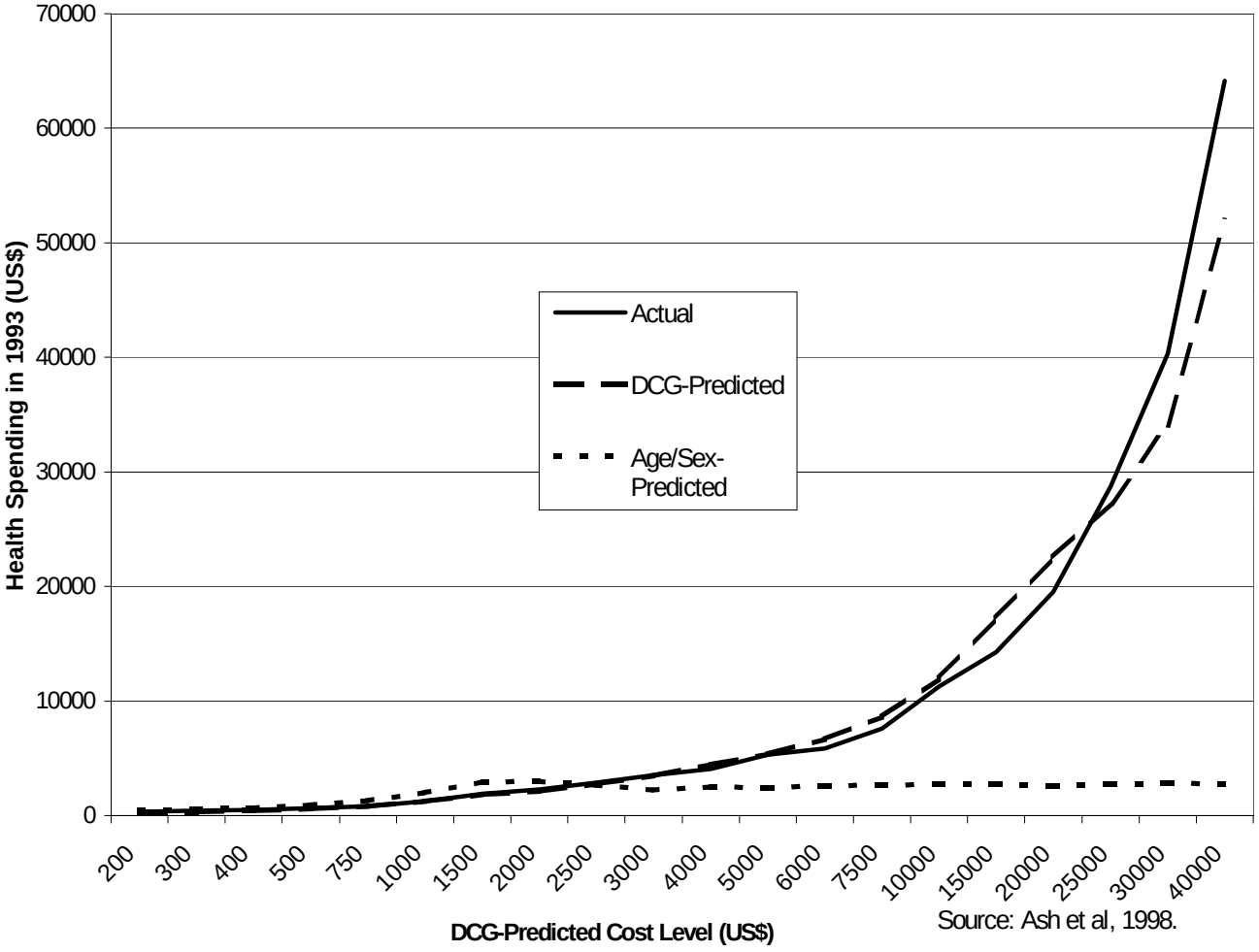


Source: Ash et al, 1998

Figure 10

Comparison of Actual Versus Predicted Health Spending by DCG Predicted Cost Intervals

US Private Insured Sample (N=346,466)



Source: Ash et al, 1998.

Miller and Luft (1997)

"…plans face strong disincentives to excel in care for the sickest and most expensive patients. Plans that develop a strong reputation for excellence in quality of care for the sickest will attract new high-cost enrollees…"

Can reinsurance avert risk selection?

- Not very well…
- Typical government-sponsored reinsurance schemes would not have much impact on risk selection.
- But hybrid schemes that combine with diagnosis-based risk adjustment appear to be working better.

What is Reinsurance?

- Reimburses insurer for a portion of the costs of the most expensive enrollees

- E.g.: A common proposal would reinsure 75% of costs above the threshold for the top 1% of spenders.
  - The 1% threshold is about $35,000. This group accounts for about 25% of health spending.

- States that have public reinsurance programs include NY, AZ, CT, ID, MA, NH, NM.

Reinsurance rationale?

1. Mitigates dumping among top 1%.
   Doesn't much help the other 20-30% who are high risks

2. In markets without community rating, it is a vehicle to help pool risks.

3. Vehicle for subsidizing premiums.
   But poorly targeted since not means tested.

Not necessary for protecting insurance companies against risk: Private reinsurance already does that well.

Reinsurance Modeling

- NHPF and others have argued that reinsurance would have little risk selection benefit.

- We have estimated reinsurance effects on:
  - Premium reductions (subsidy)
  - Decreased risk selection incentives
  - Budgetary costs in CA
  - Uninsurance reduction

NHPF Background Paper
April 13, 2005

NATIONAL HEALTH POLICY FORUM

Fundamentals of Underwriting in the Nongroup Health Insurance Market: Access to Coverage and Options for Reform

Mark Merlis, *Consultant*

OVERVIEW — *Although the majority of Americans with health insurance obtain coverage through their employers, many individuals must negotiate the nongroup insurance market alone. Insurers use a process called medical underwriting to identify applicants with current or recent medical problems. Because these applicants are likely to cost the insurer more in claims than a healthier person, insurers may charge them higher premiums or restrict or deny coverage. This background paper reviews the practice of underwriting, state and federal regulation of insurers offering nongroup health coverage, and several proposed options for improving access to coverage for applicants who are in poor health.*

THE GEORGE WASHINGTON UNIVERSITY
WASHINGTON DC

One alternative to a high-risk pool is to allow uninsurable people to "buy in" to a public program, such as Medicare or Medicaid, by paying a premium. The Clinton administration proposed allowing people aged 62 to 64 (and some younger displaced workers) to buy Medicare coverage. Although this proposal did not specifically target the uninsurable, people just below age 65 may be especially likely to have difficulty obtaining affordable private coverage. Tennessee's TennCare program for Medicaid beneficiaries has allowed people to buy in to the program if they were determined by the state or a state-contracted underwriter to be unable to obtain private insurance for health reasons. Participants with income above the federal poverty level pay an income-based premium ranging from $20 to a maximum of $550 per month. TennCare as a whole has faced continual financial pressures; a broad package of enrollment cuts proposed by Governor Bredesen includes eliminating the buy-in option for uninsurable people above poverty.[39]

Reinsurance

A health insurer (or a self-insured employer health plan) can buy reinsurance or stop-loss coverage to limit its potential risks for very high costs. There are two kinds of stop-loss coverage, individual and aggregate; an insurer may purchase either or both.

Under individual stop-loss, the reinsurer assumes full or partial liability when costs for any single enrollee during a year exceed a specified dollar threshold. The original insurer is usually required to retain at least some liability for costs above the threshold so that it will have an incentive to continue managing the patient's care. For example, the reinsurer might pay 90 percent of individual expenses in excess of $25,000; if the individual had accumulated $100,000 in bills, the primary insurer would pay $32,500 ($25,000 plus 10 percent of the remaining $75,000) and the reinsurer would pay $68,500. Under aggregate stop-loss, the reinsurer steps in when total costs for a whole group of enrollees exceed some limit—for example, 120 percent of premium revenues.

Reinsurance may be purchased by small to mid-sized self-insured employer plans, for which a handful of high-cost cases could drive total plan costs above the level the employer finds acceptable. Or, it may be bought by insurers in the small group or individual market who have a relatively small number of cases across which to spread risk. In either case, the reinsurer is in effect pooling the risks of a number of smaller primary insuring entities. Although private reinsurance is thought to be common in health care, there is little data on how many insurers or employers participate in these arrangements or how much risk they are transferring.[40] One report suggests that the general reinsurance market tightened after September 11 and that as many as half of the firms that had been offering medical reinsurance left the market by 2004; those that remained were raising premiums and imposing higher loss thresholds.[41]

Private reinsurance protects each participating insurer from a high-cost event or a randomly excessive incidence of such events. Because revenues from the pool of participants must be enough to cover the reinsurer's losses, reinsurance does not reduce the overall cost of insurance. (On the contrary, it raises costs, because the reinsuring entity has administrative costs and desires a profit.) Reinsurance merely ensures that no one participant will suffer unduly high losses due to bad luck.

Some states have experimented with subsidized reinsurance programs for individuals or small groups, under which payments from the participating insurers are supplemented with funds from other sources that help cover part of the reinsurer's losses. In Connecticut and Idaho, for example, the funding mechanism is comparable to that used in many high-risk pools; losses are covered by assessments on health insurers in the state, including insurers not participating in the arrangement. The Healthy New York program uses tobacco settlement funds to provide reinsurance for carriers selling nongroup coverage to modest-income individuals; the program assumes 90 percent of costs between $5,000 and $75,000 for any individual enrollee. In Arizona, the state-subsidized Health Care Group provides aggregate stop-loss coverage to carriers enrolling small groups and self-employed individuals; it also helps these carriers buy individual stop-loss in the commercial market.[42]

The health insurance proposal offered by Senator Kerry in his presidential campaign would have created a federal reinsurance program for any employer group, large or small, that offered coverage to all employees and met other specific conditions. The program, subsidized through federal general funds, would have covered 75 percent of costs in excess of $30,000 in 2006, rising to $50,000 in 2013. The plan was designed to reduce employer costs by about 10 percent.[43]

Some analysts have suggested that a public health reinsurance program could be modeled on the mortgage insurance offered by the Federal Housing Administration.[44] Mortgage insurance protects lenders against losses in the event that a borrower defaults and the proceeds from a foreclosure are insufficient to cover the loan balance. This protection for lenders seems similar to the protection reinsurance provides to health insurers; it is important to note, though, that mortgage lenders also engage in underwriting, attempting to screen out bad credit risks the same way that insurers screen out bad health risks. Mortgage insurance, like conventional reinsurance, protects against unpredictable risks in a market from which predictable risks have already been screened out.

Although a publicly subsidized reinsurance plan can reduce overall premiums—as any public subsidy could—it would not necessarily remove the incentives for insurers to avoid enrolling chronically ill people who can be expected to incur above-average costs. Table 5 (see next page) shows how rates for people with and without the three high-cost conditions used in the Table 1 example might be affected by a reinsurance

Although a publicly subsidized reinsurance plan can reduce overall premiums, it would not necessarily remove the incentives for insurers to avoid enrolling chronically ill people.

TABLE 5
Effect of Reinsurance on Average Annual Private Insurer Payments, 2001, for Nonelderly People with and without Cancer, Diabetes, and/or Heart Disease at Start of Year

	Health Condition		
	Cancer, diabetes, and/or heart disease	None	Total
Per capita payments without reinsurance	$11,194	$2,266	$3,092
Per capita payments after 75% reinsurance	$ 8,006	$2,184	$2,723
Percent change	– 28%	– 4%	– 12%
Per capita payments after 100% reinsurance	$ 6,943	$2,157	$2,599
Percent change	– 38%	– 5%	– 16%

Source: Author's analysis of MEPS. Population estimates are for noninstitutionalized people aged 18 to 64 who had employer coverage throughout 2001, who had Medicare at no time during that year, and who participated in MEPS in both 2000 and 2001. Spending figures include private insurance spending only and have been adjusted for age and sex.

scheme comparable to the Kerry proposal. Reinsurance would pay 75 percent of costs for any individual in excess of $25,000. (This threshold is used, instead of $30,000, because the example uses 2001 dollars.)

Reinsurance would reduce the primary insurer's average enrollee costs by about 12 percent, roughly the same proportion estimated for the Kerry proposal. The reduction would be larger for people with the chronic conditions because they are more likely than others to have costs above the reinsurance threshold. Even so, the net amount to be paid by the private insurer would be nearly four times as high for the chronically ill enrollees as for the others. An insurer who screened out or charged separate rates to the chronically ill applicants could charge $2,184 for those without chronic conditions instead of $2,723 if all applicants were charged the same rate, a difference of nearly 20 percent.

This is partly because many of the chronically ill have expenses above the reinsurance threshold, and the primary insurer must pay 25 percent of these costs. However, as the last rows show, even a reinsurance plan that paid 100 percent of costs above the threshold would leave a considerable incentive for insurers to continue underwriting. Reinsurance reduces, but cannot eliminate, the incentive for underwriting because it addresses unpredictable risk, whereas underwriting corrects for predictable risk.

Methodology

- Estimated several models to predict 2004 expenditures using 2003 demographic characteristics and medical conditions
  - Used predictions to create four risk pools
- Calculated reinsurance threshold levels using 2004 data
- Calculated average subsidy for each risk pool based on actual expenditures
  - Subsidy amount was 75% of expenditures above reinsurance threshold

Medical Conditions

- Priority conditions
  - Individual was asked whether he/she had ever been told by a doctor or other health care professional that they have (condition)
    - Diabetes
    - Asthma
    - High blood pressure
    - Heart disease
      - coronary
      - angina or angina pectoris
      - heart attack or myocardial infarction
      - stroke or transient ischemic attack
      - other
    - Emphysema
    - Joint pain
    - Arthritis
- Enumerated conditions
  - Individual lists the medical conditions they had since the last interview
  - MEPS coded the conditions using ICD-9-CM codes (235 possible conditions)

2003-2004 MEPS Panel Sample Size

2003-2004 MEPS Panel	Sample Size
Total sample	16,256
Under 65	13,786
Under 65, no public insurance	9,760
Under 65, no public insurance, non-missing priority conditions	9,589

Source: 2003-2004 MEPS

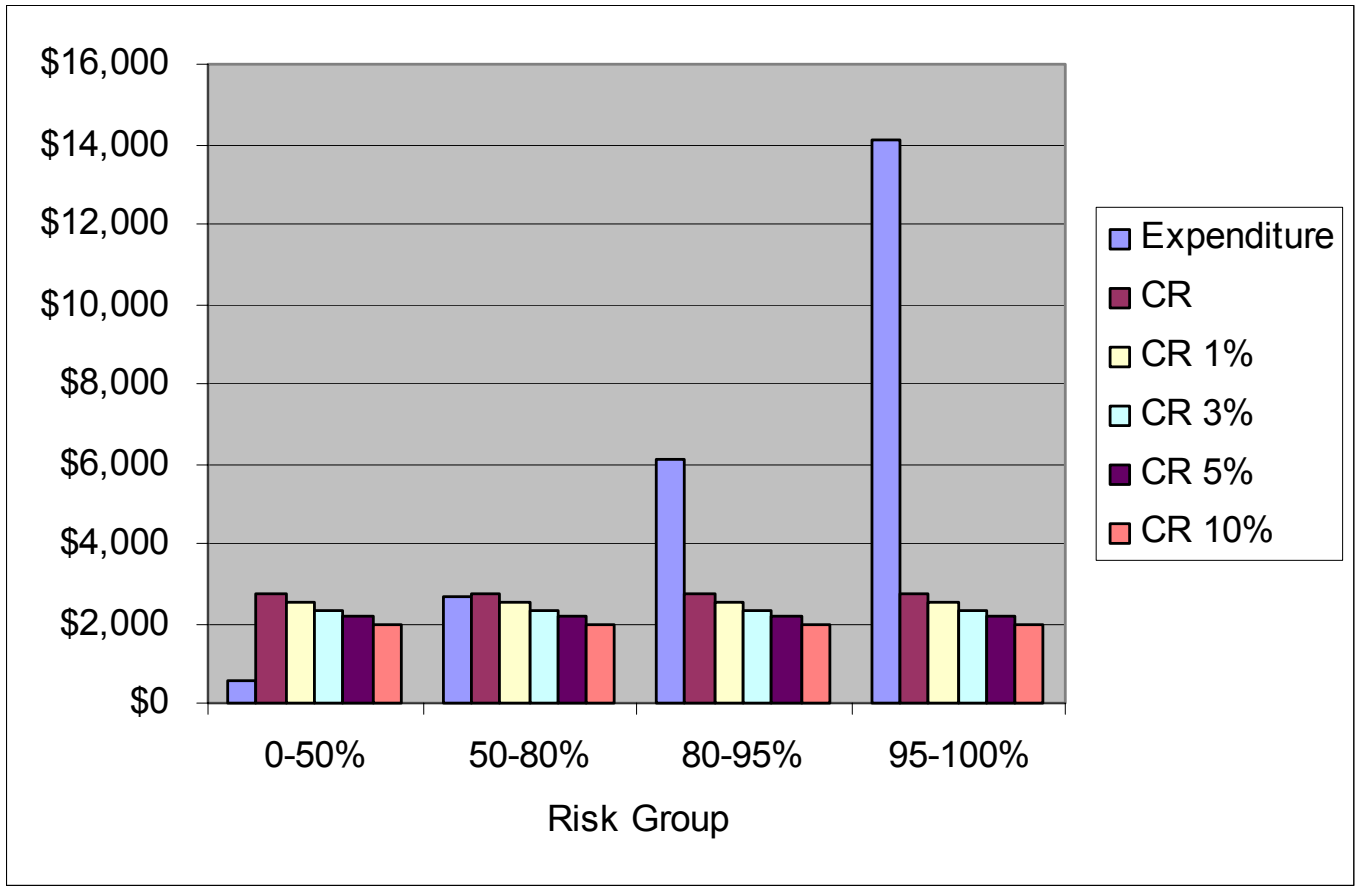
2004 MEPS Cross-Section Expenditure Levels

2004 Expenditures Levels	Expenditures ($2007)
Average	3,004
Minimum*	0
50th percentile	767
90th percentile	7,166
95th percentile	12,144
97th percentile	16,604
99th percentile	34,659
Maximum	272,440

*17.5% of sample had zero expenditures

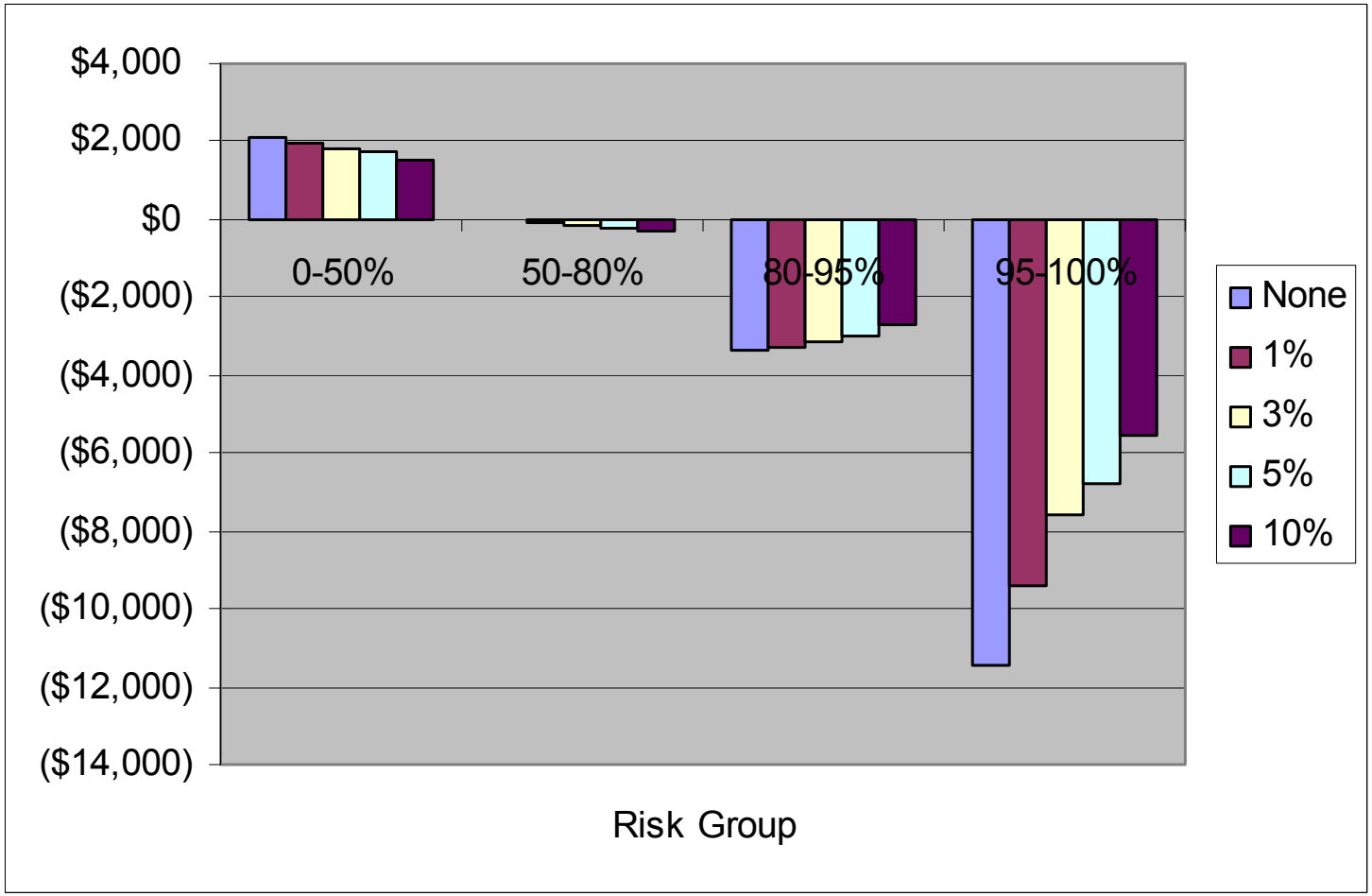
Source: 2004 MEPS (20,197 individuals under 65 with no public insurance)

Expected Expenditures and Community Rated (CR) “Premiums” per Enrollee by Reinsurance Threshold and Risk Group



Source: 2003-2004 MEPS

Expected Profit (or Loss) per Enrollee by Reinsurance Threshold and Risk Group



Source: 2003-2004 MEPS

Expected Profit per Enrollee With and Without Reinsurance

Top 1% Reinsurance Threshold

Risk Group	Predicted Spending	Reinsurance Subsidy	Expected Profit with Reinsurance	Expected Profit with No Reinsurance
0-50%	569	11	2,152	2,141
50-80%	2,694	84	101	16
80-95%	6,076	291	(3,076)	(3,366)
95-100%	14,128	2,177	(9,241)	(11,418)
Entire Pool	2,710	183	183	0

Top 10% Reinsurance Threshold

Risk Group	Predicted Spending	Reinsurance Subsidy	Expected Profit with Reinsurance	Expected Profit with No Reinsurance
0-50%	569	129	2,271	2,141
50-80%	2,694	437	454	16
80-95%	6,076	1,370	(1,996)	(3,366)
95-100%	14,128	6,634	(4,783)	(11,418)
Entire Pool	2,710	733	733	0

Source: 2003-2004 MEPS

State Budget Outlays and Reduction in Uninsurance, by Reinsurance Threshold

Reinsurance Threshold	Budget (mn)	Reduction in Premium	Reduction in Uninsurance
1%	$495	7%	0.7%
3%	$1,039	14%	1.4%
5%	$1,354	19%	1.9%
10%	$1,979	27%	2.7%

Assumes 2.7 million people in the individual market and a price elasticity of 0.1.

Source: 2003-2004 MEPS

Drawbacks of Typical Reinsurance

- Still strong incentives to risk select.
- Insurers have dulled cost containment incentives… for exactly the expensive cases we worry most about.
- Large budgetary cost to lower premiums, inefficiently targeted by income.

=> But combining with diagnosis-based risk-adjustment could minimize these limitations.

Hybrid Reinsurance / Risk-Adjustment

- *Still strong incentives to risk select?*
  - Risk adjustment mitigates by rewarding insurers for taking on anyone above average risk, not just top 1%.
- *Insurers have dulled cost containment incentives.*
  - Risk adjustment uses diagnosis-based measures, maybe from prior year, so less moral hazard.
- *Large budgetary cost to lower premiums, inefficiently targeted by income.*
  - The risk adjustment mechanism can be used to directly assess insurers that cream skim the healthiest enrollees. No tax revenue is needed.

Reinsurance is a special case of risk-adjustment

- Reinsurance is risk adjustment that:
  - Is ex-post only (doesn't use prior history).
  - Uses only expenditure data (not diagnoses).
  - Only applies to a limited portion of the spending distribution (e.g., top 1%).

- But we now know how to do much better!

Why not use fuller risk adjustment in individual market?

- Techniques have improved greatly for diagnosis-based risk-adjustment (e.g., hybrid ex-ante / ex-post).
  - Comprehensive review in van de Ven and Ellis (2000), much literature since then.

- IS politically feasible:
  - Medicare Advantage, part D
  - State Medicaid HMO contracts
  - Internationally used (e.g., Netherlands)

Sample design for risk-adjusted premium subsidies

- State (or public/private entity) develops risk-adjusted subsidy schedule based on hybrid of prospective diagnoses and retrospective reinsurance.
  - Many risk adjustment methods exist. Phase in prospective portion as data become available.
- Individual market insurers receive aggregate subsidy (or assessment) depending on adverse (or positive) risk selection mix of all enrollees combined.
- In competitive market, insurers subtract (or add) the individual's predicted subsidy (assessment) from the premium quote, so easy for shoppers.
- This is similar to Netherlands model (see also van de Ven et al., JHE 2001).

Effects?

- To extent the risk-adjustment schedule mimics insurer estimates:
  - Every enrollee could be equally profitable, so risk selection activities averted. Instead insurers compete on value.
  - Special needs plans could arise (such as AIDS plans in Medicare Advantage).
- Since schedule will be imperfect, use rate bands (e.g, +/- 10%):
  - Use premium variation information to improve risk-adj schedule
  - Compromise between equity and efficiency

Comparison with typical reinsurance schemes

- There will still inevitably be some risk selection, but much less. Better patient/consumer protection.
- Better cost containment incentives for insurers.
- Assessments from low risks could fund subsidies for sick. So public budget is freed up for income-based subsidies.

Pros/cons of risk-adjustment (vs. community rating alone)

- Can promote efficiency/equity objectives:
  - Distortionary risk selection behaviors reduced…better patient protection.
  - Stabilizes the insurance market, so avoids plan withdrawals.
  - Provides mechanism to efficiently subsidize targeted groups.
- Cons:
  - Complexity requires good governance, extensive data
  - Moral hazard still an issue, though improving with hybrid ex-ante/ex-post models
  - Insurers capture subsidies if have market power… need guaranteed issue in public plans too?