Health Care and Policy Reform in the U.S. - Some Economics

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Life Expectancy at Birth: 1900-2005 (years)

Year	All	Gain per year	White	Black
1900	**47.3**		47.6	33.0
1935	**61.7**	**0.41**	62.9	53.1
1965	**70.2**	0.28	71.1	64.3
1995	**75.8**	0.19	76.5	69.6
2005	**77.8**	**0.20**	78.3	73.2
Gain	*30.5*	0.29	30.7	40.2

Worth a Lot!

- Murphy and Topel "The Value of Health and Longevity" *JPE* (2006)
- **Cumulative gains in longevity since 1900 worth over $1.2 million to representative American in 2000**
- Post-1970 gains add about half of GDP per year, $3.2 trillion

Cutler, Deaton & Lleras-Muny. "The Determinants of Mortality" *J.Econ.Perspectives* **(2006)**

- 1750-1850: **improved nutrition,** economic growth
- 1880-1920: **public health**

  urbanization (- then +)

  waste disposal, drinking water, washing hands

- 1930-present: **medicine,** vaccines, high technology interventions

Determinants of Mortality: A Fourth Stage?

- **1960 – present**

LIFESTYLE

- Diet, exercise, smoking, drinking style, stress management, …

Health Production Function

$$H = f(HB, EN, LS, HC)$$

H   ≡ health status

HB   ≡ human biology, genes

EN   ≡ environment

LS   ≡ *lifestyle*

HC   ≡ health care

Marginal Products

$\partial \mathbf{H} / \partial \mathbf{LS}$ additional health given …

- HB   given genes
- EN   given in area, but can change
- HC endogenous, MP varies greatly
     "flat of the curve" medicine

- **LS   endogenous, high MP now**

Cutler, David M., Edward L. Glaeser, Allison B. Rosen. "Is the US Population Behaving Healthier?" NBER Working Paper 13013 (April 2007)

Figure 1: Conception of Risk Factors Affecting Health
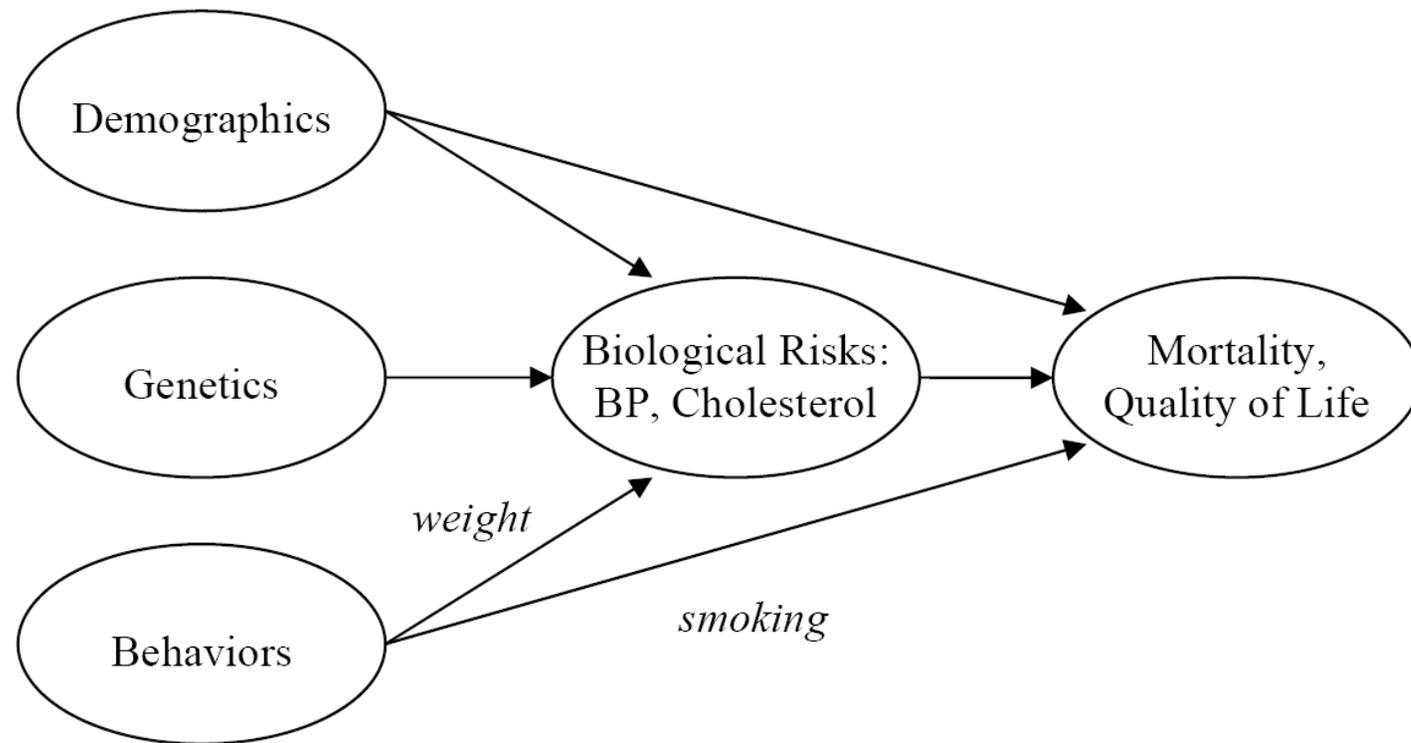
Behaving Healthier Data

- National Health and Nutritional Examination Survey
- 1971-75 and 1999-2002
- 6,000+ observations

Table 2: Effect of Risk Factors on 10 Year Mortality

Variable	Odds Ratio	Standard error
Race (relative to white)		
Black	1.402**	.195
Other race	.245	.221
Married	.682**	.077
Education (relative to high school graduate)		
<High School	1.269**	.144
At Least Some College	1.062	.191
Smoking status (relative to never smoker)		
Current smoker	2.126**	.250
Former smoker	1.233	.165
Drinking status (relative to never drinker)		
Heavy drinker	1.021	.175
Light drinker	.771**	.094
BMI (relative to optimal)		
Underweight, BMI<18.5	2.408**	.582
Overweight, 25≤BMI<30	.762**	.089
Obese, BMI≥30	1.278	.197
Blood pressure (relative to normal)		
Pre-hypertension	.904	.166
Stage 1 hypertension	1.131	.201
Stage 2 hypertension	1.535**	.289
Cholesterol (relative to normal)		
Borderline high	1.029	.130
High	1.150	.148
N	6,525	

Note: Data are from NHANES I. The regression includes 10 year age dummy variables interacted with gender.

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HC	$\equiv$	health care, focus of reform

"Flat of the curve" Medicine

- RAND Health Insurance Experiment
- Flat total product curve, $\partial H / \partial HC = 0$
- **More HC, but no H difference**

- Fixation on medical care

Rand Health Insurance Experiment: Price Matters

Plan	Likelihood of Any Use (%)	One or More Admissions (%)	Total Expenses (1991 $)
Free	86.8	10.3	982
	(0.8)	(0.5)	(50.7)
Family Pay			
25 Percent	78.8	8.4	831
	(1.4)	(0.6)	(69.2)
50 Percent	77.2	7.2	884
	(2.3)	(0.8)	(189.1)
95 Percent	67.7	7.9	679
	(1.8)	(0.6)	(58.7)
Individual Deductible	72.3	9.6	797
	(1.5)	(0.6)	(60.3)

Note: Standard errors shown in parentheses. Medical services exclude dental and outpatient psycho-
therapy.

TABLE 5-5 Work Loss Days per Employed Person per Year, by Plan

Plan	Mean	Standard Error of Mean	95% Confidence Interval	Number of Persons
Free	5.47	0.42	4.65–6.29	1,136
Intermediate (25%, 50%)	4.82	0.37	4.09–5.55	983
Individual Deductible	4.54	0.36	3.83–5.25	787
Family Deductible (95%)	4.82	0.53	3.78–5.86	600

Does More Intensive Treatment of Acute Myocardial Infarction in the Elderly Reduce Mortality?

- **Cardiac catheterization, revascularization, etc.**   *NO!*

- Care within first 24 hours – yes
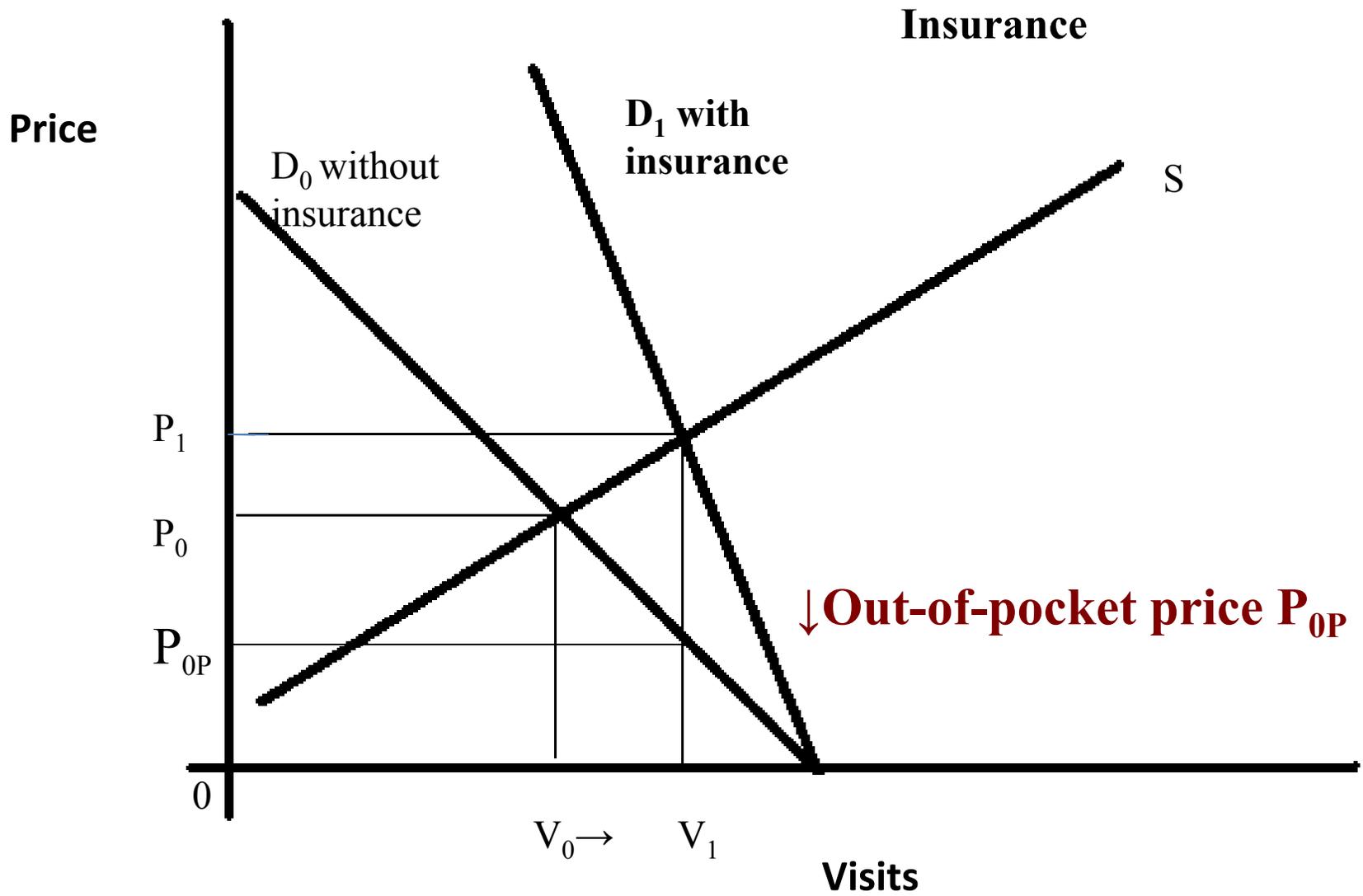
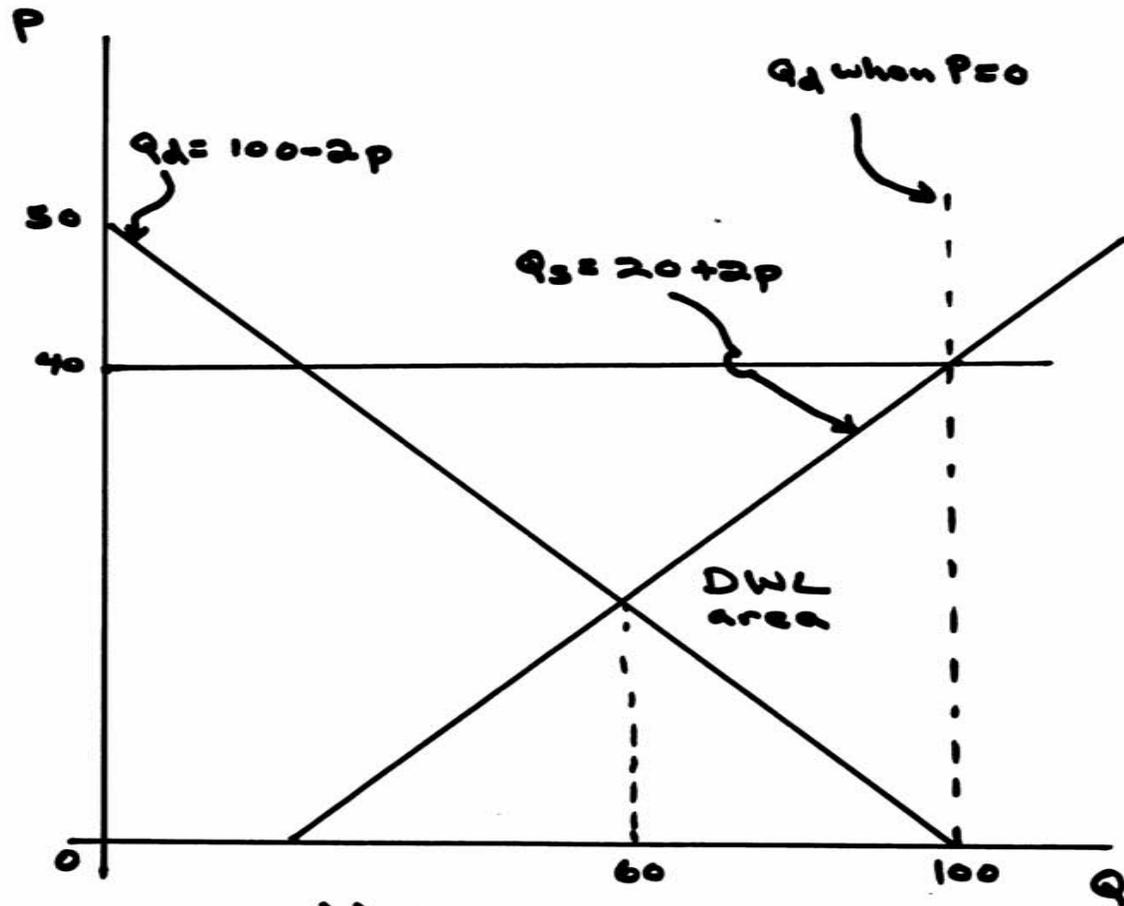- McClellan, McNeil & Newhouse *JAMA* (1994)
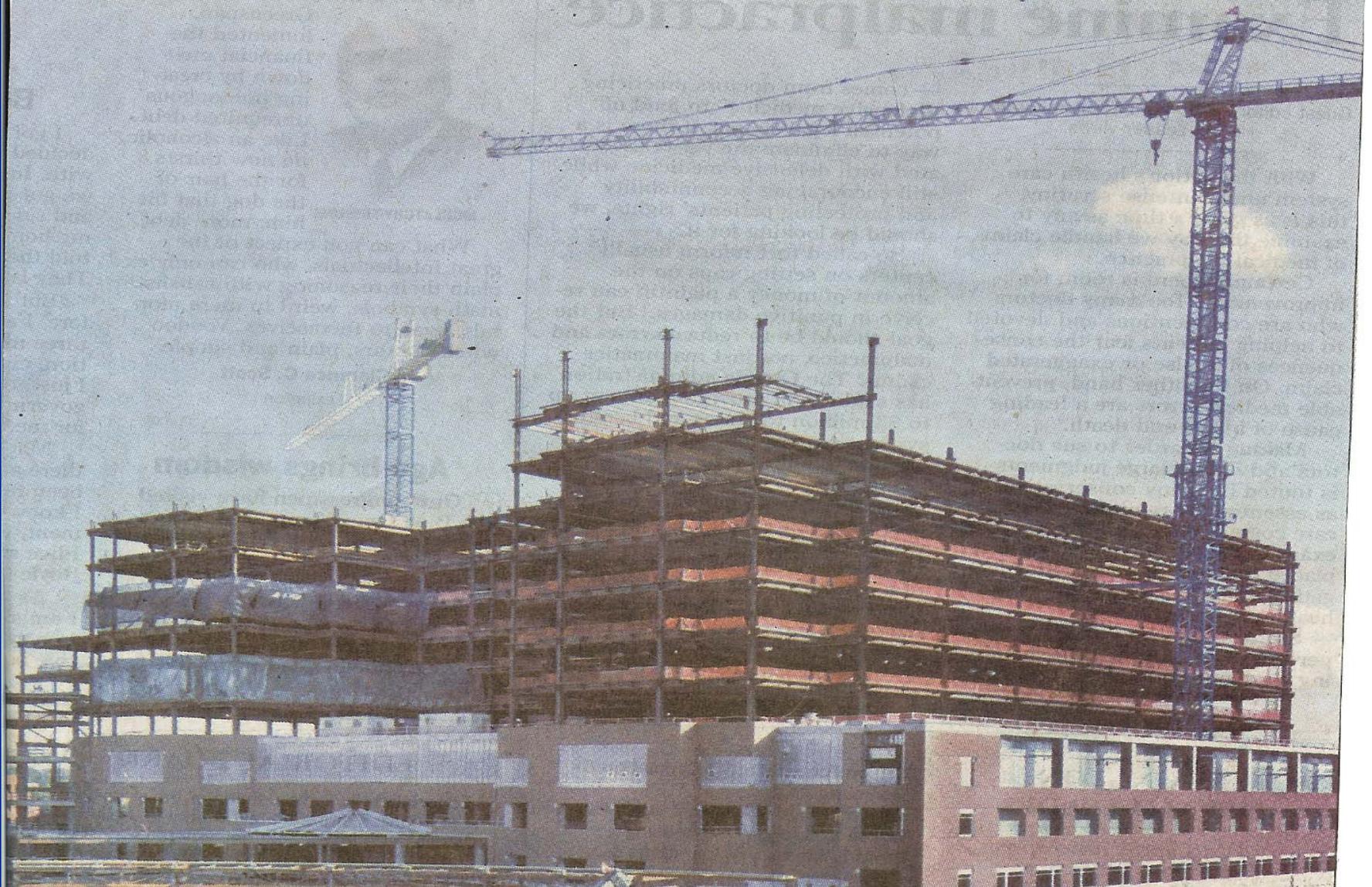
Active Health Personnel

- Per 100,000 population
- US Dept. Health and Human Services, Health United States

	1970	1980	1990	2000	2005	x
Physicians	**164**	**206**	**247**	**289**	**305**	1.9
Nurses	**369**	**562**	**720**	**1019**	**1040**	2.8
Pharmacists	**55**	**63**	**65**	**76**	**78**	1.4

Insurance

Price

D_0 without insurance

D_1 with insurance

S

P_1

P_0

P_{0P}

↓Out-of-pocket price P_{0P}

0

V_0→ V_1

Visits

Calculate the deadweight loss of "free" care given the D & S functions

$q_d = 100 - 2p$

$q_s = 20 + 2p$

q_d when $P = 0$

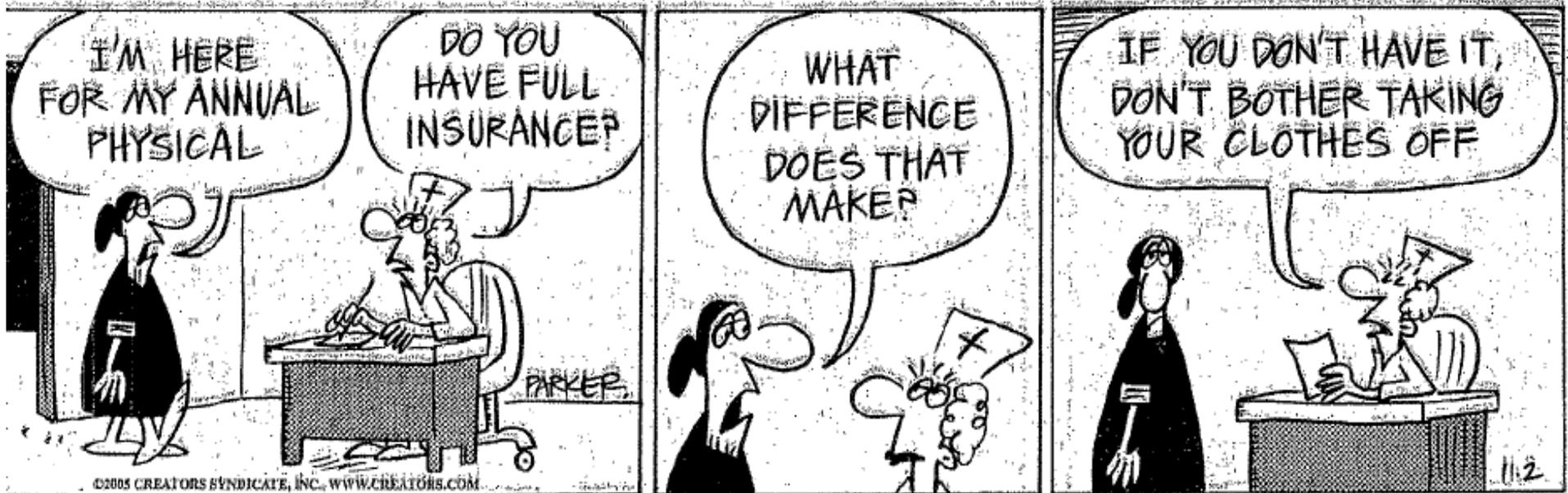DWL area

$$DWL = (\tfrac{1}{2})(40 - 0)(100 - 60) = 800$$

Out-of-Pocket Payments

- Not paid by private health insurance, Medicaid, Medicare, or other 3rd parties
- Personal Health Care Expenditures
- Centers for Medicare & Medicaid, US Census

	1960	1970	1980	1990	2000	2007
OPP %	51.6	39.6	27.0	22.4	16.9	14.3

Health Insurance?

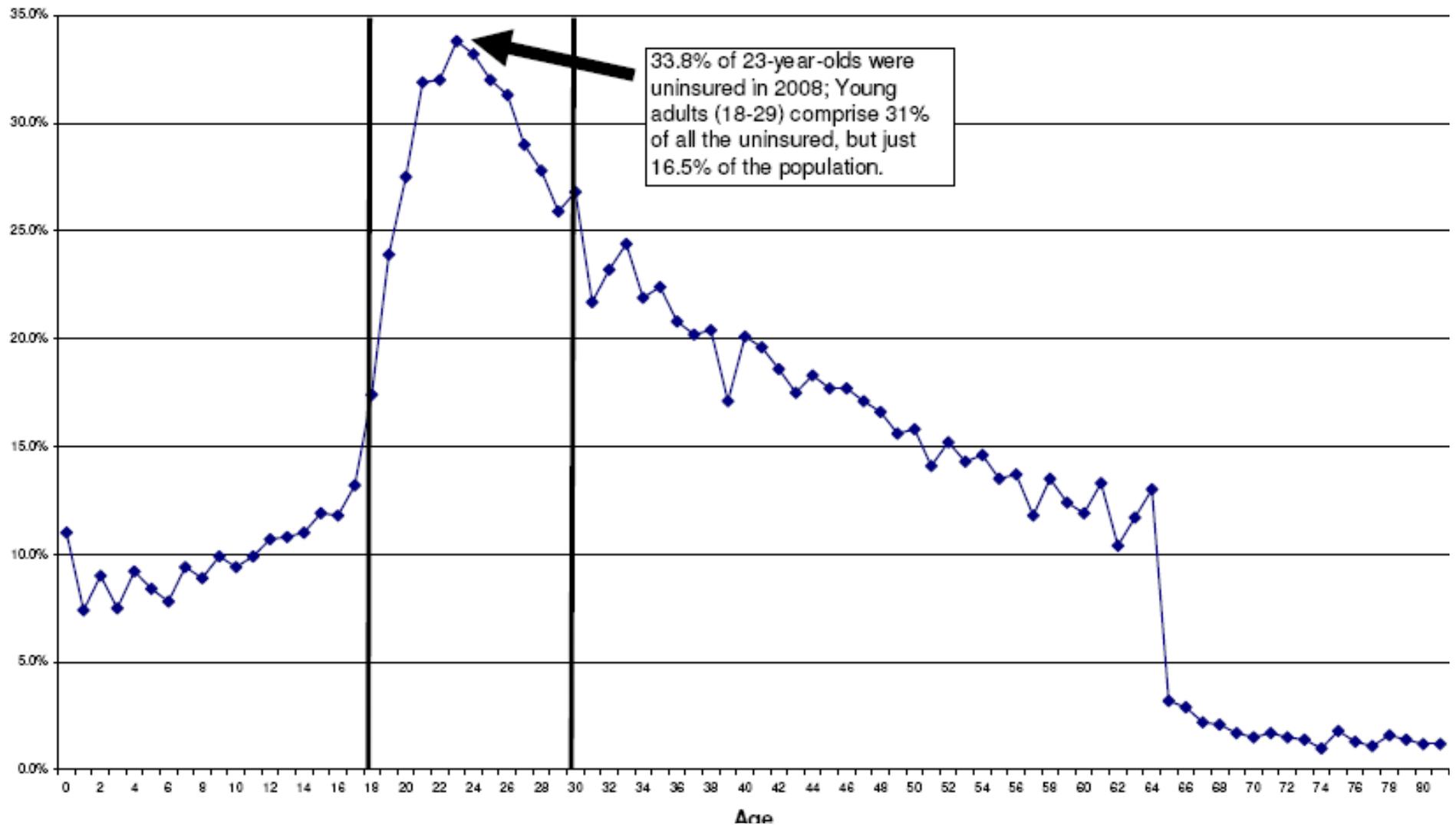|	California No Community Rating or Guaranteed Issue (Zip Code 90201, Bell Gardens, Population 105,275)	New York Community Rating and Guaranteed Issue (Zip Code 11226, Brooklyn, Population 106,154)
	Individual Plan Premiums and Plan Choices **Accessed on eHealthInsurance.com 9/28/2009**	

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	California No Community Rating or Guaranteed Issue (Zip Code 90201, Bell Gardens, Population 105,275)	New York Community Rating and Guaranteed Issue (Zip Code 11226, Brooklyn, Population 106,154)
Age 25, Born 9/28/1984		
Male, non-smoker	107 plans offered Premiums: $55-$433/mo Median premium: $118/mo	12 plans offered Premiums: $151.22-$1143.41 Median premium: $410.59
Female, non-smoker	107 plans offered Premiums: $56-$433/mo Median premium: $133/mo	
Male, smoker	107 plans offered Premiums: $55-$433/mo Median premium: $123.19/mo	
Female, smoker	107 plans offered Premiums: $56-$461.75/mo Median premium: $133.91/mo	
Age 55, Born 9/28/1954		
Male, non-smoker	112 plans offered Premiums: $188-$1275.24/mo Median premium: $399/mo	12 plans offered Premiums: $151.22-$1143.41 Median premium: $410.59
Female, non-smoker	112 plans offered Premiums: $204-$1267.61/mo Median premium: $399/mo	
Male, smoker	112 plans offered Premiums: $188-$1466.52/mo Median premium: $404/mo	
Female, smoker	112 plans offered Premiums: $204-$1457.75/mo Median premium: $411/mo	

Percent Uninsured, 2008 Calendar Year
Yelowitz's Tabulation of March 2009 Current Population Survey

33.8% of 23-year-olds were uninsured in 2008; Young adults (18-29) comprise 31% of all the uninsured, but just 16.5% of the population.

America's Healthy Future Act of 2009

- Sen. Baucas, Chairman Senate Finance Committee

- Best bet to become law?

- Congressional Budget Office, Oct. 7, 2009 preliminary analysis

AHFA 2009 Features

INDIVIDUAL MANDATE

Start July 2013   financial penalty

Insurance exchanges for individuals & families, subsidies for new co-ops

Subsidies to buy for income 100-400% fed poverty level

GUARANTEED ISSUE accept all applicants, no limit on preexisting conditions

AHFA 2009 Features (2)

COMMUNITY RATING same premium regardless of health

Excise tax on insurance plans with high premiums

In 2013, 40% tax excess > $8,000 individual & $21,000 family ($201B)

Penalty on firms with 50+ workers not offering insurance   if workers receive subsidy in co-ops

AHFA 2009 Features (3)

Expansion eligibility for Medicaid

In 2014, nonelderly < 133% federal poverty level

Federal government pays 90%

CHIP federal pay increases from 70% to 90%

Reduce growth rate of Medicaid & Medicare payment rates Medicare rates for nonphysician, reduce subsidy to Medicare Advantage, reduce M&M payments to DSH hospitals serving low income

Bottom Line 2010-2019

- **Uninsured nonelderly in millions:**
  51→25

- **Insured share of nonelderly:**
  81% → 91%

  excluding unauthorized immigrants:
  83% → 94%

Money, Billions, 2010-2019

Medicaid/CHIP	$345
Exchange subsidies	461
Small employer tax credits	23
■ **Gross Cost**	**$829**
Penalty payments – indiv	-4
Penalty payments – firms	-23
Excise tax	-201
Other	-83
■ **Net Cost**	**$518**

IS ALTRUISM PATERNALISTIC?*

Fredric Jacobsson, Magnus Johannesson and Lars Borgquist

We test if altruism is paternalistic with respect to health. Subjects can donate money or nicotine patches to a smoking diabetes patient whose willingness to pay for nicotine patches is positive but below the market price. In a between-subjects treatment, average donations are 40% greater in the nicotine patches group. When subjects can donate both nicotine patches and money more than 90% of the donations are given in kind rather than cash. These results are also confirmed in three additional stability experiments that vary the framing, use food stamps instead of money, and use exercise instead of nicotine patches.

The taste for improving the health of others appears to be stronger than for improving other aspects of their welfare. (Arrow 1963, p. 954)

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Thoughts

- Public option? Subsidized?

- Insurance markets not working well?

  criteria? State regulation

- Pay for uninsured anyway? Moral hazard

  C-section trend, casualty insurance model NO

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October 8, 2009