

# Price Sensitivity in Health Care: Implications for Health Care Policy

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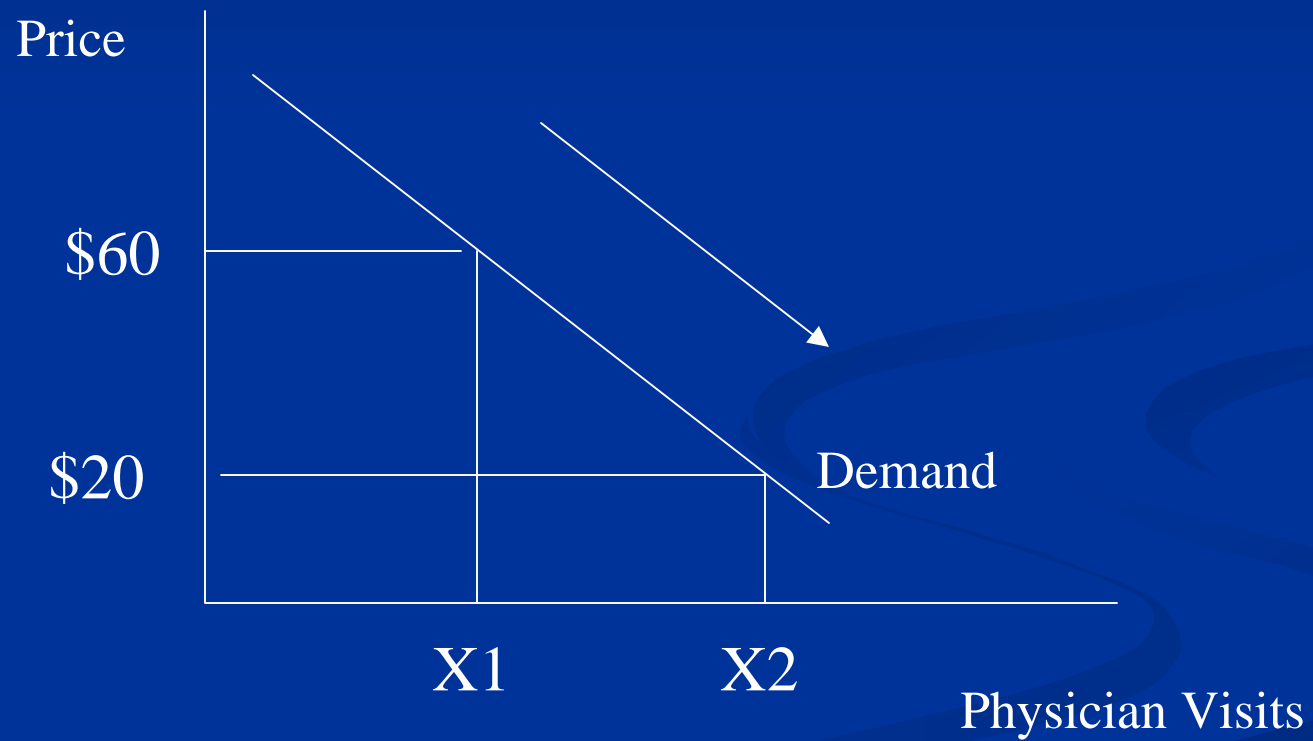
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# Price Sensitivity

- How responsive are buyers to changes in price:
  - When they buy health services?
  - When they buy health insurance?
- Why should we care?

# Health Services

# Moral Hazard



# RAND Health Insurance Experiment

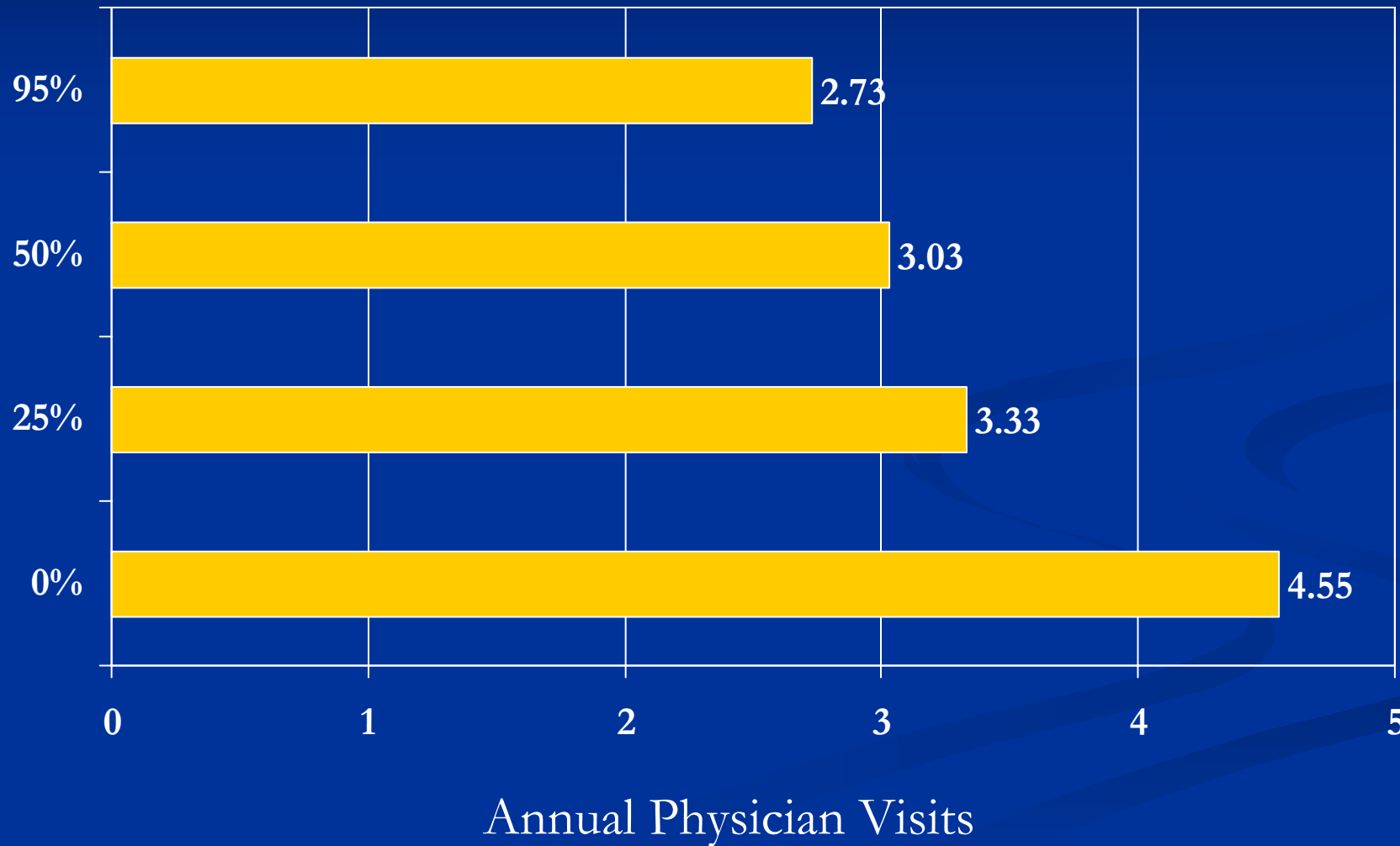
- Even though it's 30 years old, the RAND-HIE continues to be relevant.
  - Strong methodology
  - Consistent approach to a range of services
  - Subsequent research is largely consistent with the findings of this 1970s study.

# The RAND Study

- Random assignment
  - Variety of coinsurance arrangements
  - \$1,000 stoploss (\$3,700 in 2004 \$)
- Covered virtually all services
- 5,809 enrollees covered 1974-1979
- Participation criteria:
  - Under age 62
  - Incomes < \$93,000 (in 2004 dollars)

# HIE Physician Visit Findings

## Co-Insurance Rate



## HIE Predicted Mean Annual Use of Medical Services

	Likelihood of Any Use	Face-to-Face Physician Visits per Capita	One or More Admissions	Medical Expenses (2004 \$)
Free	86.7%	4.55	10.37%	\$2,889
Family Pay				
25 Percent	78.8	3.33	8.83	2,342
50 Percent	74.3	3.03	8.31	2,168
95 Percent	68.0	2.73	7.74	1,985

Adapted from Manning, et al (1987, Tables 2 and 3)

## Subsequent Work on:

- Physician visits
- Emergency department use
- Dental services
- Mental health services
  
- Consistent with the RAND-HIE

# Subsequent Work: Prescription Drugs

- RAND-HIE:
  - Single-tier coinsurance plan
  - Relative to those who paid 25% of the price, those with free drugs had 23% more prescriptions filled.
- More Recent Work:
  - Focus on 2- and 3-tier drug plans
  - Copays at each tier reduce use, with the greatest price sensitivity at the “non-preferred brands” tier
  - Greater price sensitivity for drugs taken intermittently to treat symptoms than those taken for on-going care
  - Greater price sensitivity for drugs with better substitutes
  - Prescription & over the counter drugs both complements to physician services

# Subsequent Work: Long Term Care Services

- Remarkably little research
- Evidence that nursing home services are very price sensitive
  - Elasticities greater than -1.0
  - Substantial cross-price elasticity with adult foster care
- Serious implications for an aging population and the structure of the Medicaid program
- Do easy spend-down provisions keep people out of foster care?

## Subsequent Work: Deductibles

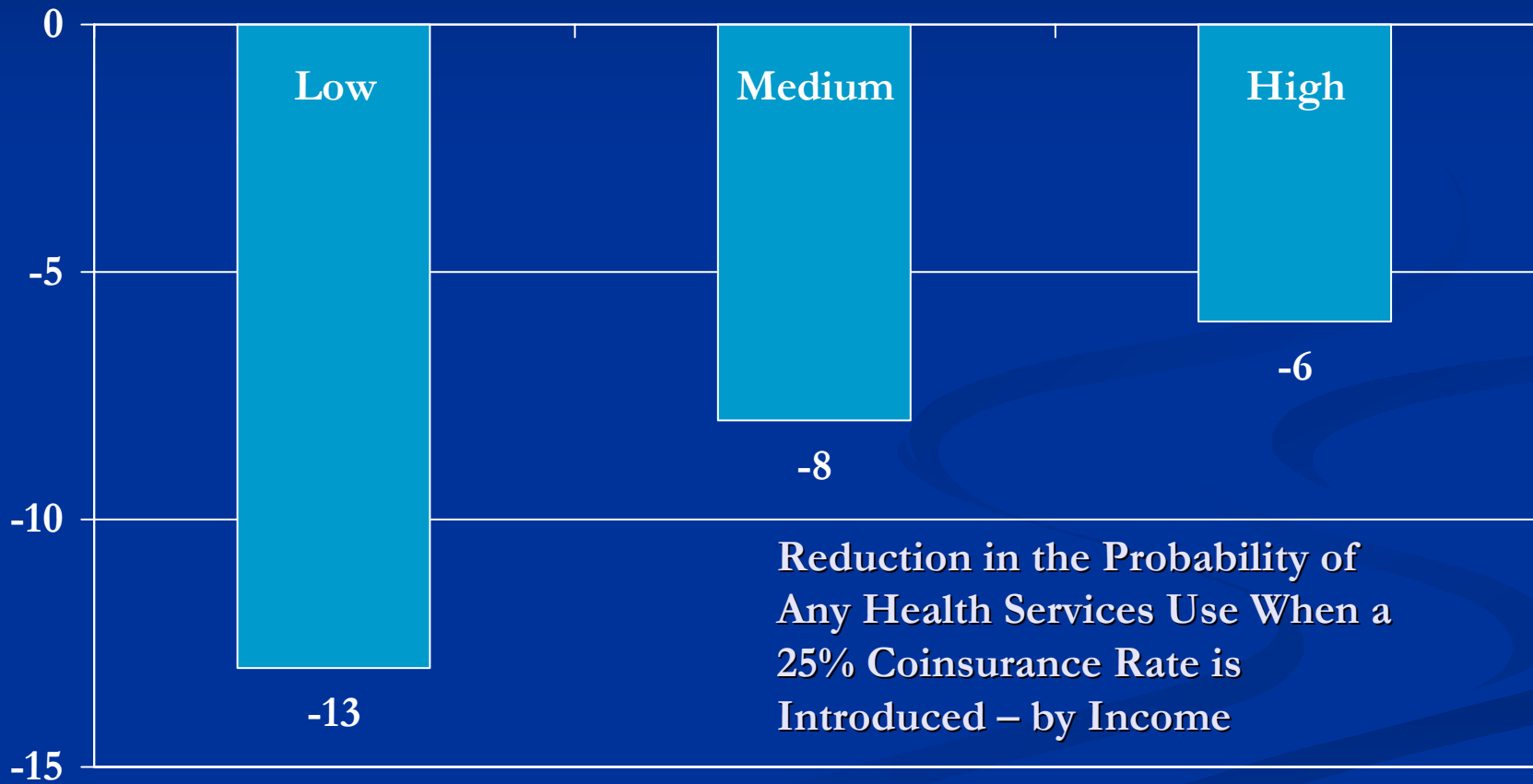
- Remarkably little work – other than the RAND-HIE
- The RAND study found that the presence of a family deductible of \$3,200 (in 2004 \$) resulted in a 31% reduction in medical spending relative to a free plan.

## Deductibles: Van Vliet (2004)

- In the Netherlands in 1996, higher income folks could choose to purchase private coverage that varied with respect to the size of the deductible.
  - Those with deductibles of  $\geq \$1,200$  (in 2004 \$) had expenditures 28% less than they otherwise would have been.
- Consistent with the RAND-HIE

# Price Sensitivity Differs by Income Level

Annual Income



Reduction in the Probability of Any Health Services Use When a 25% Coinsurance Rate is Introduced – by Income

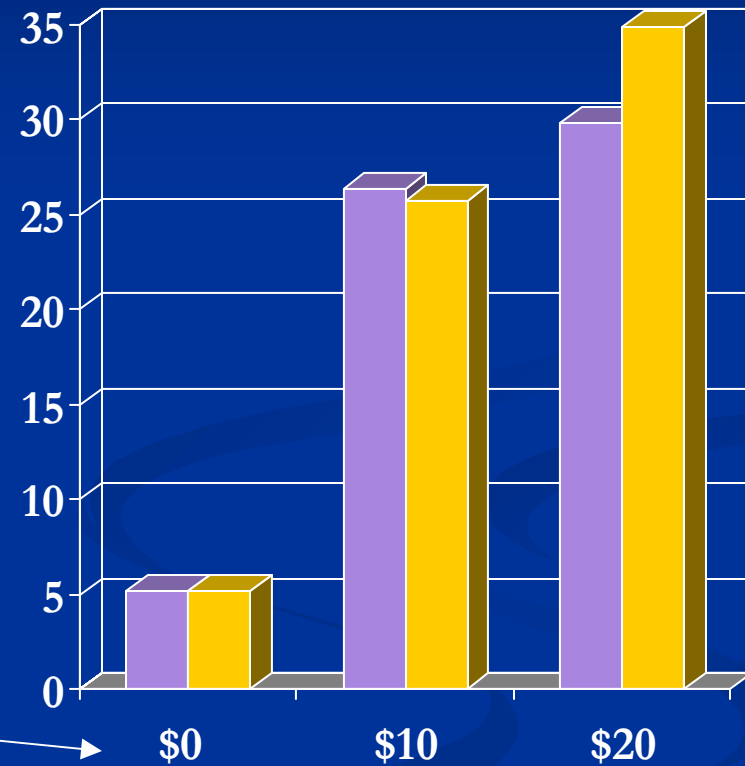
Percent

# Health Insurance

# Insured Employees

- Are remarkably sensitive to the size of employee premium contribution in choosing which plan to take.

Percent Switching Plans



Monthly Employee Premium Contribution

Buchmueller & Feldstein (1996)

All Plans HMOs

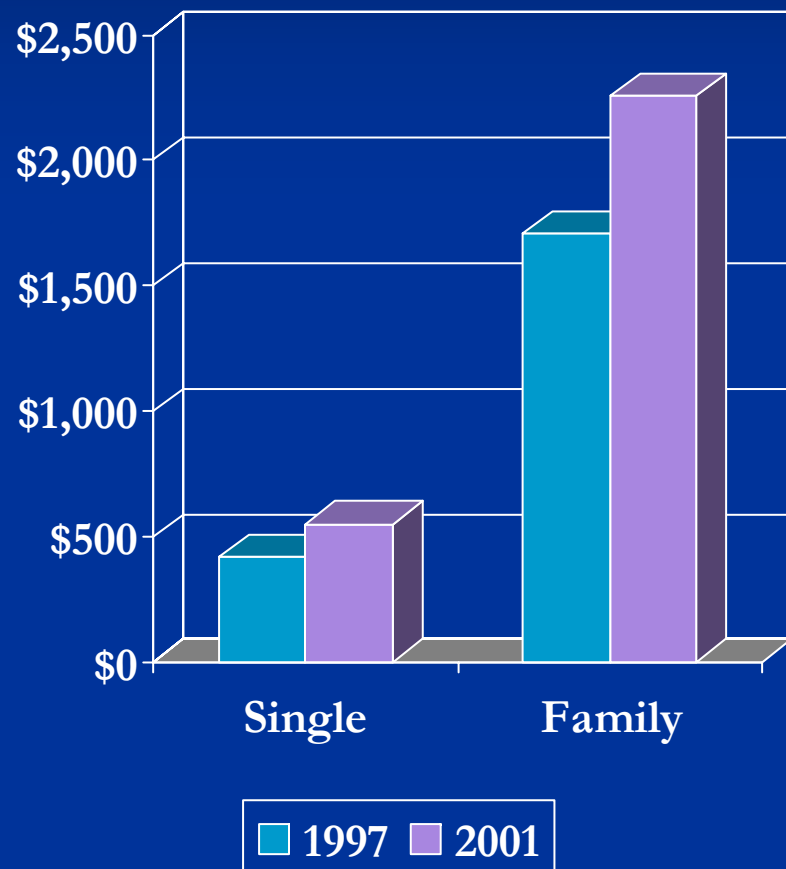
# Implications

- Employee premium contributions can be successfully used to motivate employee choice of plans
- If workers are sensitive to the premiums in plan selection, their employers will be as well.
- It is this sensitivity in plan selection that motivates health plans to push providers for price concessions.

# Employee Take-up Rates

- The take-up elasticity for employees offered coverage is very small
  - On the order of -0.01 to -0.09
- But the large increases in the size of employee premium contributions times these small elasticities have been estimated to be large enough to explain the drop in employer sponsored coverage over the 1990s.

# Trends in Premium Contributions



MEPS data

- Single and family premium contributions have increased by nearly 32% between 1997 & 2001.
- But as a percentage of the full premium, they have remained constant at 20% and 31%, respectively, over the entire period.

# Implications

- Employee premium contributions are a key to understanding coverage decisions
  - Who pays for employer sponsored health insurance?
  - Why don't employers pay the full premium?
  - Why don't employees pay the full premium?
  - Why have employee premium contributions been increasing?

# Who Pays for Employer Sponsored Health Insurance?

- As a matter of economic theory, workers pay for health insurance in the form of lower wages & benefits
- There is growing empirical evidence that this is indeed the case.
  - Gruber (1994)
  - Sheiner (1999)
  - Miller (2004)
  - Bhattacharya & Bundorf (2004)

# Employee Compensation Tradeoffs

- Employees in a flexible cafeteria style compensation plan find that their average insurance premiums increased by 10%
- Employees paid for this in 3 ways:

	Savings
■ Less generous health insurance benefits ...	48%
■ Lower take-home wages .....	37%
■ Reductions in other benefits .....	15%

# Implications

- Employer decisions on benefits offered and wage-benefit tradeoffs reflect, in part, employee preferences
- Employees buy coverage through their employers because its cheaper
- Workers pay for mandated insurance coverage

# Employers as Agents

- If workers buy coverage through their employer, then the employer is their insurance agent
- Limited evidence on how well they play this role but...

# Employer Agents

- Monheit & Vistnes
  - Evidence that small businesses with a comparative advantage in wages attract workers who value insurance the least
- Moran & Chernew
  - Evidence that firms with more diverse workforces offer more health plans and more plan types

# Employer Agents

- Dranove, Spier & Baker
- Vistnes, Morrissey & Jensen
  - Employee premium contributions increase with the proportion of two-earner households in the market
    - If I can get coverage through my spouse, I'd rather have the money
    - Higher employee premium contributions achieve this

# Taxes & Health Insurance

- Because employer sponsored health insurance is not subject to federal or state income taxes or to Social Security or Medicare payroll taxes, employees and their employer agents have a strong incentive to shift compensation toward untaxed health insurance.

# Effects of Taxes on Employer Coverage

- A 10% increase in the “tax price” of health insurance is associated with:
  - a 2.5% reduction in the probability of having coverage
  - a 7.1% reduction in spending on health insurance
  - Small firms roughly twice as tax-price sensitive

# Individual Insurance Market

- 6 to 8% of the population buy their insurance directly
- Overall, the estimates suggest an elasticity of -0.2 to -0.44
  - Younger people and the self-employed tend to be more price sensitive
  - Those under 35, self-employed with income below 200% of the poverty line were estimated to have elasticities in the -0.7 to -1.2 range.

**Enhancing the Role of Price**  
**- Health Services Markets -**

# Price & Health Services

- Encourage the use of copays and deductibles, at least for ambulatory services
  - Consumers can trade away higher health insurance premiums, over which they have little control, for physician, dental, drug and related services over which they have some control.
- There is a role for consumer directed health plans in this regard

# Price & Health Services

- Eschew utilization management, at least for ambulatory services
  - Remarkably little evidence of effectiveness
  - A key element in the backlash against managed care

# Price & Health Services

- Return to Selective Contracting
  - Trading volume for price is the only clearly demonstrated comparative advantage of managed care
  - “New” managed care
    - Selective contracting without utilization management

# Price & Health Services

- Eliminate Certificate of Need
  - Limits competition among providers
- Repeal any willing provider laws
  - Under cuts the ability to selectively contract
- Continue to apply antitrust laws to healthcare
  - If consolidation among providers is a concern, entry into markets and antitrust laws are the usual remedy
- Provide information on prices & quality

**Enhancing the Role of Price**  
**- Health Insurance Markets -**

# Price & Health Insurance

- Deregulate the group insurance market
  - Small group reforms haven't worked
- Worry more about the uninsurable
  - High risk pools
- Think about the role of flexible spending accounts and related programs reducing the tax wedge in the purchase of employer sponsored health insurance

# Price & Health Insurance

- Eliminate the tax exclusion of employer sponsored health insurance
  - It leads too many of us to be over-insured
  - It drastically mitigates the effects of health services and health insurance prices

# Price & Health Insurance

- In eliminating the tax exclusion...either
- Cut tax rates to be budget neutral
- or
- Replace the exclusion with a tax-credit that applies to all