14.472 Public Finance II
Subsidizing Health Insurance for Low Income Adults: What Does It Do and What Does That Mean?

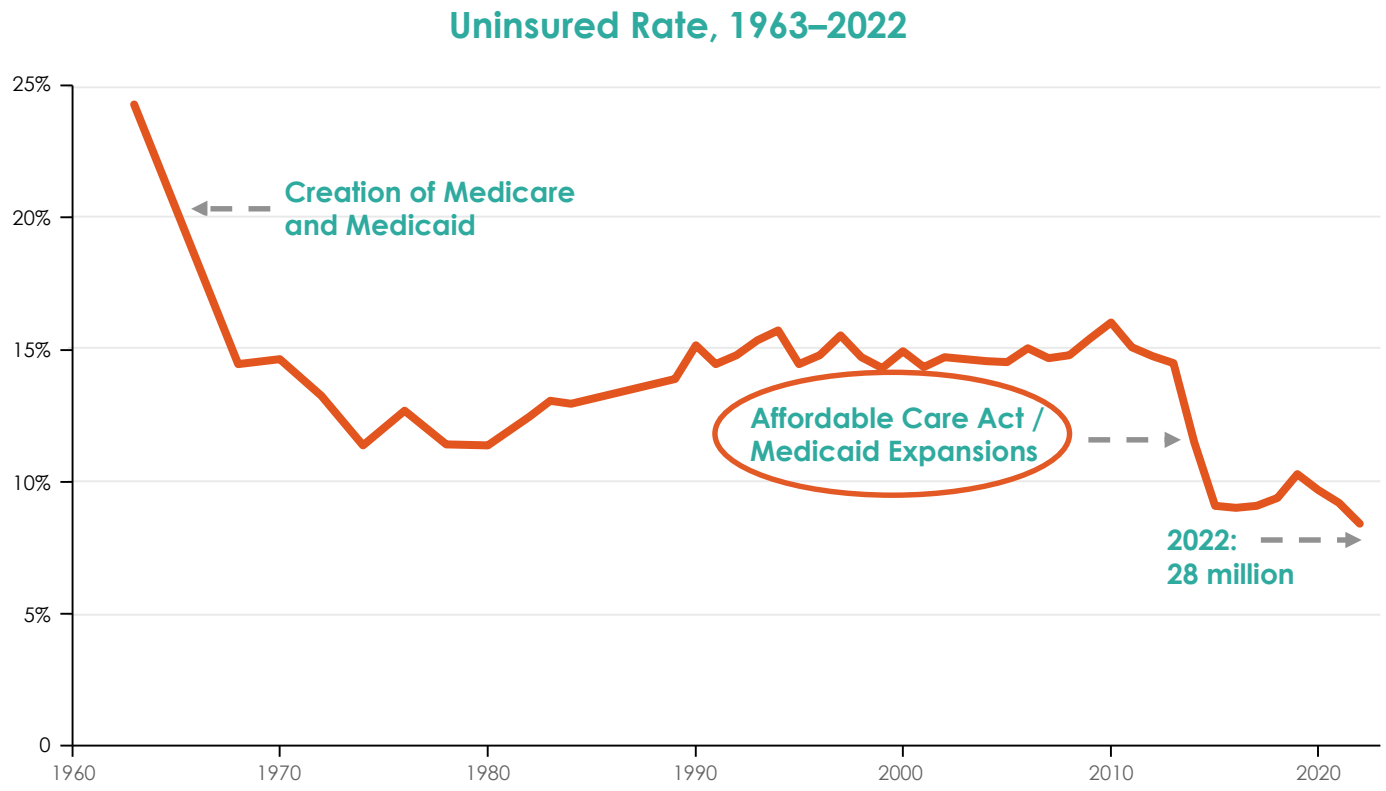
Amy Finkelstein

Fall 2025

Why Subsidize?

- Adverse selection
- Redistribution
  - NB: A distinct – and distinctive – issue of "affordability" with risk that is not proportional to income
- Samaritan's Dilemma

Health Insurance Coverage Over Time



Medicaid as Major Form of Redistribution

- Medicaid provides public health insurance to low-income children, disabled, elderly, and some adults
- Expanded in 2014 to adults up to 138% of federal poverty line
  - ~11 million newly covered low-income adults (~1/3 of newly insured)
- Medicaid spending is now ~$600 billion per year
  - Dwarfing next largest means-tested programs (SNAP, EITC: ~$70 billion each)
  - About the size of the national defense budget

Helpful or Harmful: The Debate Over Medicaid

The Washington Post

How the Medicaid expansion could actually save states money

THE WALL STREET JOURNAL.

OPINION

Medicaid Is Worse Than No Coverage at All

New research shows that patients on this government plan fare poorly. So why does the president want to shove one in four Americans into it?

By SCOTT GOTTLIEB

NJPP NEW JERSEY POLICY PERSPECTIVE

Expanding Medicaid Would Save New Jersey Billions of Dollars

Why Medicaid is a Humanitarian Catastrophe

From Rhetoric to Research

- **Part I: Descriptive Evidence:** Impacts of Medicaid
  - Randomized evaluation of extending access to Medicaid

- **Part II: Normative Interpretation**: Value of Medicaid
  - Use simple economic theory to analyze descriptive results

- **Part III: Implications**
  - For policy and for opportunities for much-needed future research

What Is Medicaid?

- On paper extremely comprehensive
  - Covers most healthcare with minimal or no consumer-cost sharing or premiums
- Concerns about low reimbursement rates to providers and resulting access issues
  - "The best insurance money can't buy"
- What are likely effects of Medicaid expansion on:
  - Health care use and health spending ("cost" of the program)
  - Health
  - Financial security (consumption smoothing)

Conjectured impact on health care spending

- Basic economics: Expanding health insurance will increase health care spending ("Moral hazard")
  - Insurance (by design) reduces the price individuals pay for their medical care
  - Economics 101: Demand increases as price decreases
    - Therefore newly insured will demand more medical care
- But, other points of view…

Conjectured impact on health care spending

- Health insurance will not increase health care spending
  - Nobody wants to go to the doctor

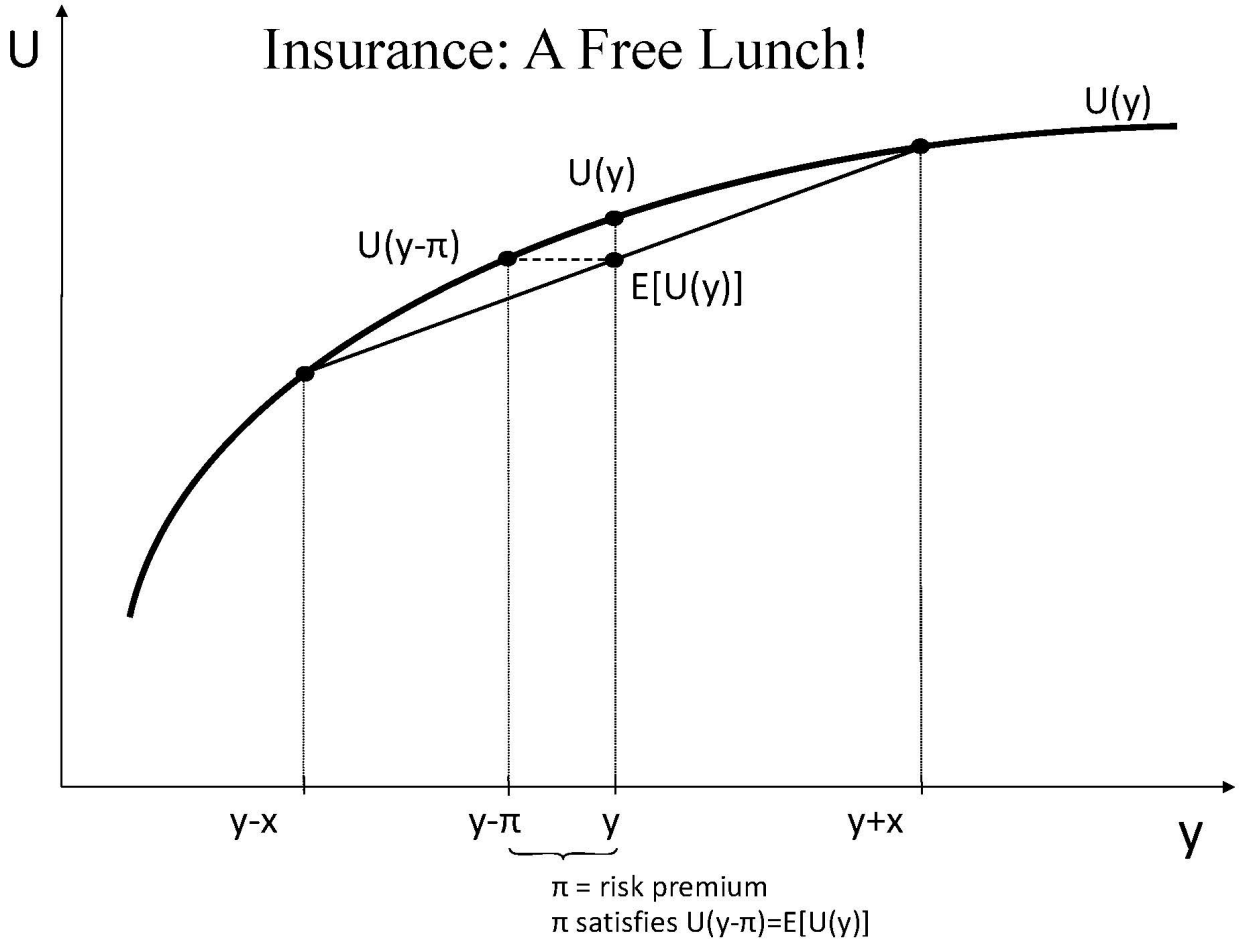
- Health insurance will decrease health care spending
  - Reduce inappropriate and inefficient use of emergency rooms
    - Expanding Medicaid "means fewer folks are going to be going to the emergency room for treatable illnesses like asthma or strep throat"

      - President Obama, 2013, urging states to expand Medicaid
  - Improve health and therefore reduce health care use

Possible benefits for health and financial security

- Health
  - Improvements in health through increased utilization
- Financial security
  - Consumption smoothing: reduced risk of large, out-of-pocket medical expenditures

Insurance: A Free Lunch!



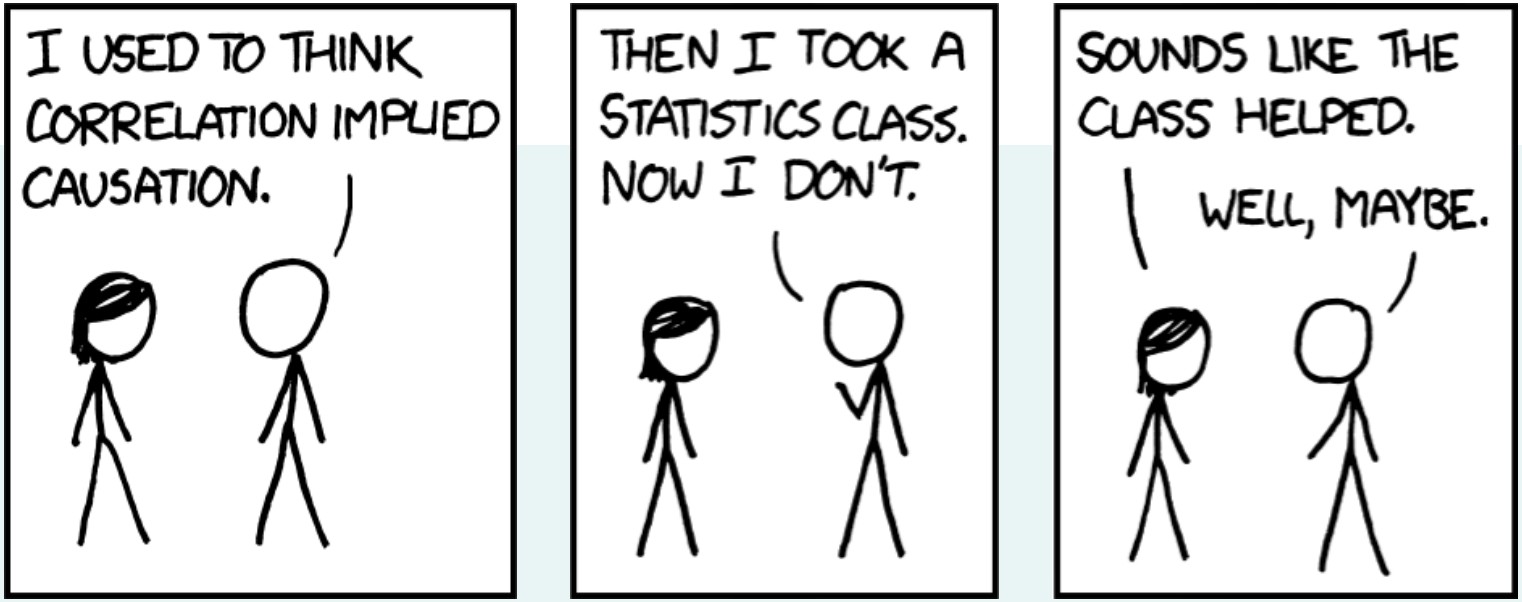
Additional ambiguity when it comes to Medicaid

- Impacts of Medicaid on low-income uninsured may be much smaller than typical insurance impacts
- Glass half full:
  - Low-income uninsured already consume subsidized medical care through public health clinics and uncompensated care
- Glass half empty: Medicaid is not "good" insurance
  - Low reimbursement rates for providers makes it hard to access care
  - Evidence consistent with this:
    - "Secret shopper" / audit studies (very cool / under-appreciated)
    - Increased Medicaid rates increase access/use (Alexander and Schnell AEJ Applied, 2024)

How to Measure the Impact of Medicaid?

- The Challenge: People with and without Medicaid differ in many ways
  - Hard to measure and control for
  - Can get perverse "findings" (e.g. Medicaid makes you sicker)
- Randomly assign some uninsured individuals access to Medicaid
  - Solves causal inference problem
  - *By construction*, treatment and control groups on avg have same characteristics

Correlation Vs. Causation



Source: XKCD, "Correlation," https://xkcd.com/522

Beyond Causality: The Value of Randomization

- Duflo: "Have the ability to surprise you"
  - Relatedly, can test for subtle, indirect effects (e.g. spillovers)

- Design studies to answer the questions you want to answer (vs. where you can find variation)
  - Relatedly: Design to test theory and mechanisms

- Gets us off our ass / forces us to do field work (which we should be doing even for non RCTs)

(See Alsan and Finkelstein, Milbank Quarterly 2021 for more discussion of these points)

Oregon Health Insurance Experiment


Looking for low-cost or free health coverage?

HOW IT WORKS

OHP Standard provides free or low-cost health insurance to Oregon residents who:

- Do not have health care insurance*
- Are 19 years old or older*
- Are not pregnant*
- Have limited income*

Because there are not enough openings to meet everyone's needs, DHS is creating a list of people who would like to apply for OHP Standard. You must place your name on the reservation list during January 28 - February 29, 2008.

DHS will randomly select names monthly from the list starting in March. If your name is selected, DHS will mail you an OHP Standard application form. If you apply and qualify, you will be enrolled in OHP Standard.

DHS wants you to be independent, healthy and safe. The Oregon Health Plan can help make that possible.

GET STARTED

There are three ways to get on the reservation list:

FILL OUT A REQUEST ONLINE.
Visit the OHP Standard reservation list Web site at www.oregon.gov/DHS/open and enter your information electronically.

MAIL A REQUEST.
Complete the OHP Standard reservation request form. Forms are available at any DHS or [illegible] office, county health department and most hospitals and clinics.

SIGN UP BY PHONE.
Call 800-699-9075 or 503-378-7800 (TTY) Monday through Friday, 7:00 a.m. to 7:00 p.m. If you cannot call during the hours listed, you can have anyone call for you – they just need your name, date of birth and mailing address.

IT'S EASY, IT'S FAIR, GET ON THE LIST!
The reservation list is only open from January 28 - February 29, 2008.

DHS Oregon Department of Human Services
Oregon Health Plan

* The information above applies only to OHP Standard. Other benefit packages, such as those that cover pregnant women or people who are under 19 years of age, have different eligibility requirements and are always open. To find out if you are eligible for one of these benefit packages, complete an OHP application. OHP applications are available by calling 800-359-9517 or at any DHS branch office.

Because there are not enough openings to meet everyone's needs, DHS is creating a list of people who would like to apply for OHP Standard. You must place your name on the reservation list during January 28 - February 29, 2008.

DHS will randomly select names monthly from the list starting in March. If your name is selected, DHS will mail you an OHP Standard application form. If you apply and qualify, you will be enrolled in OHP Standard.

Oregon Health Insurance Experiment

- Oregon's Medicaid expansion program covers those financially but not categorically eligible for Medicaid
  - Low-income (below 100% of federal poverty line), uninsured, able-bodied adults
- Covers doctors, hospitals, drugs, mental health, etc. with no consumer cost sharing and low or no premiums
- In 2008: Oregon had money to cover some but not all of those eligible… so chose to run a lottery for fairness
  - Asked interested individuals to sign up
  - Randomly assigned about 30,000 out of 75,000 low-income, uninsured adults ability to apply for Medicaid

Unprecedented Opportunity

- To bring rigors of randomized trials to pressing domestic health policy question
  - First RCT to study the impact of covering the uninsured

- Assembled a large research team
  - Co-PI: Katherine Baicker
  - Collaborators in academia, government, health care system…
  - Results, protocols and survey instruments, and data are publicly available: www.nber.org/oregon

Left No Data Stone Unturned…

- Administrative data (e.g. hospital discharge records, emergency room visits, credit reports, earnings) (~75,000)
- Mail surveys (sent to ~55,000 people)
  - Questions on health care use, financial strain, self-reported health and well-being
- In-person interviews and physical health exams (~12,000)
  - Clinical measures: blood pressure, cholesterol, blood sugar, etc.
  - Detailed medication catalog
  - Medical history (e.g. dates of diagnoses)

Research: Always An Adventure

Empirical framework – very simple

- Reduced form: Regress outcome on lottery assignment
- IV: Regress outcome on insurance (Medicaid), instrumenting for insurance with lottery assignment (2SLS)
  - First stage 0.25
  - Think about exclusion restriction
- Controls:
  - Need to control for anything correlated with probability of treatment
    - Household "size" / tickets
  - May improve power by controlling for baseline covariates

Empirical framework – some comments

- Checking if randomization "worked"
  - Balance of covariates
  - Why needed?
- Potential non-response bias in surveys
  - Examine: balance of response rate and covariates among responders
  - Took kit for imbalance:
    - Intensive follow up
    - Administrative data
    - Lee (2009) bounds (for lower response rate for treatment)
      - Assume anyone who responds as treatment would have responded as control
      - Lower bound for a positive treatment effect: drop controls with lowest outcome values until response rates are equalized.

Empirical framework – some comments

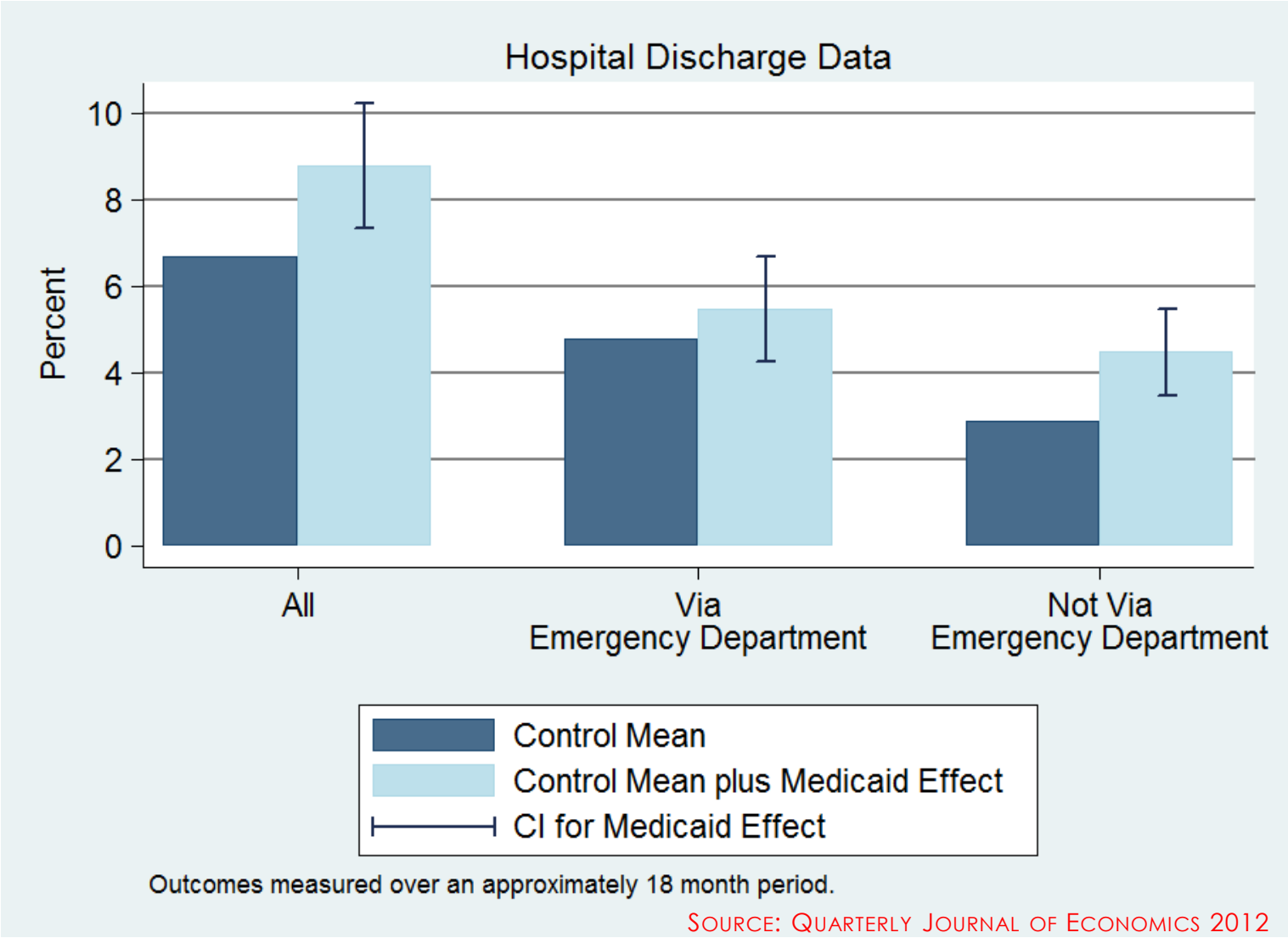
- Multiple, related outcomes (e.g. various health measures)
  - Standardized treatment effects
    - $\sum_{j \in J} \frac{1}{J} \frac{\beta_j}{\sigma_j}$, where β_j is the coefficient of interest for outcome *j* and σ_j is the standard deviation of the outcome for control group)
  - Multiple inference adjustment (Bonferroni; Westfall-Young)

- Pre-specification and archiving of analysis plan
  - Particularly useful if implementing an RCT with a partner with a "stake" in the outcome
  - Keep it short (a floor, not ceiling)
    - "In praise of moderation" (Banerjee et al. 2020)

Results after 1-2 Years

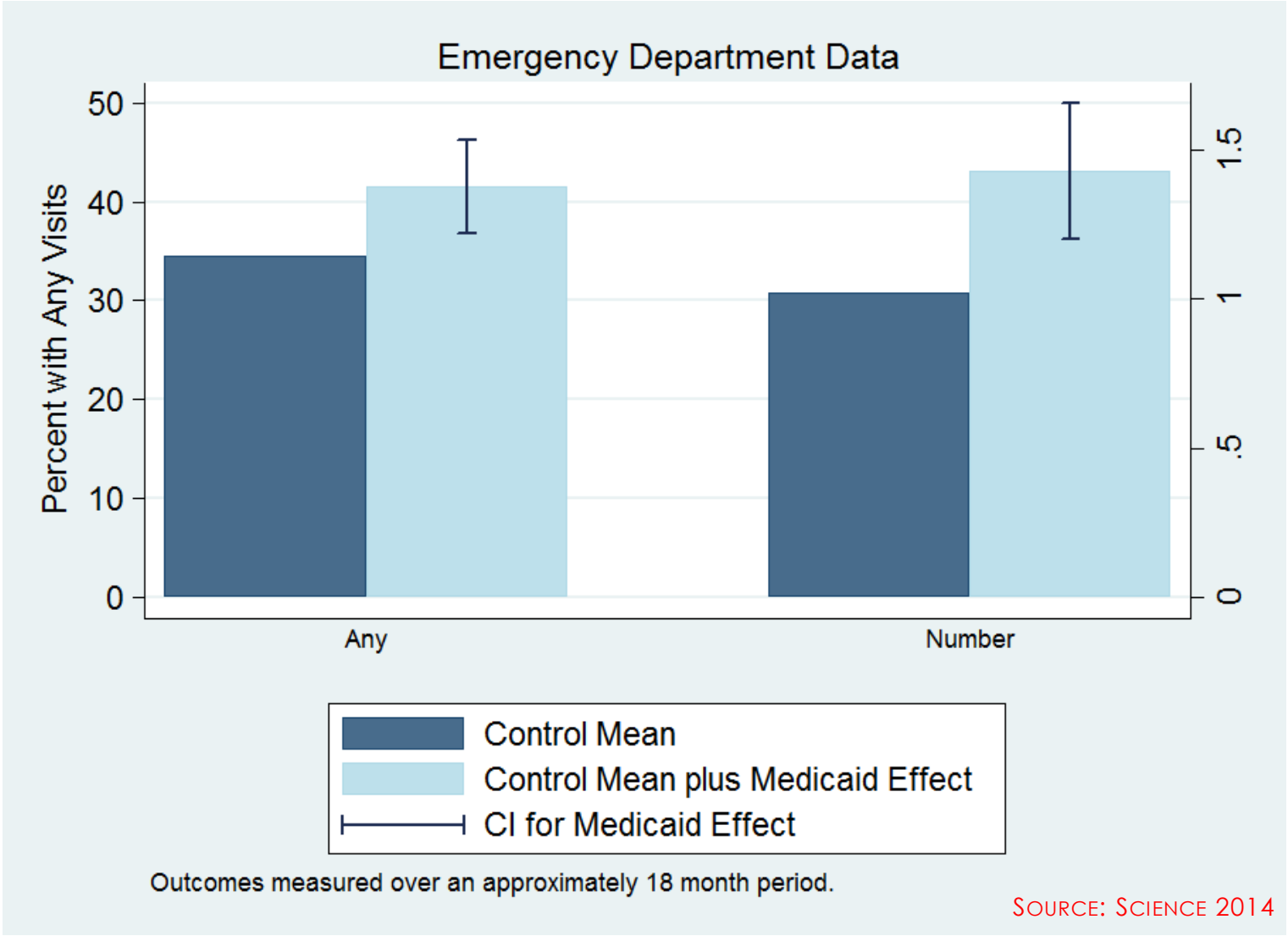
- Health care use
- Financial well-being and security
- Health

Medicaid Increases Hospital Visits



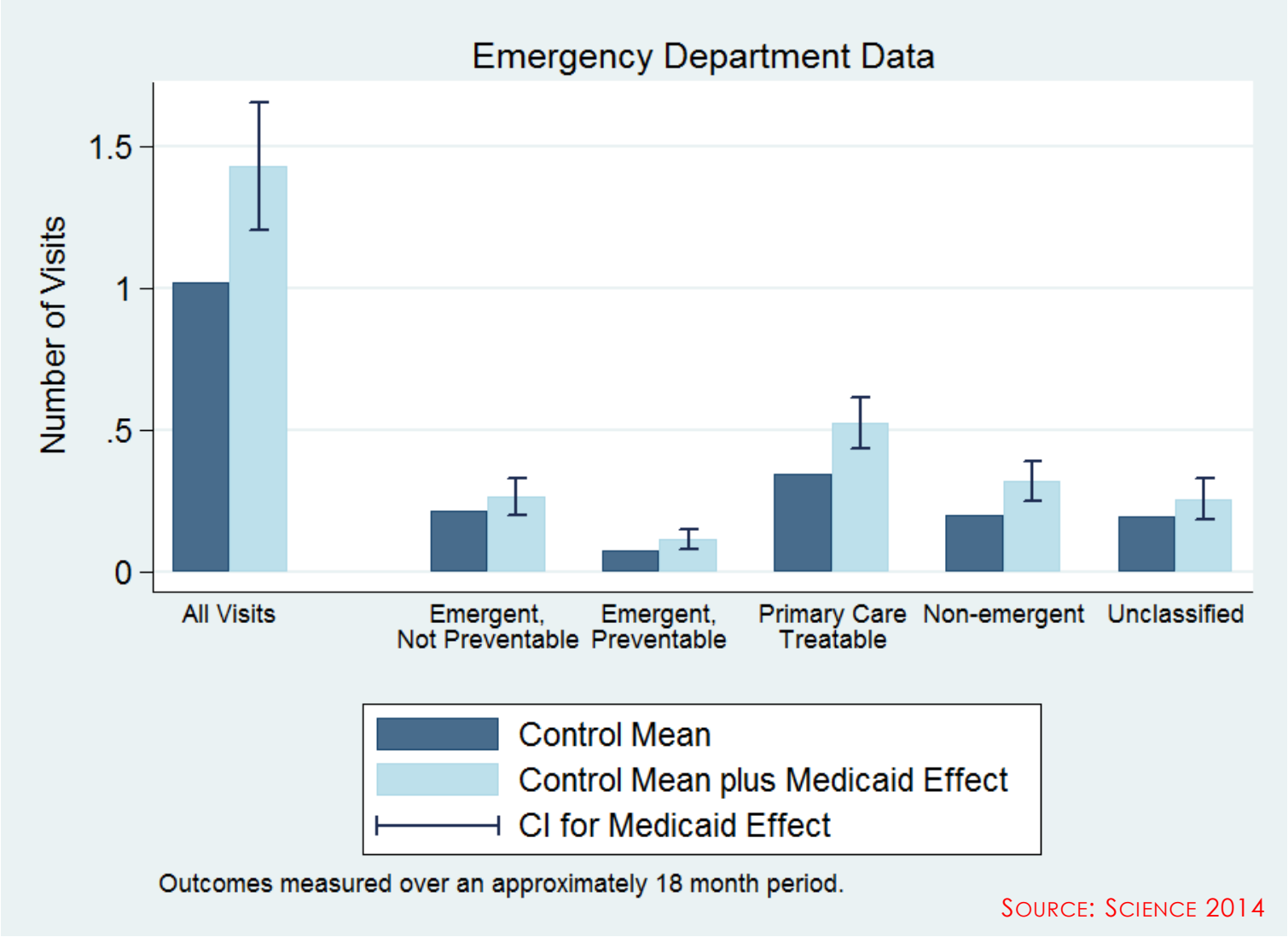
SOURCE: QUARTERLY JOURNAL OF ECONOMICS 2012

Medicaid Increases Emergency Room Visits



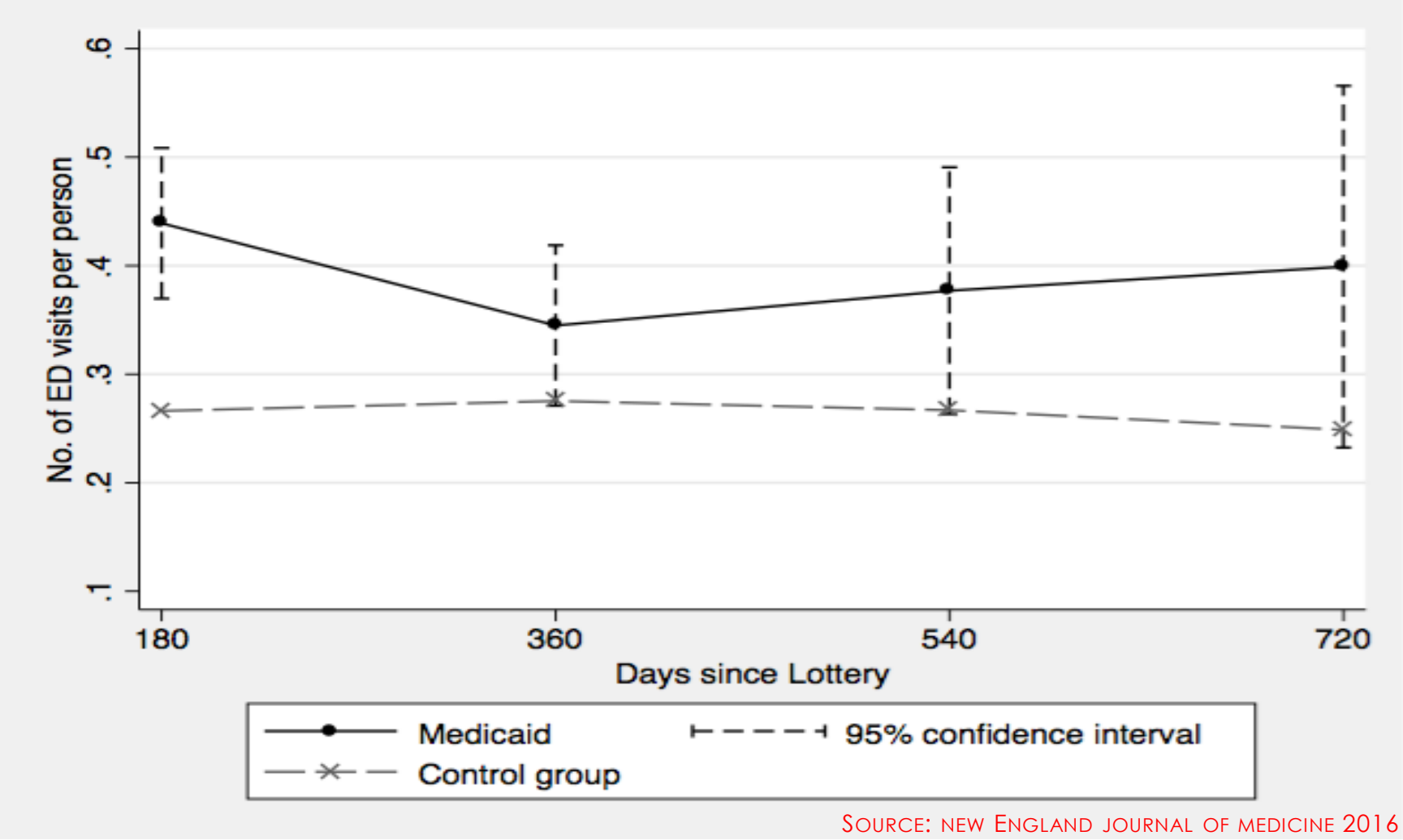
SOURCE: SCIENCE 2014

Medicaid Increases All Types of ER Visits



SOURCE: SCIENCE 2014

Increase in ER Use Steady Over First Two Years



SOURCE: NEW ENGLAND JOURNAL OF MEDICINE 2016

(Aside – Value of Administrative Data)

- We find increase in ER visits in ER discharge data, not in survey or interview data (Taubman et al. *Science* 2014). Why
  - Ability to look back over longer time horizons
  - More reporting error / noise in self-reports
- Other advantages of administrative data
  - More detailed (diagnoses; detailed time patterns etc)
  - Much cheaper to collect
  - Avoid issues of non-response bias
- Downside of administrative data:
  - If they don't measure what you want to study

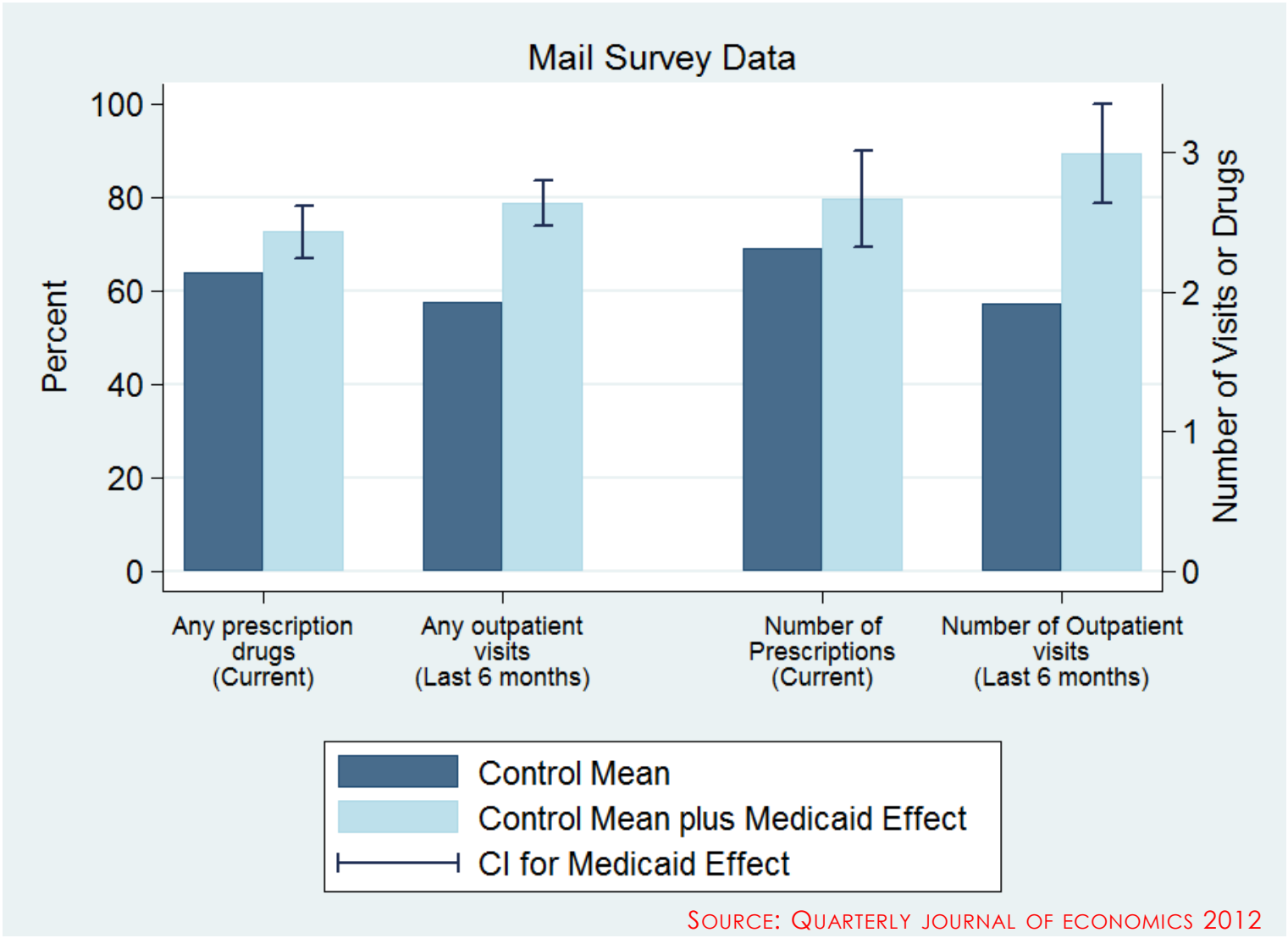
Is the Increase in ER Use a Puzzle?

- Ex ante the effect could have gone either way:
  - Medicaid makes ER free → more use
  - Medicaid makes doctor visit free → more use of docs, ? use of ER

- On net, we now know any "offset" from ER → doc does not dominate

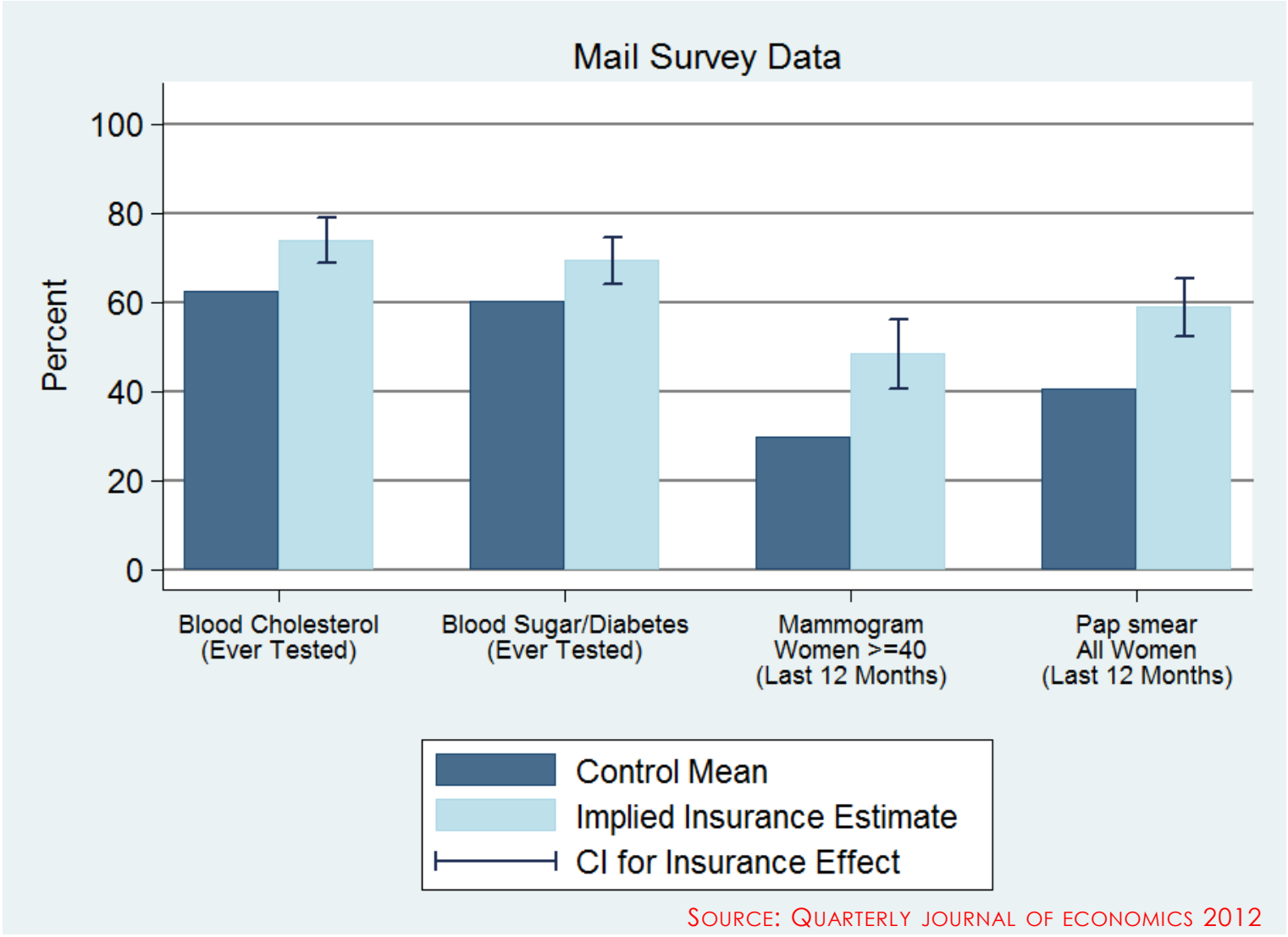
- Is this because Medicaid doesn't increase doctor use?

Medicaid Increases Primary Care



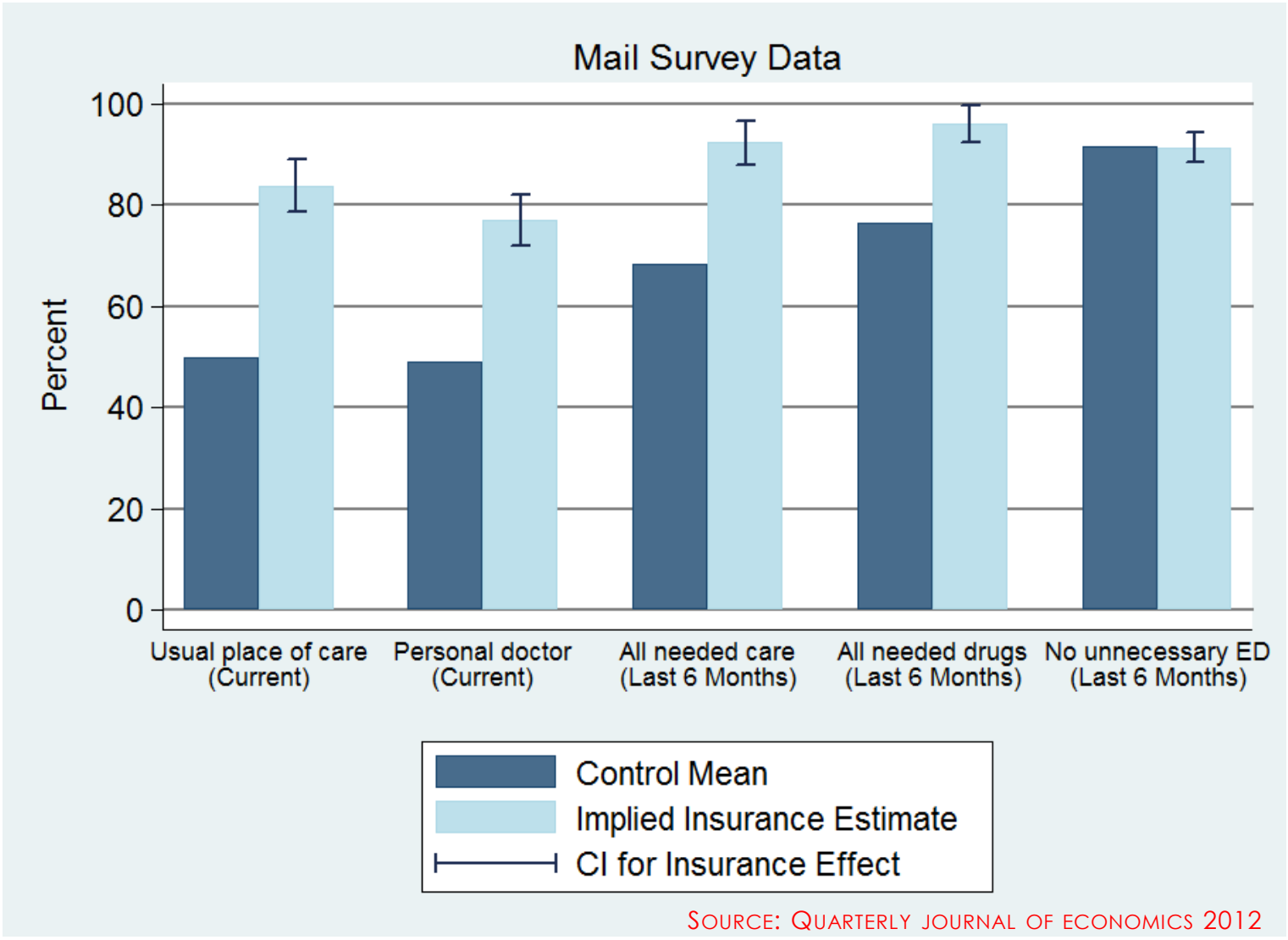
SOURCE: QUARTERLY JOURNAL OF ECONOMICS 2012

Medicaid Increases Preventive Care



SOURCE: QUARTERLY JOURNAL OF ECONOMICS 2012

Medicaid Increases Access to Health Care



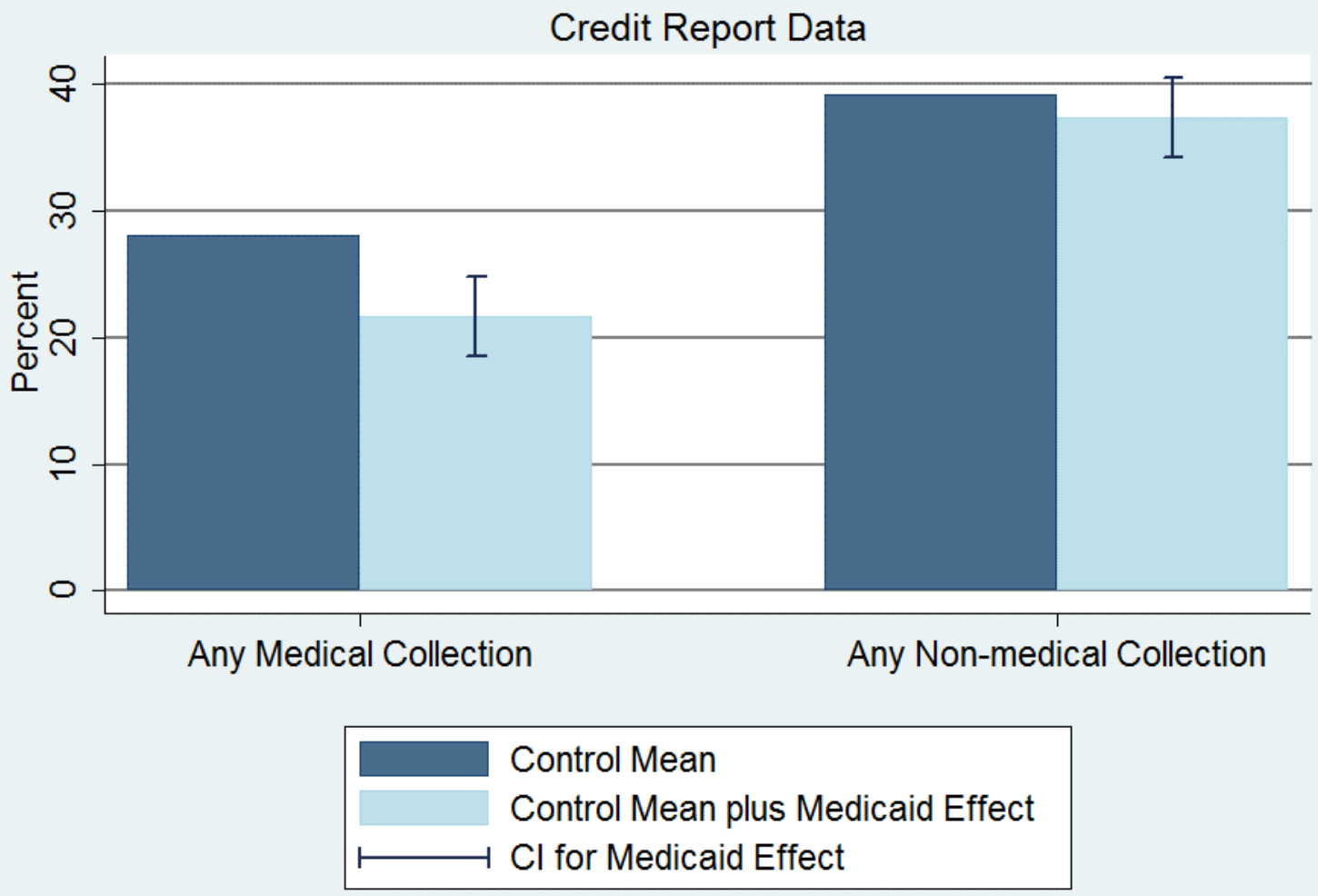
SOURCE: QUARTERLY JOURNAL OF ECONOMICS 2012

Health Care Utilization (summary)

- Increased utilization
  - 30% ↑ probability of hospital admission
  - 35% ↑ probability of outpatient visit
  - 15% ↑ probability of taking prescription drugs
  - 40% ↑ in number of ER visits
  - ↑ in compliance with recommended preventive care

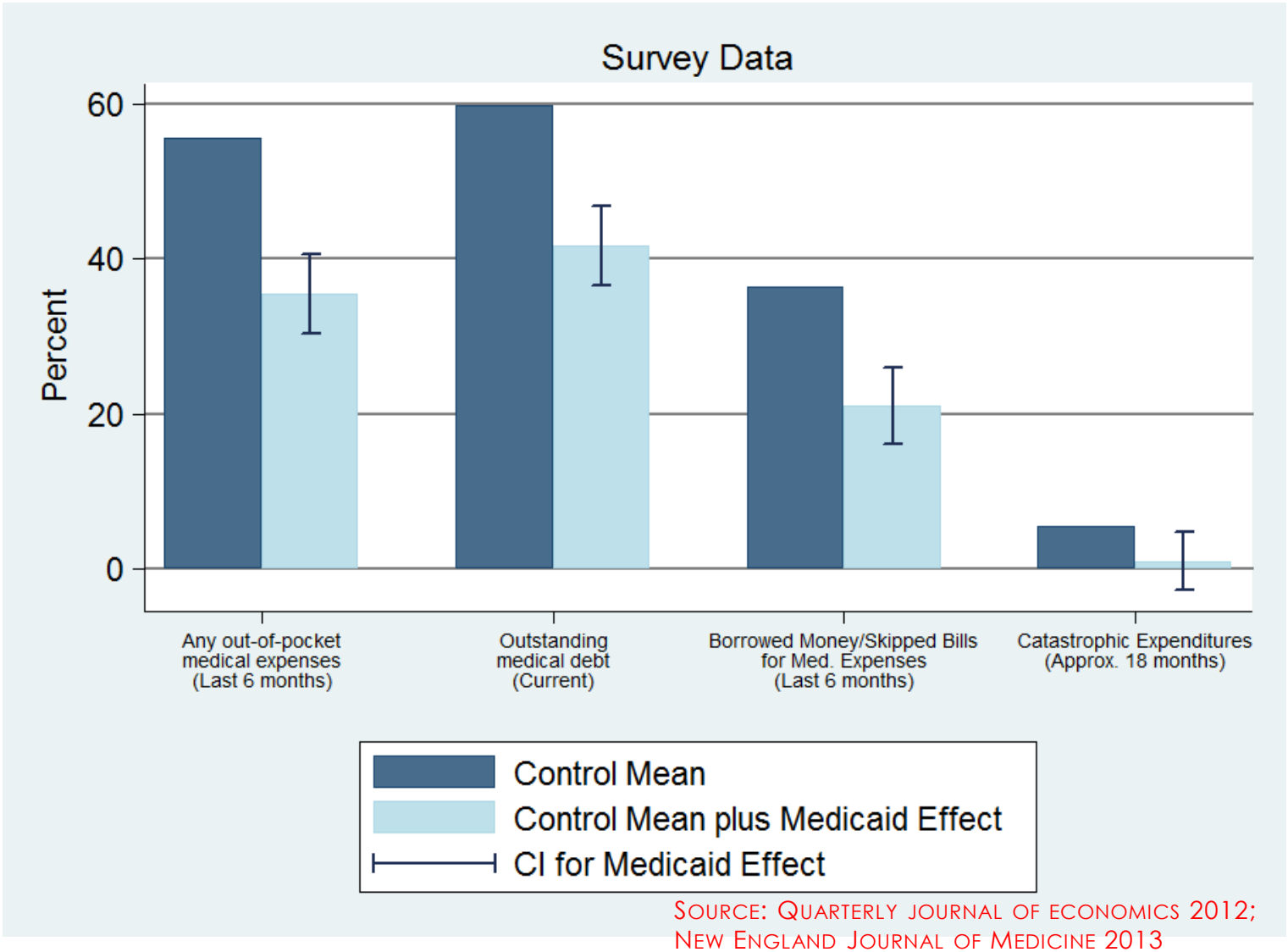
- Increased total health care spending
  - 25% ↑ total, annual spending (hospital, outpatient, ER, drugs)

Medicaid Increases Economic Security



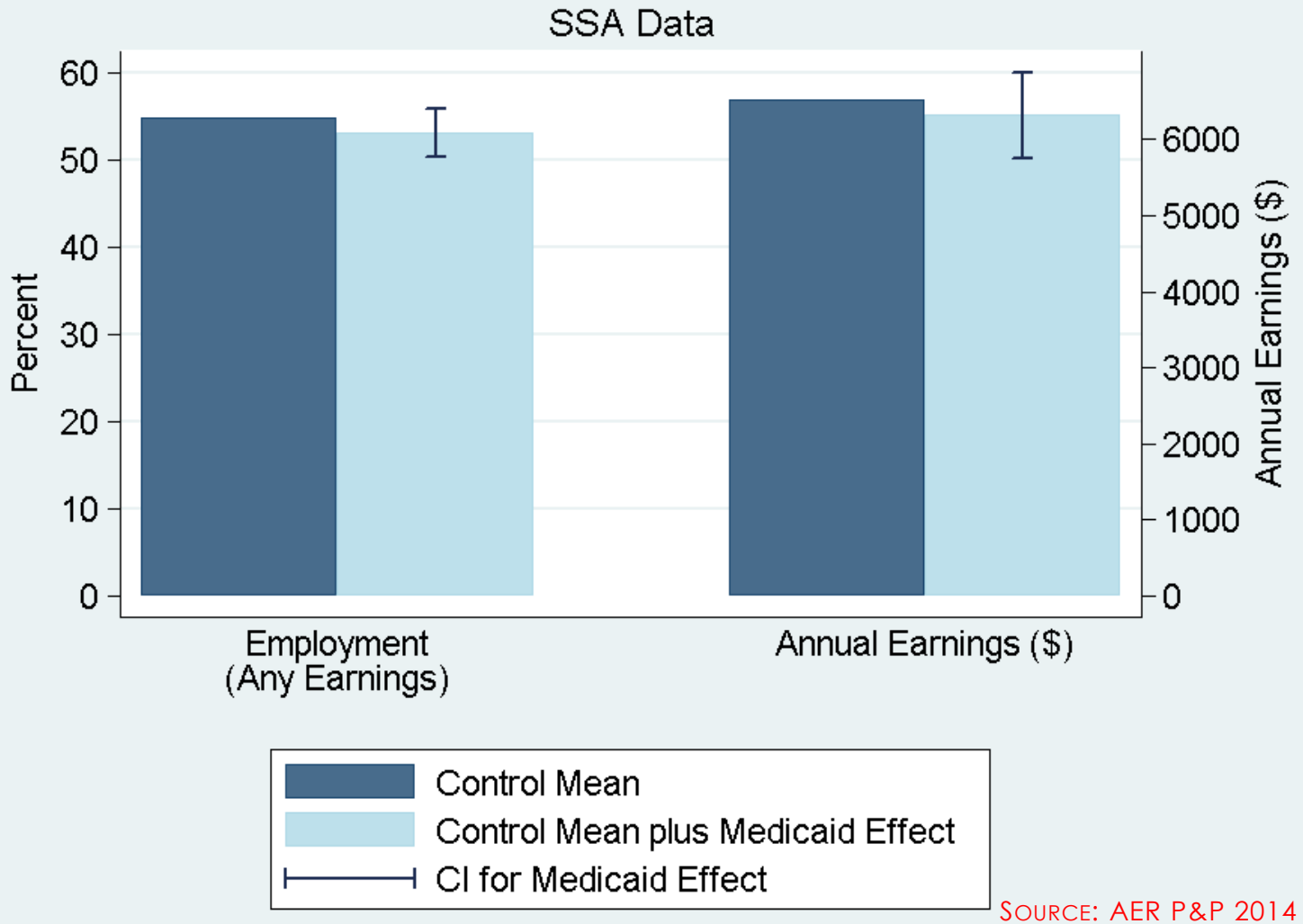
SOURCE: QUARTERLY JOURNAL OF ECONOMICS 2012

Medicaid Increases Economic Security



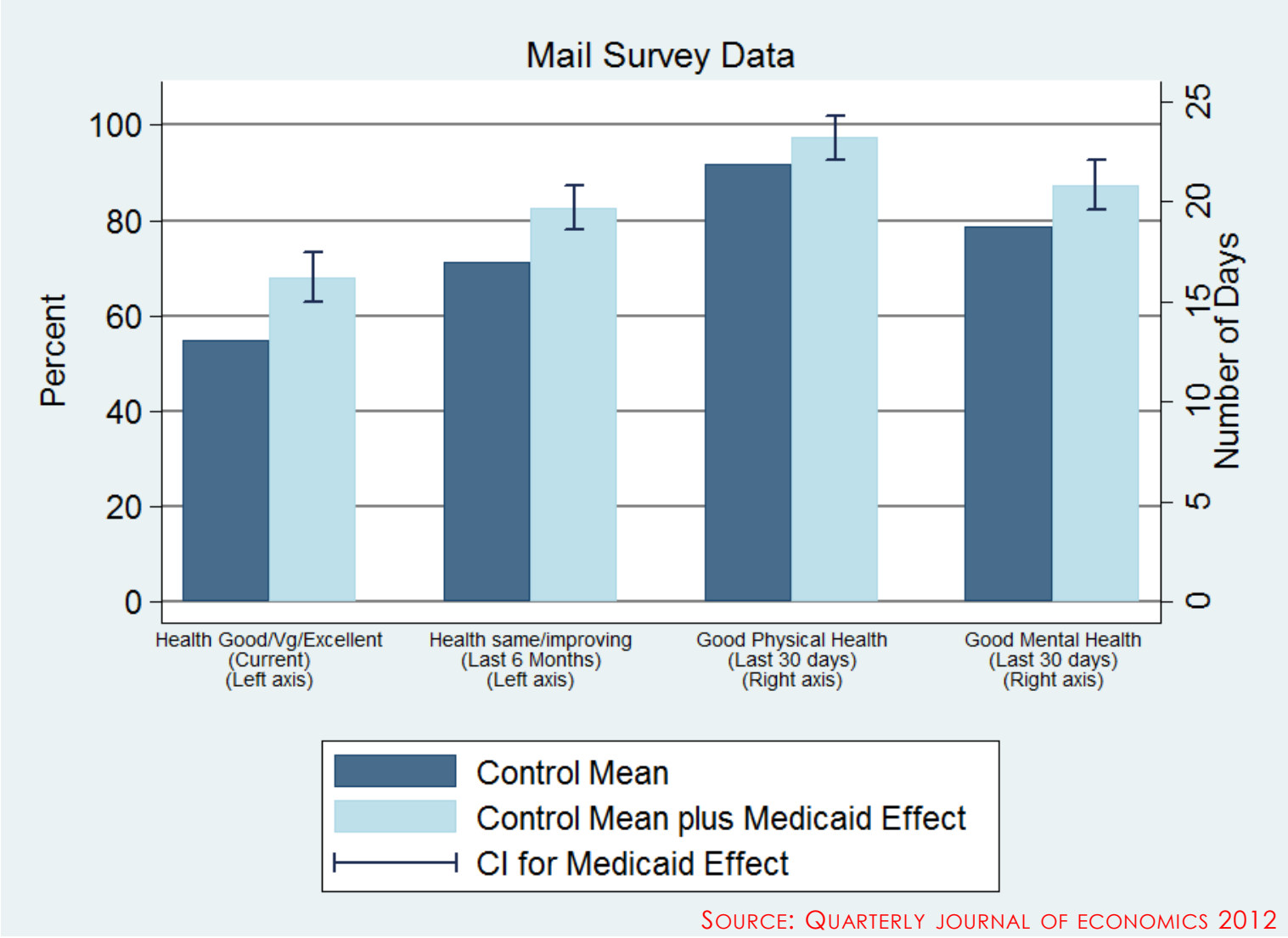
SOURCE: QUARTERLY JOURNAL OF ECONOMICS 2012; NEW ENGLAND JOURNAL OF MEDICINE 2013

No Detectable Impact on Earnings and Employment



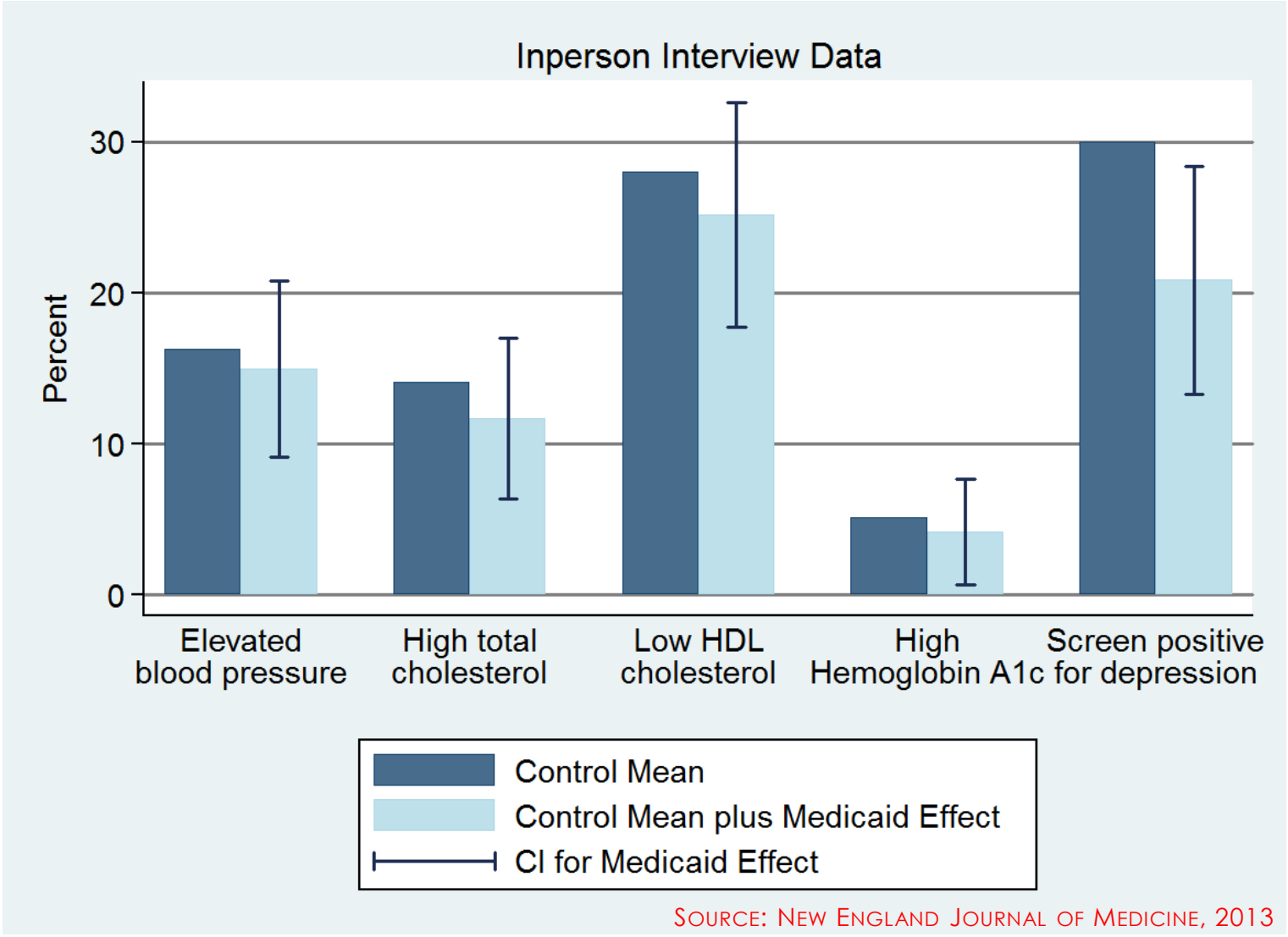
SOURCE: AER P&P 2014

Medicaid Improves Self-Reported Health



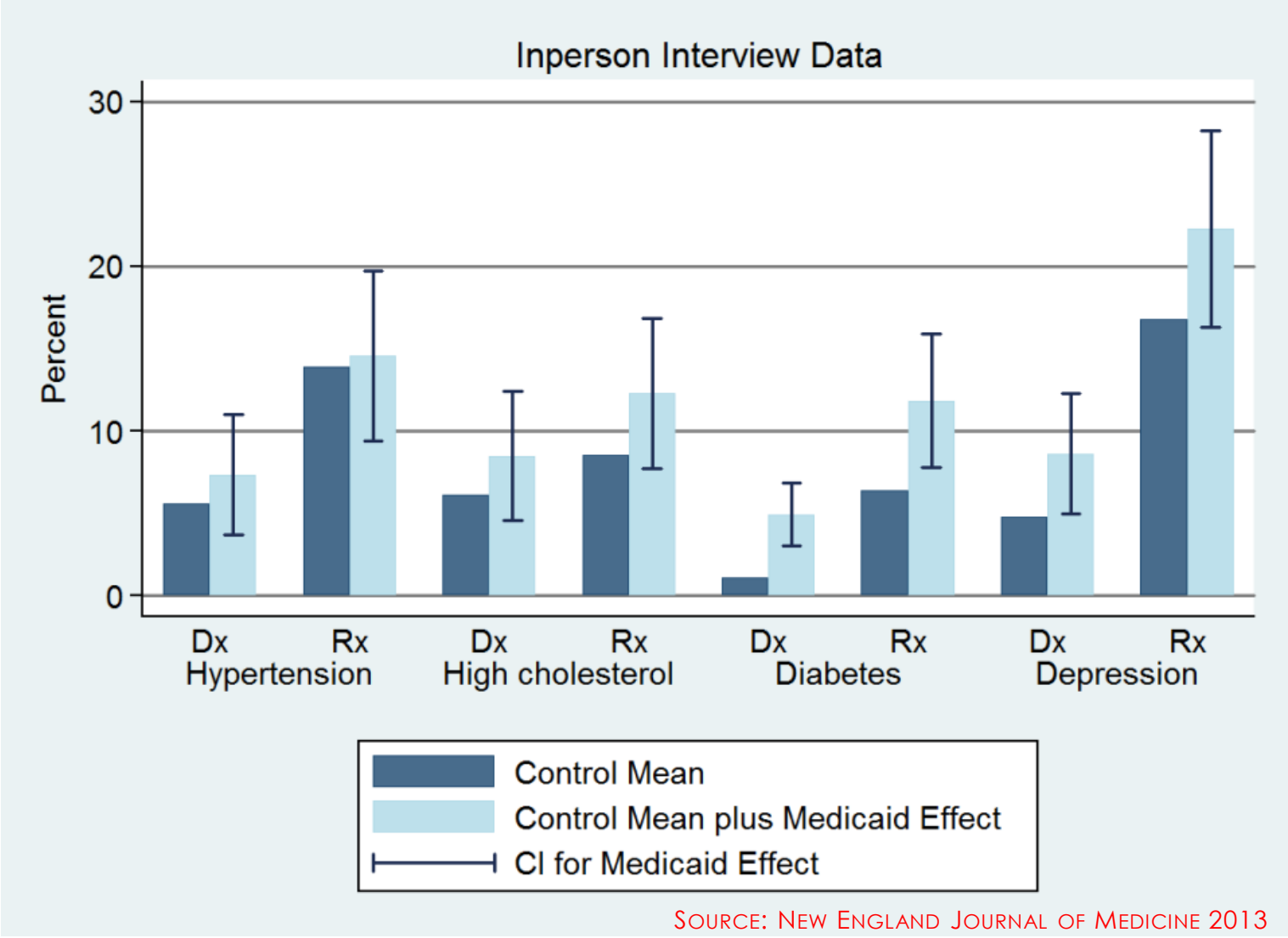
SOURCE: QUARTERLY JOURNAL OF ECONOMICS 2012

No Detectable Impact on Physical Health



SOURCE: NEW ENGLAND JOURNAL OF MEDICINE, 2013

Medicaid Increases Diagnosis and Medication



SOURCE: NEW ENGLAND JOURNAL OF MEDICINE 2013

Health Results: Discussion

- Health benefits from Medicaid
  - Improves self-reported health
  - Reduces depression (by ~9 pctg pts or 30%)
- No detectable impact on blood pressure, cholesterol, or blood sugar
  - Chosen because they are important, measurable health problems in this population and have been shown in clinical trials to be modifiable with effective treatment within our time frame
  - *Cannot* reject decline in blood sugar predicted by the effect we see on diabetes medication + clinical trials of effects of such medication
  - *Can* reject declines in blood pressure found in quasi-experimental Medicaid studies

Health Insurance and Mortality

- Subsequent, important work rejecting the null hypothesis that health insurance (or Medicaid) has no impact on adult (50-64 year old) mortality
  - Goldin et al. (QJE 2021) IRS experiment (sample size: 4 million!)
  - Miller et al. (QJE 2021) and Wyse and Meyer (2024): Medicaid expansions
- But *magnitudes* are modest
  - E.g. Meyer and Wyse estimate that enrolling all uninsured in Medicaid would reduce (substantial) mortality gap between high and low income by ~10 percent
  - Consistent with substantial income-mortality gradients in countries with universal coverage (Norway, Sweden…)
- Why?
  - Stay tuned…

Summary: Medicaid Effects After 1-2 years

- Increased health care use across the board
  - Hosp, ER, primary care, drugs, preventive care
  - ~25% ↑ total, annual spending (hospital, outpatient, drugs)
- Improved some measures of financial well-being
  - Reduced out-of-pocket costs and medical debt
    - Virtually eliminated "catastrophic" out-of-pocket spending
  - No detectable effect on earnings and employment
- Improved some measures of health
  - Improved self-reported health
  - Reduced depression
  - No statistically significant effects on measured physical health

{Interlude: Key Open Empirical Questions}

- Large literature on empirical impact of formal health insurance coverage

- Some open questions include:
  - Impact of health insurance on consumption (level and variance)
  - Consequences to individuals of medical debt (but see Kluender et al. QJE 2025)
  - Impact on health
    - Stock, not flow
    - Paucity of non-mortality measures

- For more discussion see Finkelstein, Notowidigdo and Mahoney (2018): "What Does (Formal) Health Insurance Do, and For Whom?"

{Interlude: Beyond Mortality}

- Need (representative) data on physical & mental health
  - Key challenge: usually only well-measured at scale if use health care (selection problems)

- Recent advances:
  - Minimum data set –detailed physical and health measures for all nursing home residents (Einav et al 2025 EMA)
  - Measuring chronic diseases in countries with no access gradient (Danesh et al. 2024; NBER WP 32577)
  - In progress:
    - Korean national health exams (with Hong and Einav)
    - NYC public school physical exams (with Price and Einav)
  - More needed!

Effects of Medicaid on Non-Recipients

- Low-income uninsured pay only ~20 cents on the dollar for their medical spending
  - National estimates: uninsured pay 20 – 35 cents on the dollar for their medical care
  - Remainder is charity care (i.e. by non-profit hospitals and public clinics) and bad debt

- Implications:
  - Low income "uninsured" have substantial implicit insurance (may explain modest health impacts)
  - Medicaid *recipients* not the only Medicaid *beneficiaries*

- In Oregon, we estimate that for every dollar of Medicaid spending, about $0.60 represents a transfer to the providers of implicit insurance for the low-income uninsured

Extrapolating Beyond the Experiment

- Context quite relevant for health care reform
  - Population covered by Medicaid in our study basically the same as those covered by 2014 ACA expansion of Medicaid or uncovered by potential repeal
- But important caveats to bear in mind:
  - Time pattern of effects (1-2 years vs. longer run)
  - Partial vs. general equilibrium effects (Finkelstein QJE 2007)
  - Heterogeneity in treatment effects
    - Representativeness of Oregon (population; health care system)
    - Selection on gains?
      - Voluntary vs. mandatory enrollment ("selection on moral hazard" (Einav et al AER 2013))

Updating Based on Our Findings

"No insurance is horrible, insurance is good. Like they needed a study to figure this one out."

- Oregon lottery participant

Updating Based on Our Findings

- "Medicaid is worthless"
  - Not true: Increases in utilization, perceived access and quality, reductions in financial strain, and improvement in self-reported health
- "Covering the uninsured will get them out of the Emergency Room"
  - Not true: Medicaid increases use of ER (overall and for a broad range of visit types)
- "Health insurance expansion saves money"
  - Not true in short run: increases in health care use
  - In long run, remains to be seen: increases in preventive care and improvements in self-reported health

Tremendous Media Response

5 Things the Oregon Medicaid Study Tells Us About American Health Care

A landmark new study of Oregon's Medicaid program reveals what's wrong with American health care

Four Reasons Why The Oregon Medicaid Results Are Even Worse Than They Look

Does The Oregon Health Study Show That People Are Better Off With Only Catastrophic Coverage?

Here's what the Oregon Medicaid study really said

Oregon's Lesson to the Nation: Medicaid Works

Is health insurance an antidepressant?

New findings show that wider coverage has one clear effect on the population, and it's not one that anyone is talking about.

Spending on Medicaid doesn't actually help the poor

Medicaid Access Increases Use of Care, Study Finds

Reframing the Debate

The New York Times

The Opinion Pages

Why Expand Care With No Proven Benefits?

The New York Times

May 4, 2013

What Health Insurance Doesn't Do

By ROSS DOUTHAT

First, if the benefit of health insurance is mostly or exclusively financial, then shouldn't health insurance policies work more like normal insurance? Fire, flood and car insurance exist to protect people against actual disasters, after all, not to pay for ordinary repairs. If the best evidence suggests that health insurance is most helpful in protecting people's

The New York Times

The Conscience of a Liberal

PAUL KRUGMAN

MAY 2, 2013, 6:39 PM

Fire Insurance Is Worthless!

After all, there's no evidence that it prevents fires.

But strange to say (as Mark Thoma points out in correspondence), people seem to think it's a good idea anyway.

I leave the relevance of this thought to the Medicaid discussion as an exercise for readers.

Beyond Oregon: Where Do We Go from Here?

- Critical need for more randomized evaluations in domestic policy
- Oregon shouldn't get so much media attention
  - Randomized evaluations on health care policy ideally closer to norm than exception
  - i.e. RCTs on how health care is delivered: health insurance, increase use of "appropriate" care, care coordination…

Use of RCTs in U.S. Health Care Delivery (Finkelstein and Taubman, *Science* 2015)

- Limited use to date
  - Search of top medical, economics, and health services journals
  - **18 percent of U.S. health care delivery interventions randomized**
- Greater use of RCTs for U.S. medical interventions
  - 80 percent of U.S.-based medical treatment studies randomized
  - True of both drug (86 percent) and non-drug (66 percent) interventions
- Greater use of RCTs for other social policy
  - 36 percent of U.S. education studies
  - 46 percent of international development studies

Possibility of a New Era

- Increasing demand for credible evidence
  - Increasing public sector budgets (e.g. Medicaid expansion under ACA)
- Increasing "skin in the game" for private sector (in part due to ACA)
  - Reductions in Medicare payments to hospitals for excess readmission rates
  - Accountable Care Organizations (ACOs) with shared savings if meet quality targets for Medicare patients but reduce costs
  - Private sector analogs (e.g. Alternative Quality Contract in MA BCBS)

Potential Challenges to Health Care RCTs

- Ethics of rationing
  - Programs often oversubscribed, rolled out gradually, or initially tested with a pilot program
- Time and cost considerations
  - RCTs need not, and often do not, add to costs of prospective research
  - Randomizing who is offered program and following study population in administrative data can reduce recruitment and follow-up costs
    - Yields causal estimates even without full take-up (adherence)
    - Can deliver both "real-time" results for practitioners and long-term impacts

Potential Challenges to Health Care RCTs

- Ability to study reforms to entire system or area of care
  - Randomize across providers, care-setting, etc. (about one-fifth of existing RCTs)
  - Some system-wide interventions can be studied via patient-level randomization (e.g. shared savings contracts)
  - Possibility for system-wide RCTs
    - But see CMMI market-wide payment reform RCTs!!
      - bundled payment for joint replacement
      - incentives for home dialysis
      - site neutral radiation oncology…

Reducing Barriers to RCTs in Health Policy

- Typically conducted like medical trials:
  - Recruit and consent patients
  - Follow up with primary data collection
- Alternative approach can be substantially lower cost
  - Randomize, with waiver of informed consent, an offer of intervention
  - All those in study (including those who do not accept) followed passively in administrative data
    - E.g. EMRs, insurance claims data, state discharge data sets, etc.
    - Low take-up (adherence to assigned protocol) reduces statistical power but does not interfere with obtaining consistent estimates of program's causal effects
    - Can run much larger trials with more representative samples at substantially lower cost

J-PAL NA US Health Care Delivery Initiative

- Goal: Encourage and support RCTs aimed at improving efficiency of US health care delivery

- Identify implementing partners who have innovative ideas and are committed to rigorous evaluation and match with researchers

- Support randomized evaluations (financially and technically) and help translate findings into action

J-PAL's U.S. Health Care Delivery Initiative (HCDI)

See J-PAL North America's website for more information on HCDI's projects.

Examples of recent healthcare RCTs

- Health care Hot Spotting (Finkelstein et al. NEJM 2020)
  - Patient-level randomization of a high-profile hospital discharge program
  - Designed to connect complex, high-need patients with available services
  - No impact on hospital readmissions (Why? In progress…)

- Impact of provider race on health behaviors of black men (Alsan et al. AER 2019)
  - Randomized black men to black vs white MD
  - ex ante demand for preventive services unchanged, but ex-post increased, especially for invasive services (e.g. cholesterol screening)

- Peer comparison letters for high-volume primary care prescribers (Sacarny et al. JAMA Psychiatry 2018)
  - Worked with White House SBST and CMS's Center for Policy Integrity
  - Physician-level randomization of warning letters to "outlier prescribers"
  - Letters reduced prescribing for at least two years; no evidence of negative patient effects

- Workplace wellness programs (Jones et al. QJE 2019; Baicker and Song. JAMA 2019)
  - One randomized at employee level within workplace, one at site level
  - No impact on most measured health outcomes or employee behavior
  - Healthy select into workplace wellness suggesting may be attractive for employers anyway

RCT evidence gets attention

Bloomberg

Workplace Wellness Programs Really Don't Work

They aren't saving money or making employees healthier, a new study finds.

TheUpshot

THE NEW HEALTH CARE

Can Paying for a Health Problem as a Whole, Not Piece by Piece, Save Medicare Money?

A program called bundled payments appears promising, but we need more rigorous evaluations.

npr

TREATMENTS

'Dear Doctor' Letters Use Peer Pressure, Government Warning To Stop Overprescribing

The New York Times

The Secret to Keeping Black Men Healthy? Maybe Black Doctors

In an intriguing study, black patients were far more likely to agree to certain health tests if they discussed them with a black male doctor.

Recap and Next Steps

- Medicaid: What Does It Do?
  - Results from Randomized Evaluation
  - Medicaid increases health care use, improves economic security, and improves some health measures
  - NB: Medicaid recipients not the only beneficiaries

- Up Next: What Do The Results Mean?
  - From descriptive to normative
  - Value of Medicaid?
    - Welfare analysis of impact of Medicaid

Informal Welfare Analysis Inconclusive

According to the media:

npr

Medicaid Makes 'Big Difference' In Lives, Study Finds

The Washington Post

Spending on Medicaid doesn't actually help the poor

According to think tanks:

OCPP Oregon Center for Public Policy

Oregon's Lesson to the Nation: Medicaid Works

MACKINAC CENTER FOR PUBLIC POLICY

Oregon Study Suggests Michigan Medicaid Expansion Not Worth the Cost

Part II: What Can We Learn from Formal Welfare Analysis?

- Goal: Estimate the (monetary) value of Medicaid to recipients

- Will require more assumptions (and therefore caveats) than direct experimental estimates of impacts
  - Undertook two very different approaches
  - Robust result: Medicaid's value to recipients is substantially below Medicaid spending (20-50 cents on the dollar)
  - Important driver: low-income "uninsured" pay a small share of their medical costs
    - The implicit insurers of the uninsured (e.g. hospitals) are an important beneficiary of Medicaid coverage

Welfare Analysis: Framework

- Individuals derive utility (well-being) from health *h* and (non-medical) consumption *c,* and potentially other things.

$$u=u(c,h,\ldots)$$

- Health *h* is produced according to $h = H(m;\theta)$ where
  - m denotes medical spending
  - θ denotes distribution of potential health shocks.

- Goal: estimate recipient's value of Medicaid (V)
  - Definition: V is the amount of money we could take away from Medicaid recipient that would leave him indifferent between having Medicaid (without V) and being uninsured
    - *Recipient's* value may differ from *society's* value

Road map

- Estimating value of in-kind subsidies is hard!
  - Especially if they are not traded in a well functioning market
  - Will spend some time describing and discussing some potential empirical approaches
- But first let's fast-forward and assume we have a credible estimate of V
  - What will we do with it?
  - NB: Always useful exercise to do at start of an empirical research project!

Benchmark: MVPF

- Estimate V using both ex-post approaches and get similar results. Now what do we do with it?

- One natural approach: compare value of Medicaid to its cost
  - i.e. calculate MVPF:
    - Recipient value (WTP) relative to cost
  - Note: MVPF above vs below 1 answers question: if Medicaid recipients had to pay actuarial cost of Medicaid, would they prefer to remain uninsured?
- What is cost of Medicaid in MVPF formula?
  - Recall: Cost = mechanical cost + fiscal externality

Medicaid Cost

- Cost = Mechanical Cost + Fiscal Externality
- Mechanical cost: cost holding behavior fixed
  - healthcare spending on uninsured
  - {ignoring administrative costs}
- Fiscal externality: impact of behavioral response to policy on government budget
  - Increase in healthcare sending due to insurance (moral hazard)
  - {Ignoring other potential fiscal externalities – e.g. labor supply effects of Medicaid that affect government tax revenue}

Other possible benchmarks

- Gross cost of Medicaid is substantially above net (i.e. real resource cost) of Medicaid
  - The low-income "uninsured" in fact receive substantial uncompensated care (ex-ante charity care by non profit and public providers; ex-post charity care through unpaid debt and bankruptcy)
  - On average pay about 20 cents on the dollar for their medical care
  - Net cost of Medicaid is only 40 percent of gross cost
- Value of Medicaid above / below net cost answers question: is it efficient to provide Medicaid?
  - i.e. is WTP above social cost?

WTP relative to net cost

- Referee comment: clearly WTP must be below net cost.
  - If willingness to pay were above net cost, private market would come in and provide it and undercut government (unless we think government is more efficient at offering health insurance)

- Please respond to referee!
  - Why might WTP be above net cost?
  - Why might WTP be below net cost?

Thus far: two benchmarks

- (V / Gross Costs) vs 1: If recipients had to pay the actuarial cost of Medicaid would they prefer being uninsured

- (V/Net Costs) vs 1: Is allocation efficient? i.e. is recipient willingness to pay above social cost

- So are we done?

Other Benchmarks

- Response at Chicago to an initial presentation:
  - "Well of course their willingness to pay is lower than costs, Amy… they're poor after all!"

- Let's not forget distributional analysis!

Distributional analysis

- V represents recipient value of Medicaid

- Society's value of Medicaid may exceed low-income recipient's value
  - e.g. utilitarian SWF - marginal utility of consumption higher for poor
  - SWF may be more concave, so that social marginal utility of consumption for poor is even higher
- Redistribution is not costless - Okun's (1975) "leaky bucket"
  - Society may be willing to spend more than a dollar to transfer a dollar to the poor
  - Why? Because social marginal of consumption for low income above own private marginal utility of consumption

Distributional analysis (con't)

- Two approaches to distributional analysis
  - Social cost benefit test
  - MVPF compared to other programs
    - Can we transfer to the low income more efficiently through Medicaid or through other programs (e.g. cash transfer through EITC)?
    - See earlier lecture on MVPF
- Social cost benefit test
  - Use a social welfare function to translate individual WTP (V) into a social willingness to pay (SV) – Saez and Stantcheva 2016
  - Then compare SV to gross or net costs

Social Cost Benefit Test

- Requires specifying a SWF

- Consider for example a utilitarian SWF
  - SV of Medicaid is recipient value time the ratio of marginal utility of consumption for the recipient to the marginal utility of consumption of the average person in the population
  - E.g. in Oregon recipient consumption is about 2/5 of average in population
    - If we assume CRRA utility with coefficient of relative risk aversion of 3 this implies mu of consumption is 1/c^3
    - So SV is 15 times recipient value! = (1/0.4) ^3
    - Even with log utility SV is 2.5 times recipient value

Road map

- Now have some idea of what we might do with V once we estimate it
  - i.e. have discussed various benchmarks
  - And will return to them once we estimate V

- Now let's return to the empirical challenge of estimating V!

Two Approaches to Estimating V

- **Ex-post approach:** Use estimated outcomes for individuals with Medicaid and without Medicaid to infer and compare utility with and without Medicaid
  - Based on: Finkelstein, Hendren, Luttmer (2019) "The Value of Medicaid: Interpreting the Results from the Oregon Health Insurance Experiment"

- **Ex-ante approach:** Estimate demand curve for Medicaid
  - Demand curve reveals willingness to pay (value)
  - Based on: Finkelstein, Hendren, Shepard (2019) "The Value of Health Insurance for Low Income Adults: Evidence from Massachusetts"

Ex-post and Ex-ante Approaches: Overview

- **Ex-Post:** V is amount of consumption we can take away when individual has Medicaid and leave him with same expected utility as without Medicaid:

$$E_\theta[u(c_{noins}, h_{noins})] = E_\theta[u(c_{Medicaid} - V, h_{Medicaid})]$$

- **Ex-Ante:** V defined by demand (willingness to pay) for insurance: maximum price individual is willing to pay for the contract
- These approaches are equivalent as long as calculated over same distribution of shocks (i.e. same information set)

Links across other lectures

- Einav-Finkelstein-Cullen: used ex-ante WTP estimates to evaluate welfare effects of adverse selection

- Baily-Chetty: used ex-post estimates of program effects to evaluate welfare effects of changes in social insurance benefit levels.
  - We will describe two ex-post approaches, one of which is similar in spirit to Baily-Chetty and one is not.

Two ex-post approaches

- Complete information approach
  - Completely specify normative utility function and estimate causal effect of Medicaid on distribution of all utility-relevant arguments
    - Here: Consumption and Health
  - Don't assume consumer optimization or how Medicaid affects budget set
- Optimization approach
  - Assume consumer optimization and model the budget set
  - Only specify marginal utility function over one argument * Estimate causal effect of Medicaid on only that marginal utility function
  - Applications: Consumption- and Health-Based Optimization Approach (over-identification)

Complete Information Ex-Post Approach

- V is amount of consumption we can take away when individual has Medicaid and leave him with same expected utility as without Medicaid:

$$E_\theta[u(c_{noins}, h_{noins})] = E_\theta[u(c_{Medicaid} - V, h_{Medicaid})]$$

- To solve for V need:
  - Estimates of c_{noins}, $c_{Medicaid}$, h_{noins}, $h_{Medicaid}$,
    - These come directly from the Oregon experimental estimates
  - Functional form and parameters of utility function, u
    - Where does that come from?

Complete Information Ex-post Approach

- We make a functional form assumption about utility:

$$u(c,h) = \frac{c^{1-\sigma}}{1-\sigma} + \varphi h$$

  - σ is the coefficient of relative risk aversion
  - φ is the marginal value of health in units of consumption
- V is therefore the implicit solution to:

$$E_\theta\left[\frac{c_{noins}^{1-\sigma}}{1-\sigma} + \varphi h_{noins}\right] = E_\theta\left[\frac{(c-V)_{Medicaid}^{1-\sigma}}{1-\sigma} + \varphi h\right]$$

  - And we use the cross-sectional distribution of outcomes to represent the potential realizations of states of the world, θ

What Do We Think of this Approach?

- Attractions:
  - Provides mapping from experimental estimates of impact of Medicaid on health and consumption to V
  - Don't have to take a stand on whether the individual is behaving "optimally"
- Concern: Where did that utility function come from?

$$u(c,h) = \frac{c^{1-\sigma}}{1-\sigma} + \varphi h$$

  - Need to assume a particular form for utility over c and h
  - Need to calibrate φ and σ
  - What about other arguments of the utility function that could be affected?
    - Debt, family structure, marital stability, children's outcomes etc…

Variant: Optimization Approach

- Ex-post approach that reduces information requirements through two additional assumptions
- Two key economic assumptions:
  - Program structure: Model Medicaid as affecting the individual solely through its impact on out of pocket expenses
    - Allows us to model Medicaid through its impact on budget constraint
    - Allows us to engage in the thought experiment of a marginal increase in Medicaid (conceptually: a marginal change in cost-sharing – i.e. mapping out *m* to out of pocket costs)
  - Individuals choose medical care *m* and non-medical consumptions c optimally, given their budget constraint
- Why is neither assumption innocuous?

What Do These Assumptions Buy Us?

- The power of the envelope theorem
  - Can value Medicaid solely through one argument of utility (e.g., c or h)
  - Intuition: because the recipient chooses c and h optimally, a marginal reallocation between c and h has no first order effect on welfare
  - Why is this exciting? Avoids the "endless arguments" issue.

From Marginal to Total Value

- To make inferences about non-marginal changes in the individual's budget set (e.g. covering an uninsured individual with Medicaid), require an additional statistical assumption to interpolate between local estimates
  - Can estimate marginal value of first unit of Medicaid (100% coinsurance) and last unit of insurance (0% coinsurance)
- Statistical assumption substitutes for the economic assumptions about utility function in complete information approach
  - E.g. linear interpolation between first and last value

Findings from ex-post approach

- Value of formal insurance to recipients is substantially below insurance costs (i.e. medical claims payments)
  - Value is **about one-fifth to one-half of Medicaid costs**
    - Medicaid recipients value each dollar of Medicaid spending at 20 to 50 cents on the dollar
  - Consistent with low take-up of subsidized insurance
  - Implication: low-income uninsured would prefer to be uninsured than have Medicaid and have to pay its cost

- Key driver: low-income "uninsured" have implicit insurance
  - $0.60 of every $ of Medicaid spending is a transfer to the providers of this implicit insurance
  - Lowers value of Medicaid to recipients for two reasons:
    - Accounting: 60 cents / dollar of Medicaid spending does not go directly to recipient
    - Concavity of utility: First unit of insurance most valuable

Pros and Cons of Ex-post Approach

- Attraction: Provides a mapping from experimental estimates of impact of Medicaid on health and consumption to V

- Limitations
  - Have to assume a utility function
  - Measurement challenges
    - Consumption
    - Heath Measures
  - Calibration choices for risk aversion and monetary values of health

Ex-ante Approach

- Demand curve shows willingness to pay for insurance
  - V is the maximum price at which indifferent to buying insurance or not
  - Implementation: To estimate demand curve, randomly vary price and see how many buy at different price levels

- Normative interpretation of V requires that revealed preference ("demand reveals value").
  - May be violated if individuals are inattentive, mis-informed etc.,
  - But unlike ex-post approach do not have to specify a utility function

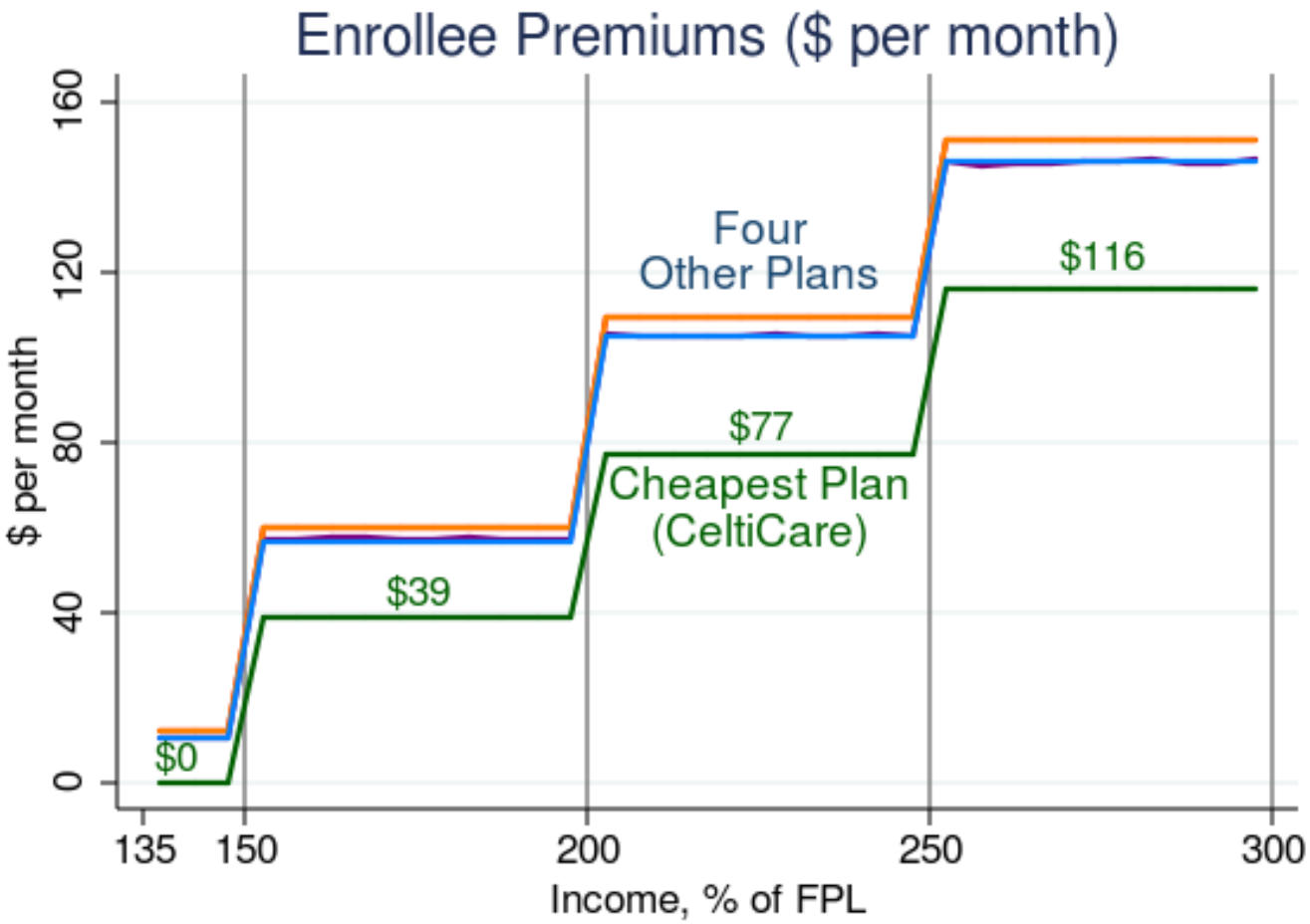
Key Assumption: Demand Curve Reveals Value

- Standard assumption / bread and butter of economic analyses of all kinds
- Why might demand not reveal value?
  - Behavioral frictions (inattention, mis-information etc – Spinnewijn, 2017)
  - Information has already been revealed, thus destroying insurance value (Hendren 2017 "Measuring ex-ante welfare in insurance markets"))
    - Observed demand (estimated once some information has been revealed) vs ex-ante demand
- What about low demand due to liquidity constraints?

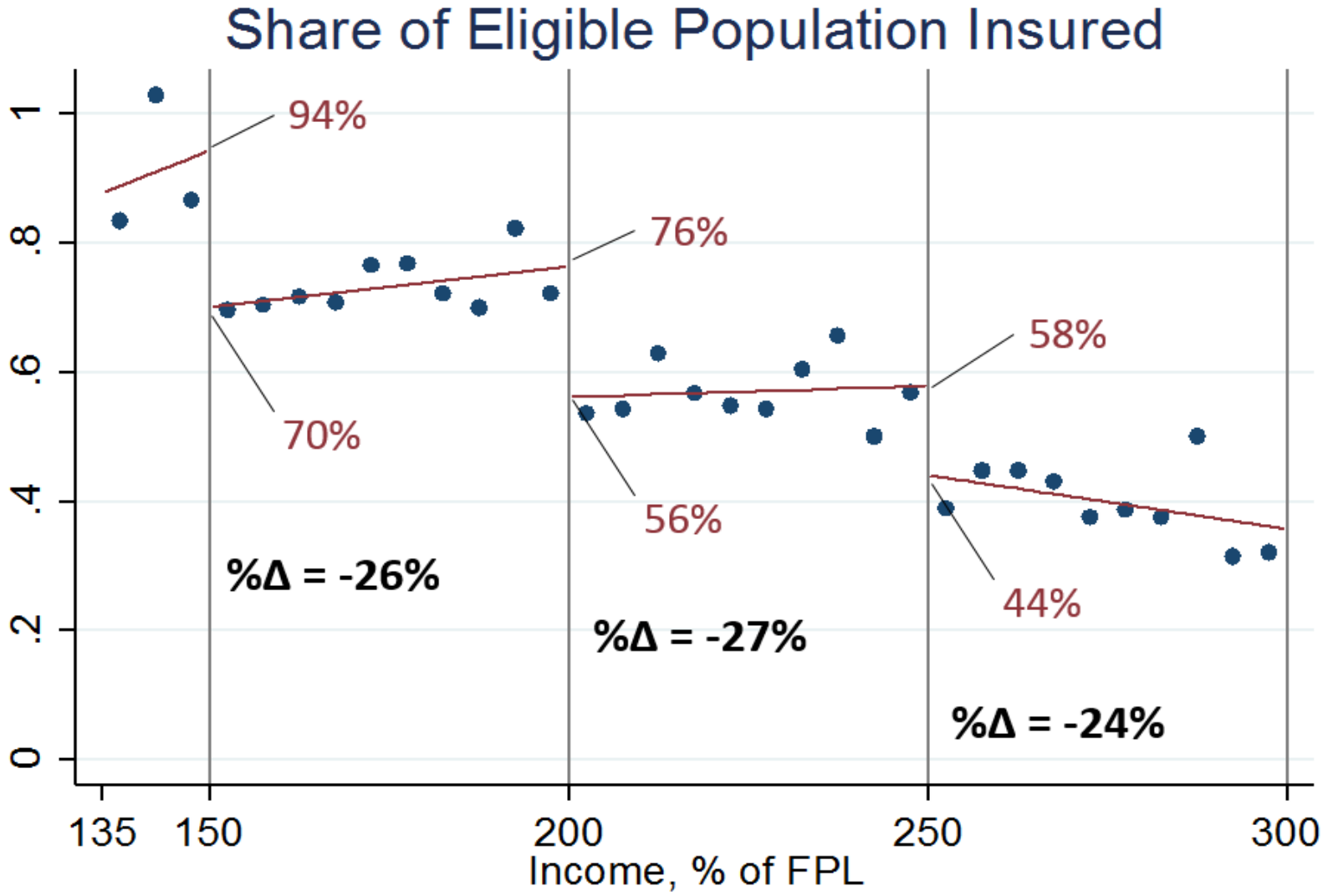
Application: Massachusetts

- Subsidized health insurance exchange in MA introduced in 2006 "Romneycare" reform
  - Precursor to ACA exchanges
  - Subsidies for low-income, non-elderly uninsured adults between 133-300% of federal poverty line
- Use quasi-random price across individuals to estimate demand
  - Public subsidies – designed to make insurance "affordable"
    - increase at discrete income bins
  - Regression discontinuity design

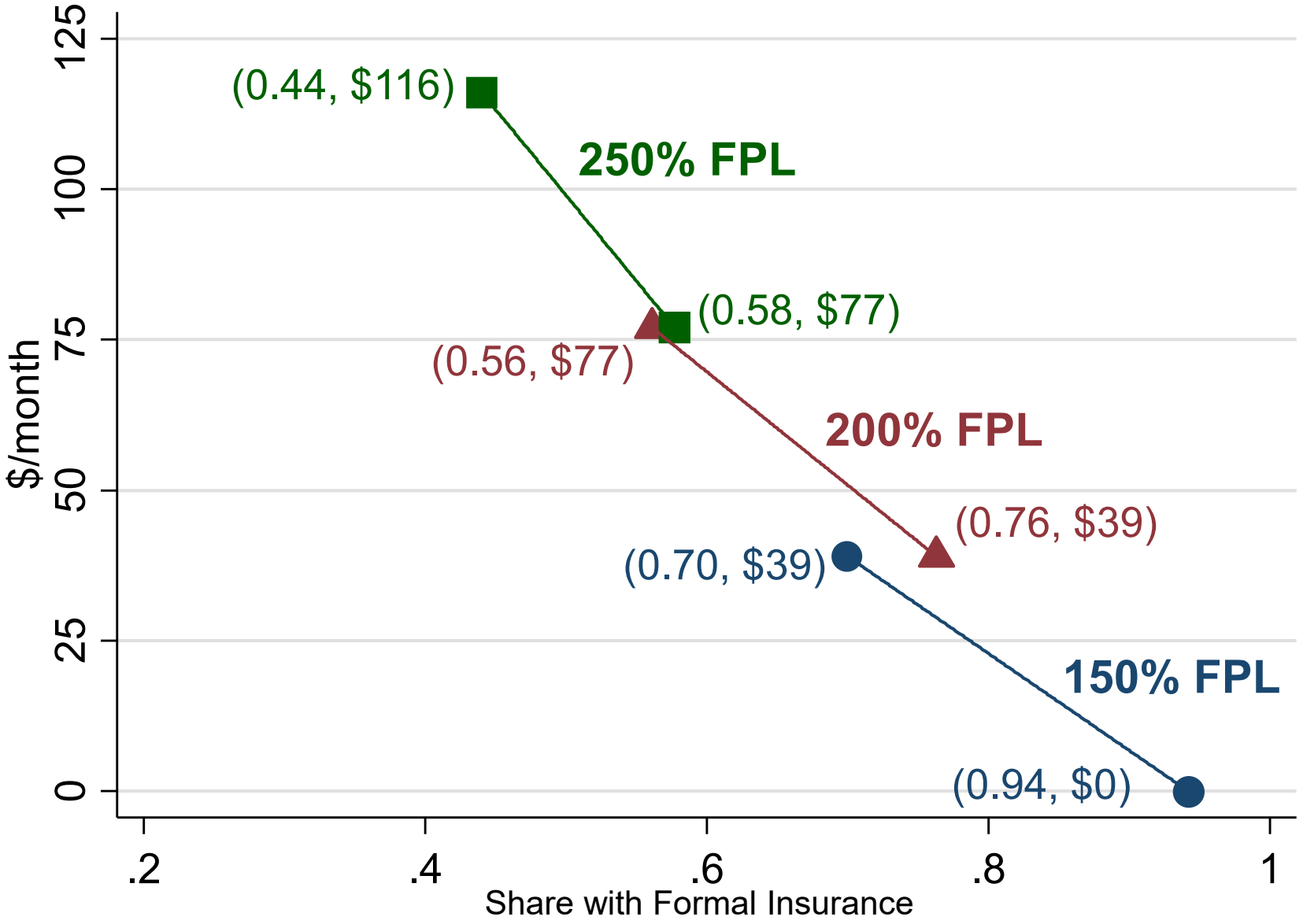
Quasi-Random Variation in Price



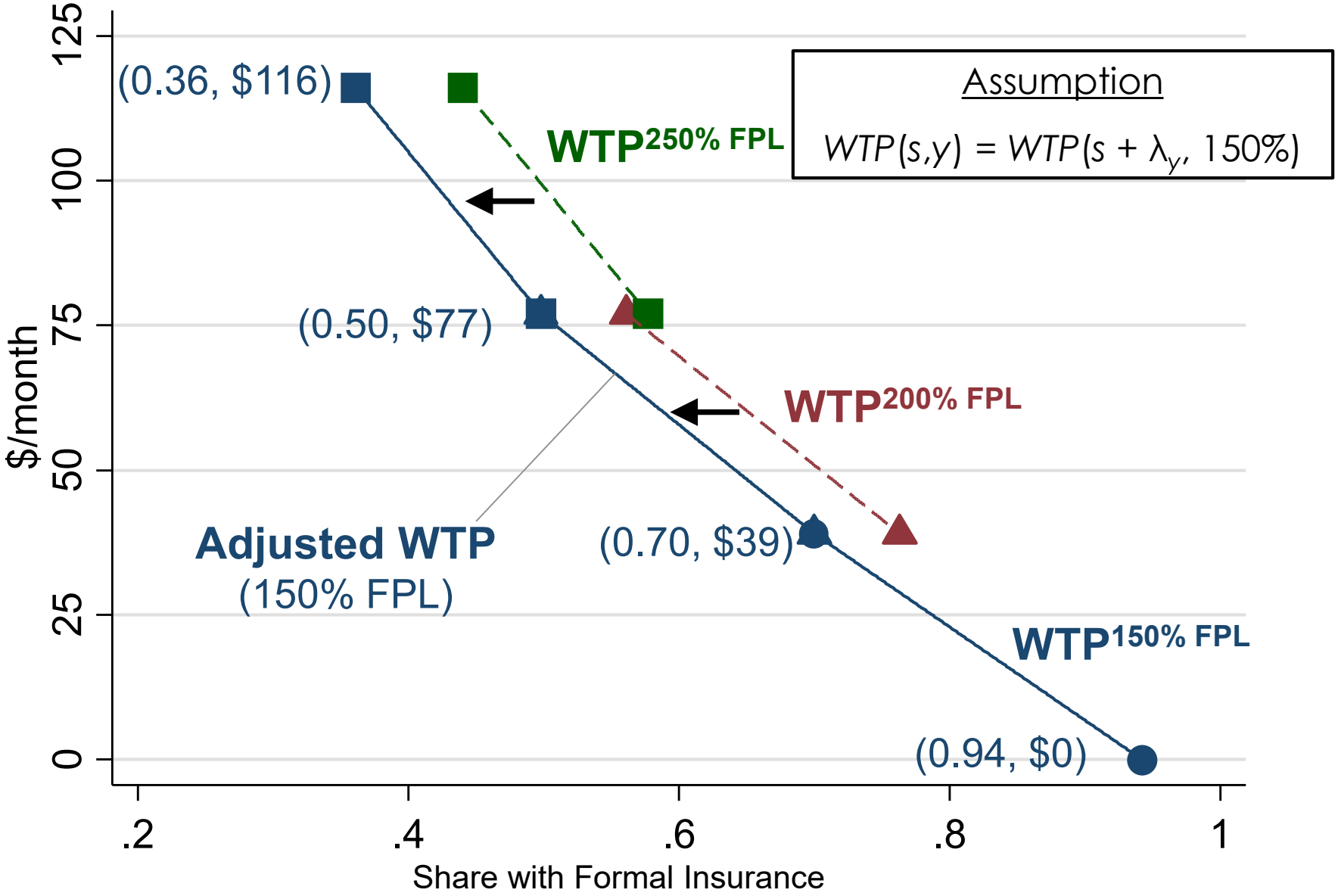
Price Changes Prompt Coverage Changes



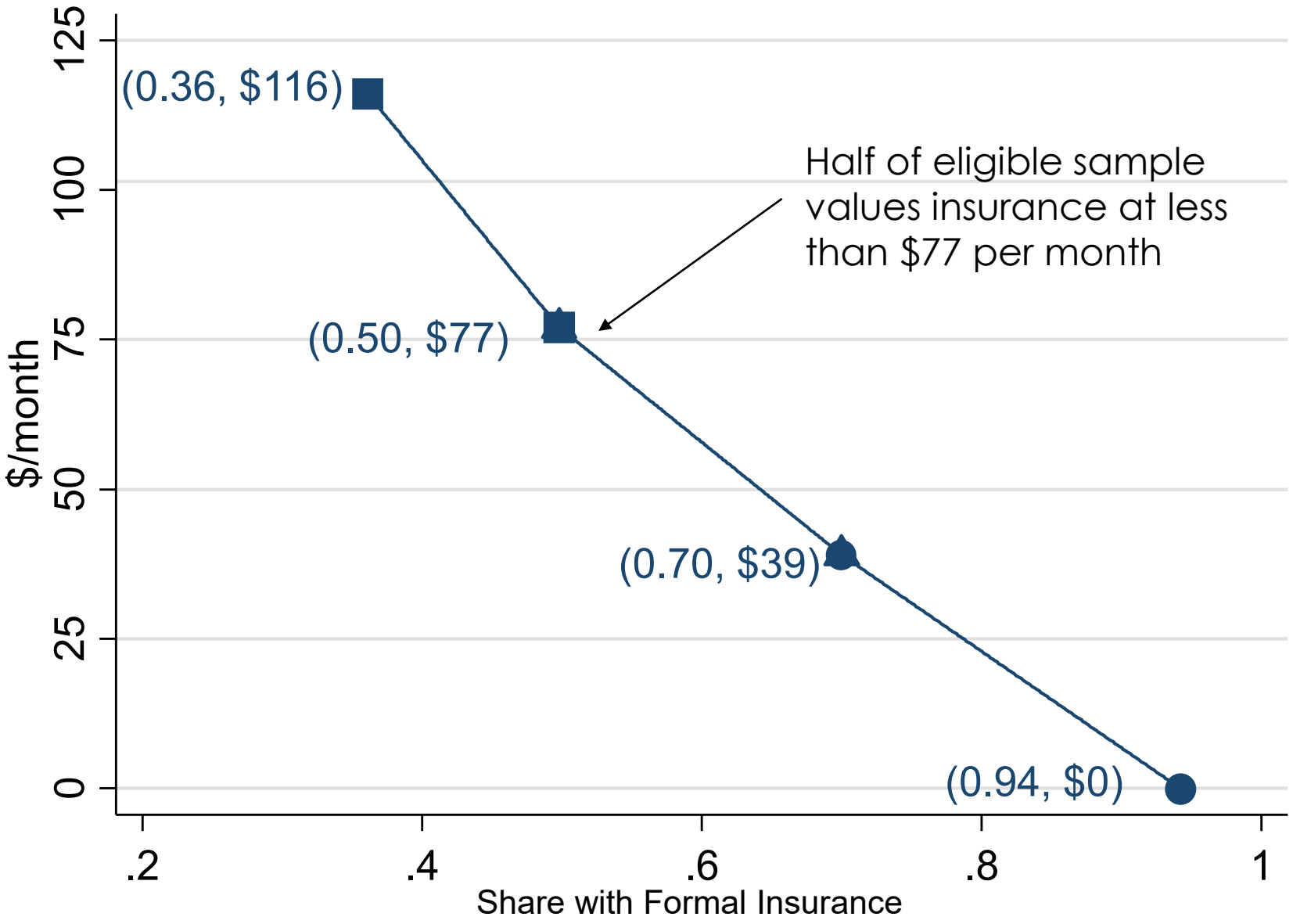
Observed Demand Points



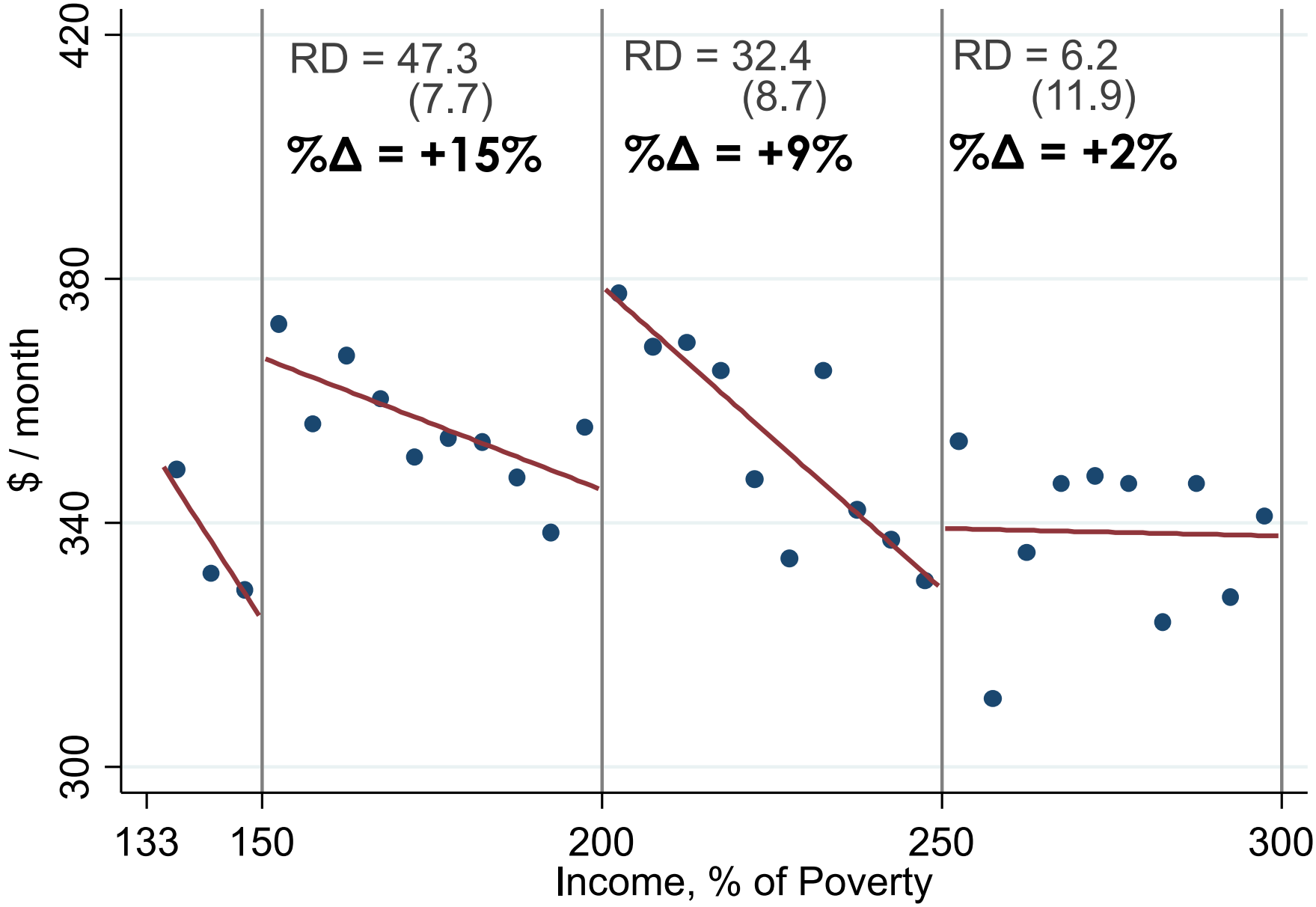
WTP (Adjusted to 150% FPL)

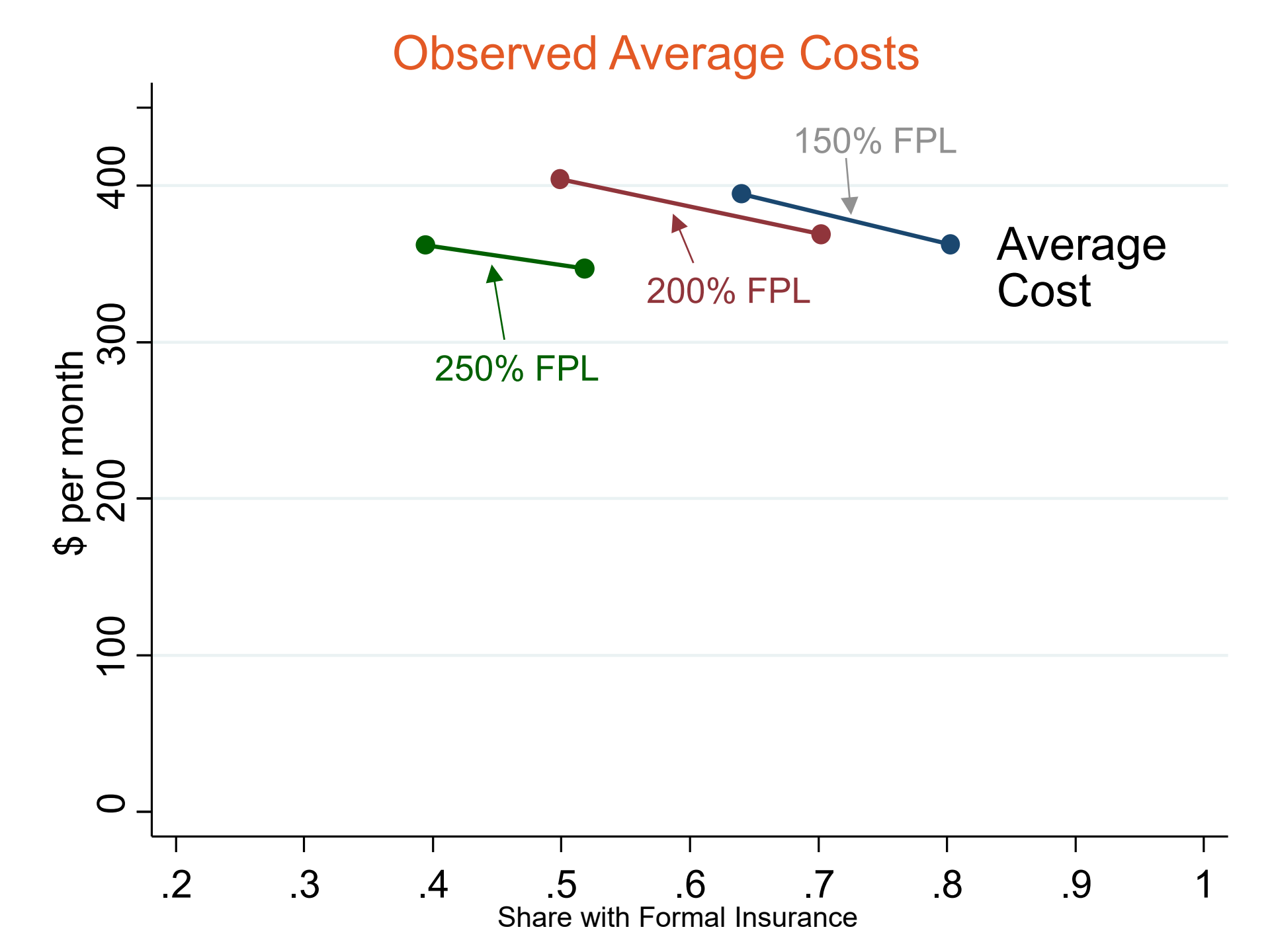


Demand Curve



Average Insurer Costs




Observed Average Costs
150% FPL
200% FPL
250% FPL
Average Cost
$ per month
0
100
200
300
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.4
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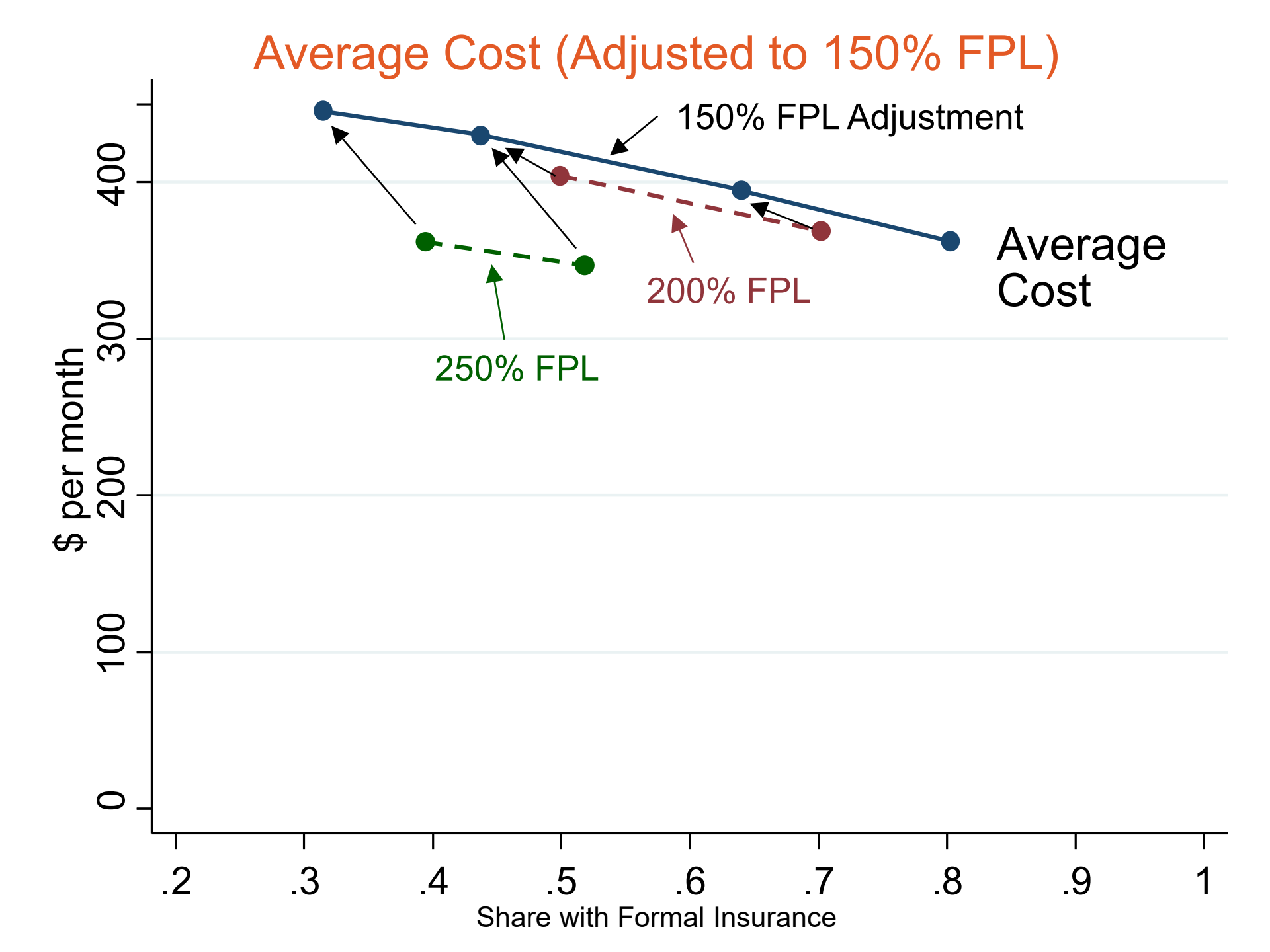
1
Share with Formal Insurance


Average Cost (Adjusted to 150% FPL)
150% FPL Adjustment
Average Cost
200% FPL
250% FPL
$ per month
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100
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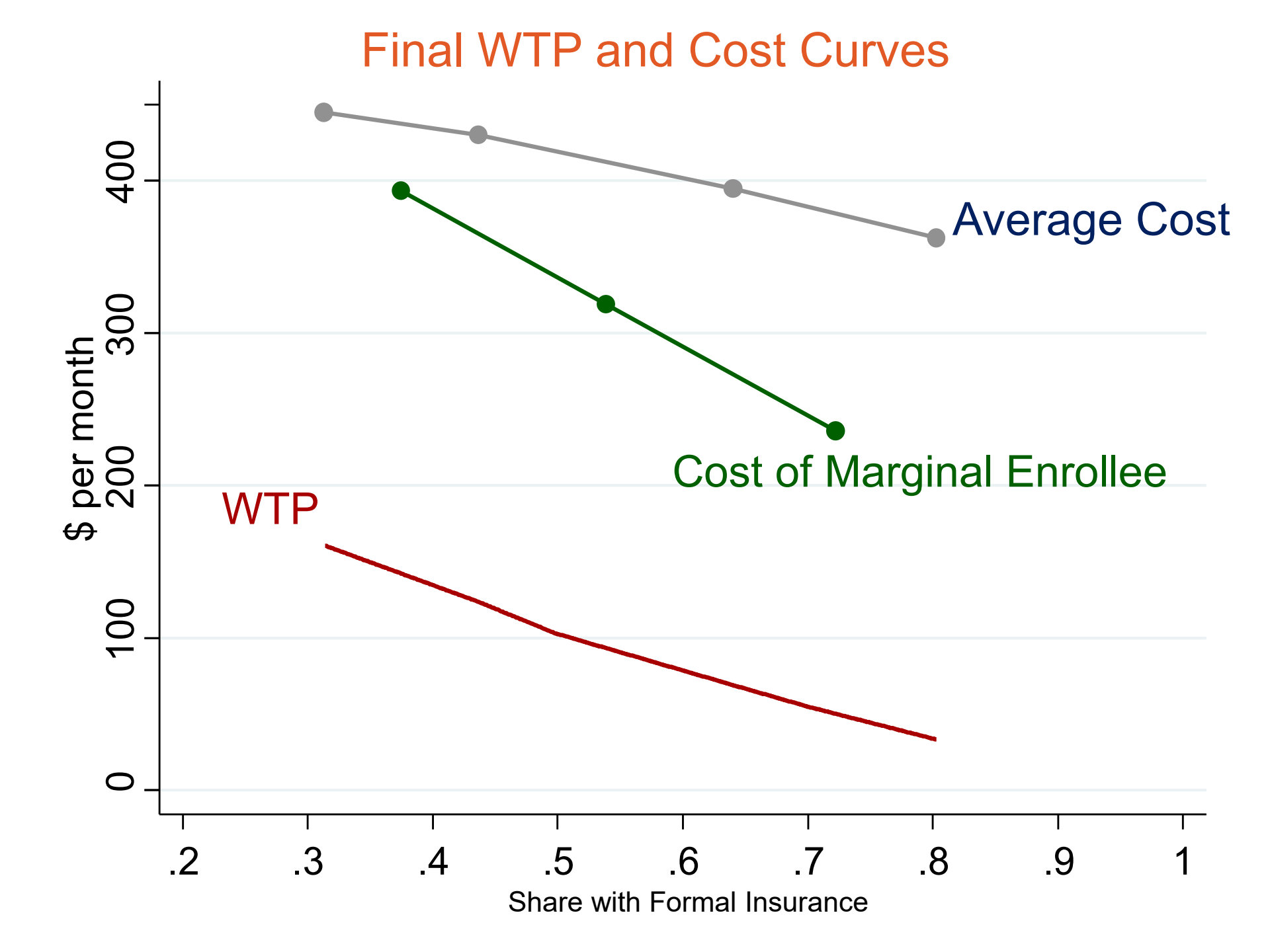
1
Share with Formal Insurance


Final WTP and Cost Curves
$ per month
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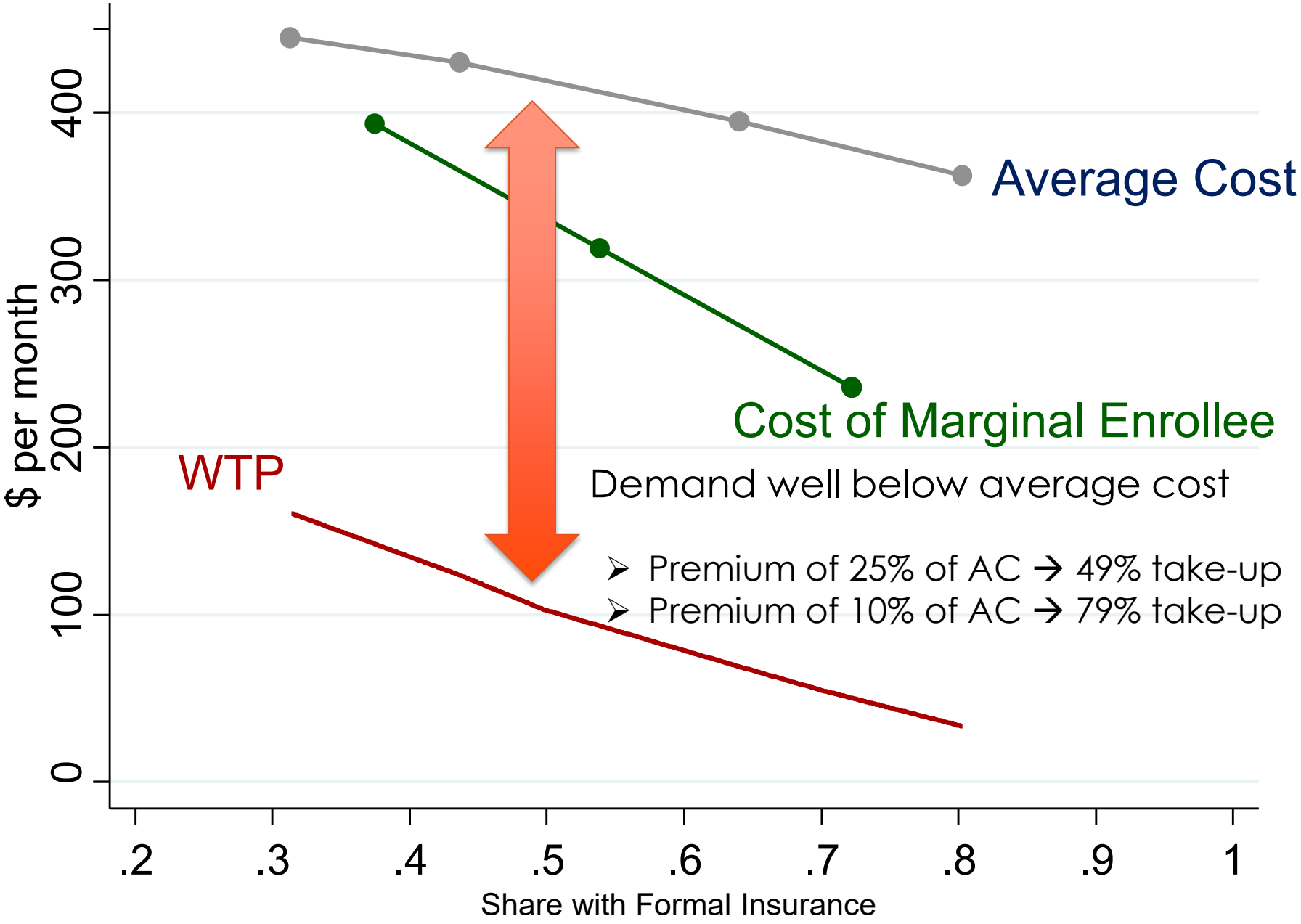
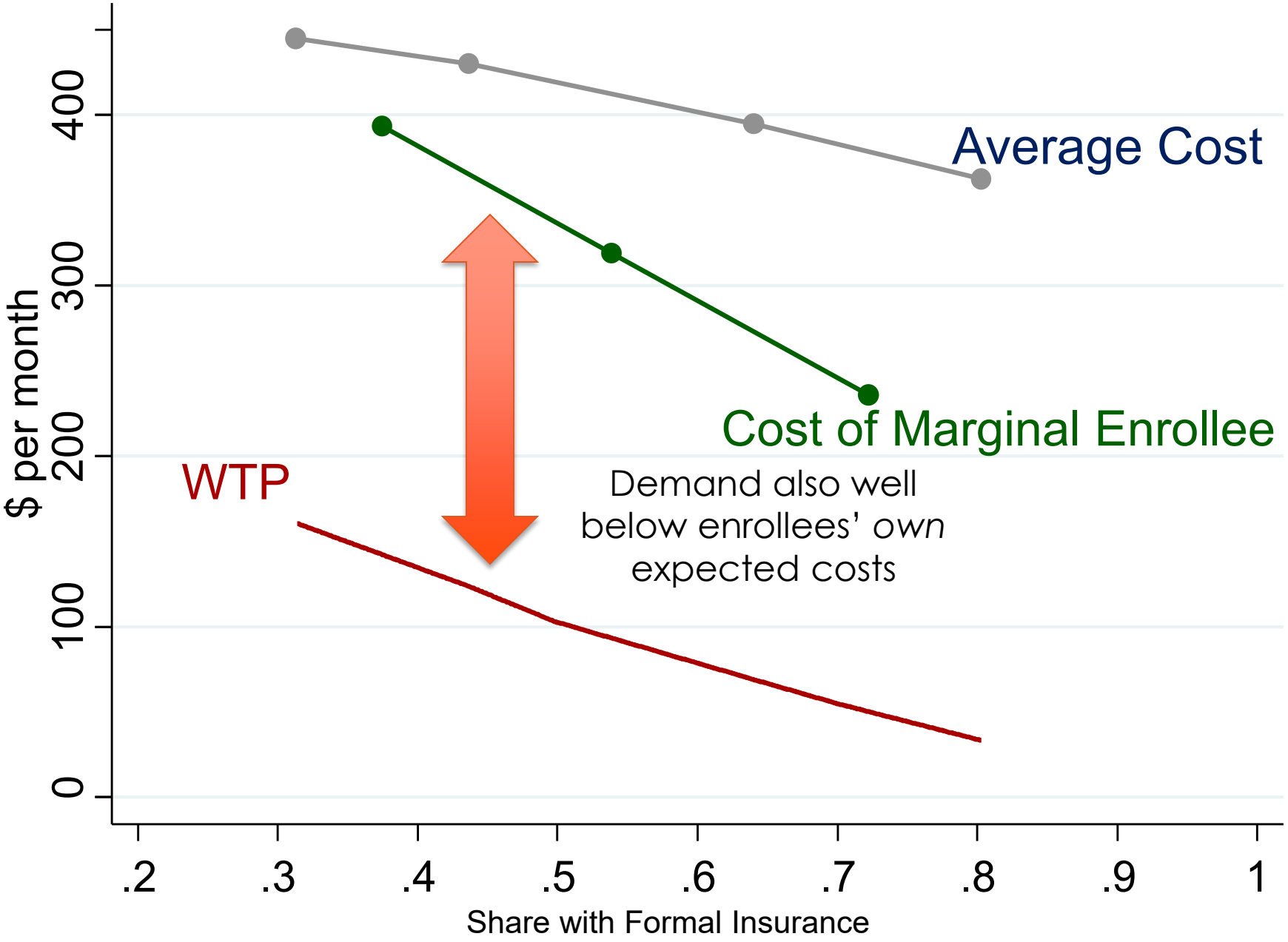
1
Share with Formal Insurance
Average Cost
Cost of Marginal Enrollee
WTP

Little Take-up w/out Large Subsidies



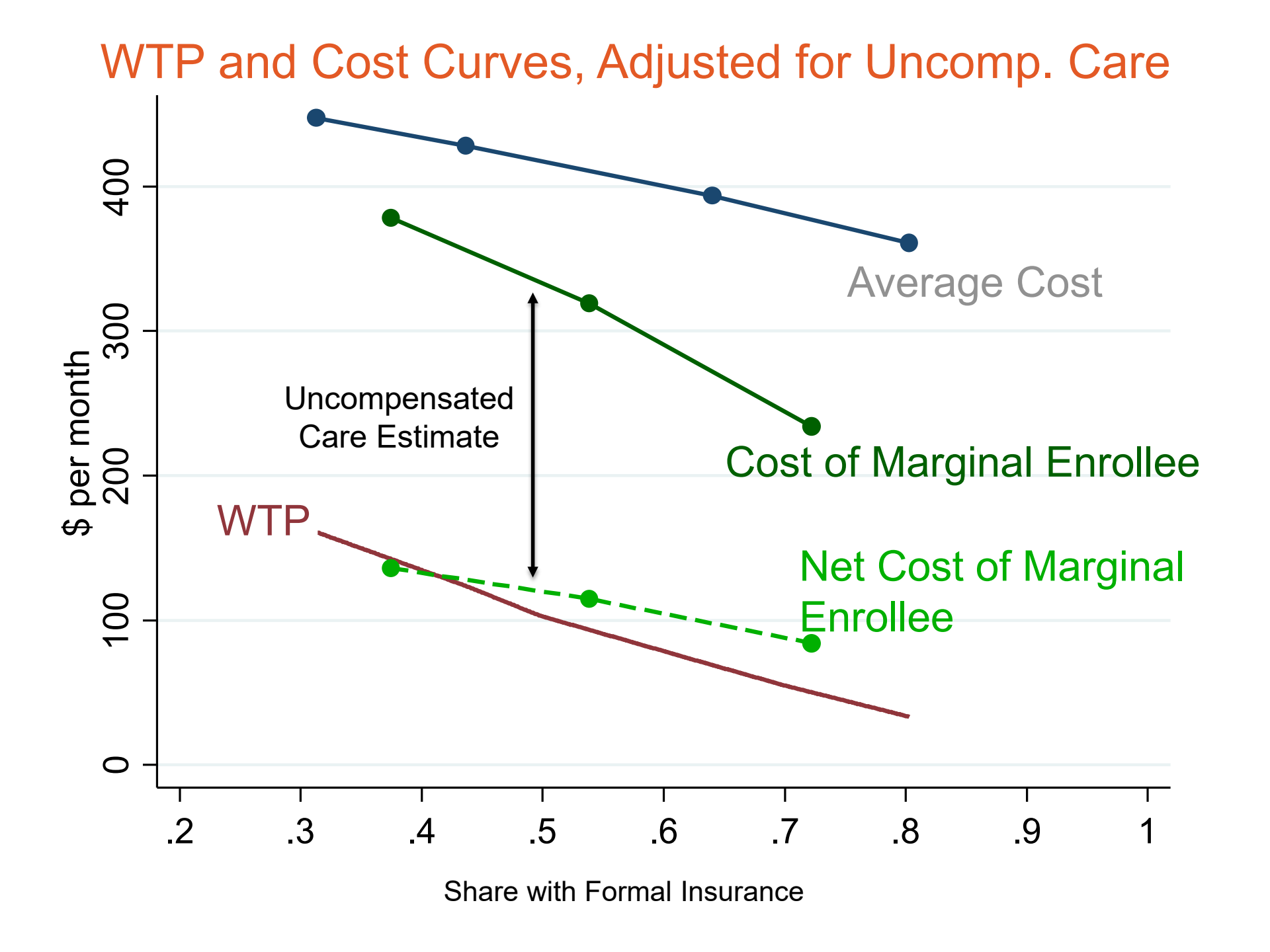
Adverse selection alone cannot explain low coverage



Why is WTP Below Own Costs?

- **Moral hazard** – textbook reason for WTP < Cost
  - But required magnitude not plausible
  - Moral hazard would have to increase costs by a factor of 200% to explain gap between WTP and Costs
  - Oregon experiment: Moral hazard increases healthcare costs by 25%

- **Uncompensated care** (charity care, unpaid bills)
  - Low-income individuals pay ~20% of their medical expenditures out of pocket
  - Use this + moral hazard estimate to construct "net" cost curve: Reflects net change in costs to insurer + third parties when get insured


WTP and Cost Curves, Adjusted for Uncomp. Care
$ per month
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.9
1
Share with Formal Insurance
Average Cost
Uncompensated
Care Estimate
Cost of Marginal Enrollee
WTP
Net Cost of Marginal
Enrollee

Summary: Welfare Analysis

- Both ex-post and ex-ante approach indicate value of health insurance substantially below claims cost of providing it
  - Value is less than half own costs
  - Consistent with low take-up on even heavily subsidized exchanges

- Likely explanation:
  - Substantial uncompensated care for nominally "uninsured" low income population
  - Reduces recipient value of Medicaid for two reasons
    - Accounting: 60 cents / dollar of Medicaid spending does not go directly to recipient
    - Concavity of utility: First unit of insurance more valuable than 81st

- Implication: Recipients are not the only (or primary) beneficiaries of subsidies

Part III: Implications

- Consider two types of implications:
  - For policies aimed at redistributing to low-income population
  - For policies aimed at improving health care delivery to low-income population

Implications for Redistribution

- **Framework:** Calculate Marginal Value of Public Funds (MVPF) spent on subsidy increase (following Hendren (2016))

$$MVPF = \frac{Marginal\ WTP\ by\ Beneficiaries}{Marginal\ Cost\ to\ Govt}$$

$$= \frac{s^*}{s^* + \frac{1}{-WTP'(s^*)} \cdot (C(s^*) - W(s^*))}$$

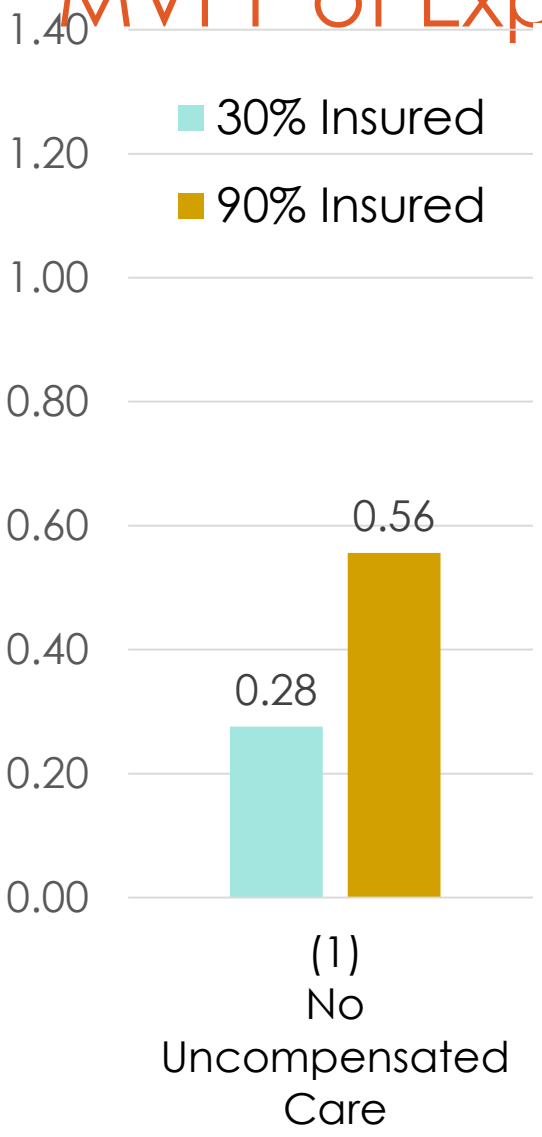
- Marginal WTP: \$1 of subsidies is valued by \$1 for s* enrolled
- Marginal Cost: Incorporate additional cost from marginal entrants
  - $-1/WTP'(s^*)$ measures number of marginal entrants
  - $C(s^*) - WTP(s^*)$ measures govt. cost of marginal entrants
- MVPF < 1 if marginal entrants have WTP less than costs

Marginal Value of Public Funds

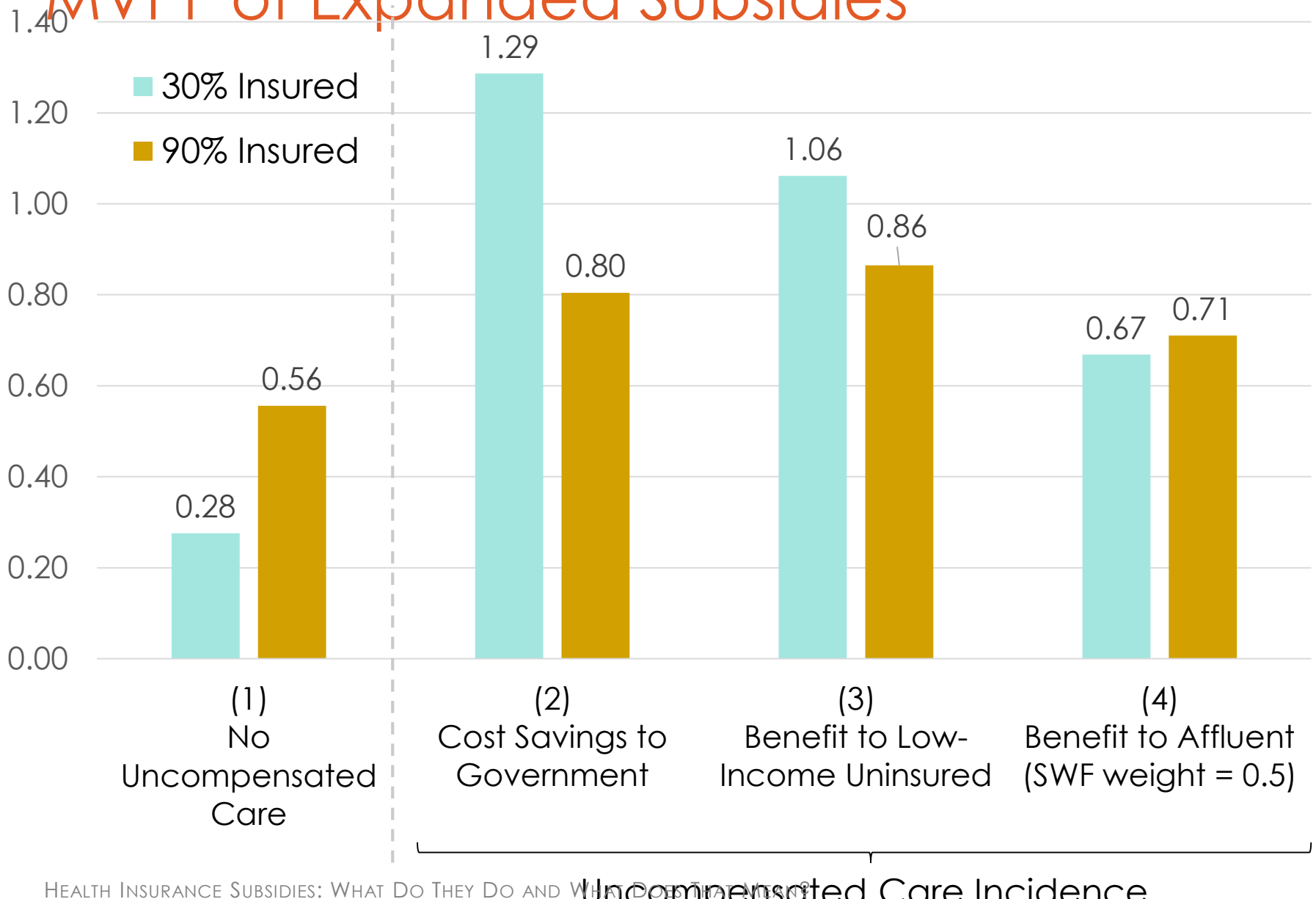
$$MVPF = \frac{\text{Marginal WTP to Beneficiaries}}{\text{Marginal Cost to Govt.}}$$

- Benefit-cost test: Does MVPF of policy exceed relevant threshold for counterfactual policy
  - MVPF > 1 if recipients willing to pay cost to government of additional subsidies (e.g. due to adverse selection)
- Various possibilities for incidence of ↓ uncomp. care:
  - No value
  - Reduced govt costs
  - Low income – e.g. better care for remaining uninsured
  - High income – e.g. reduced private insurance premiums

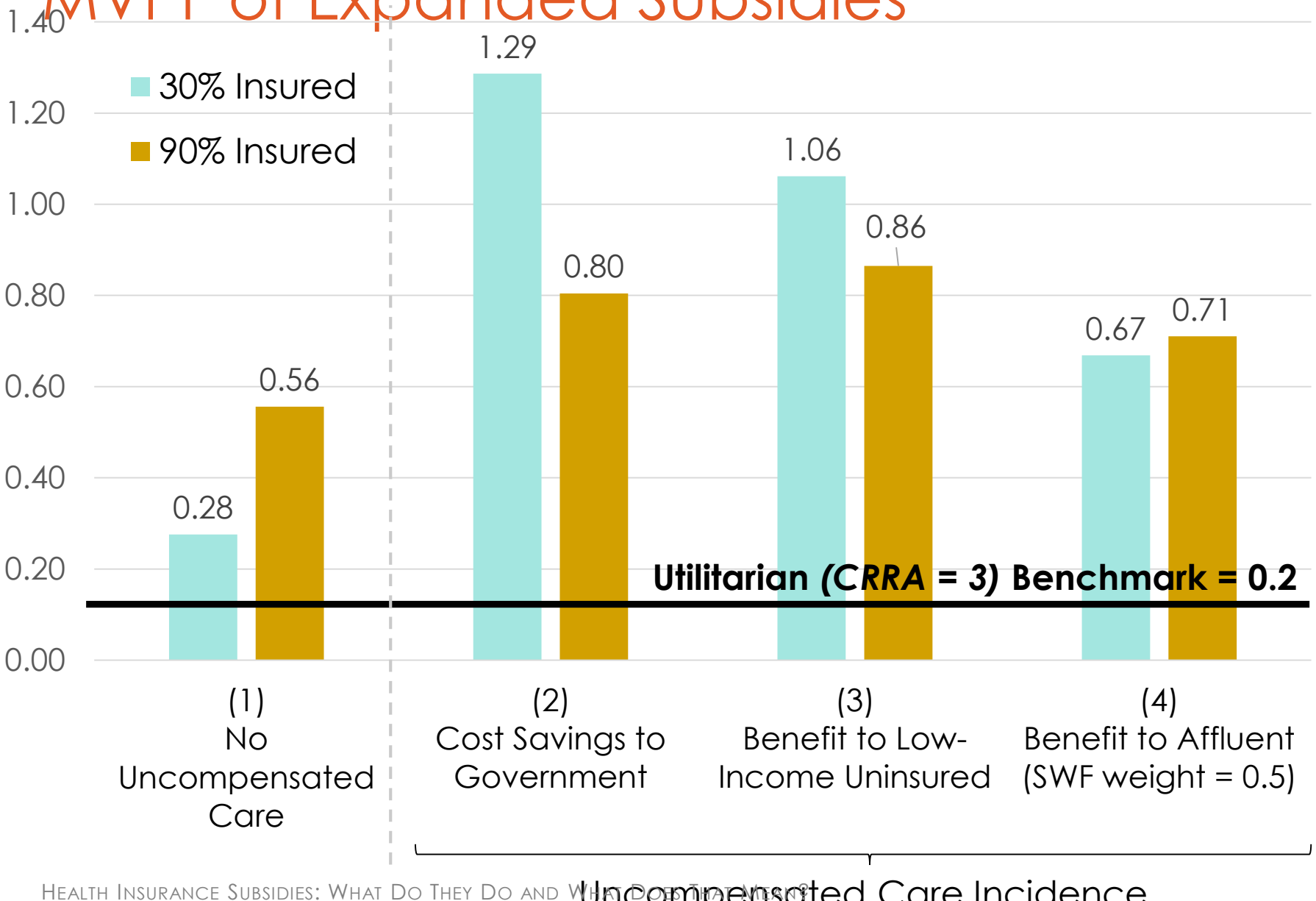
MVPF of Expanded Subsidies



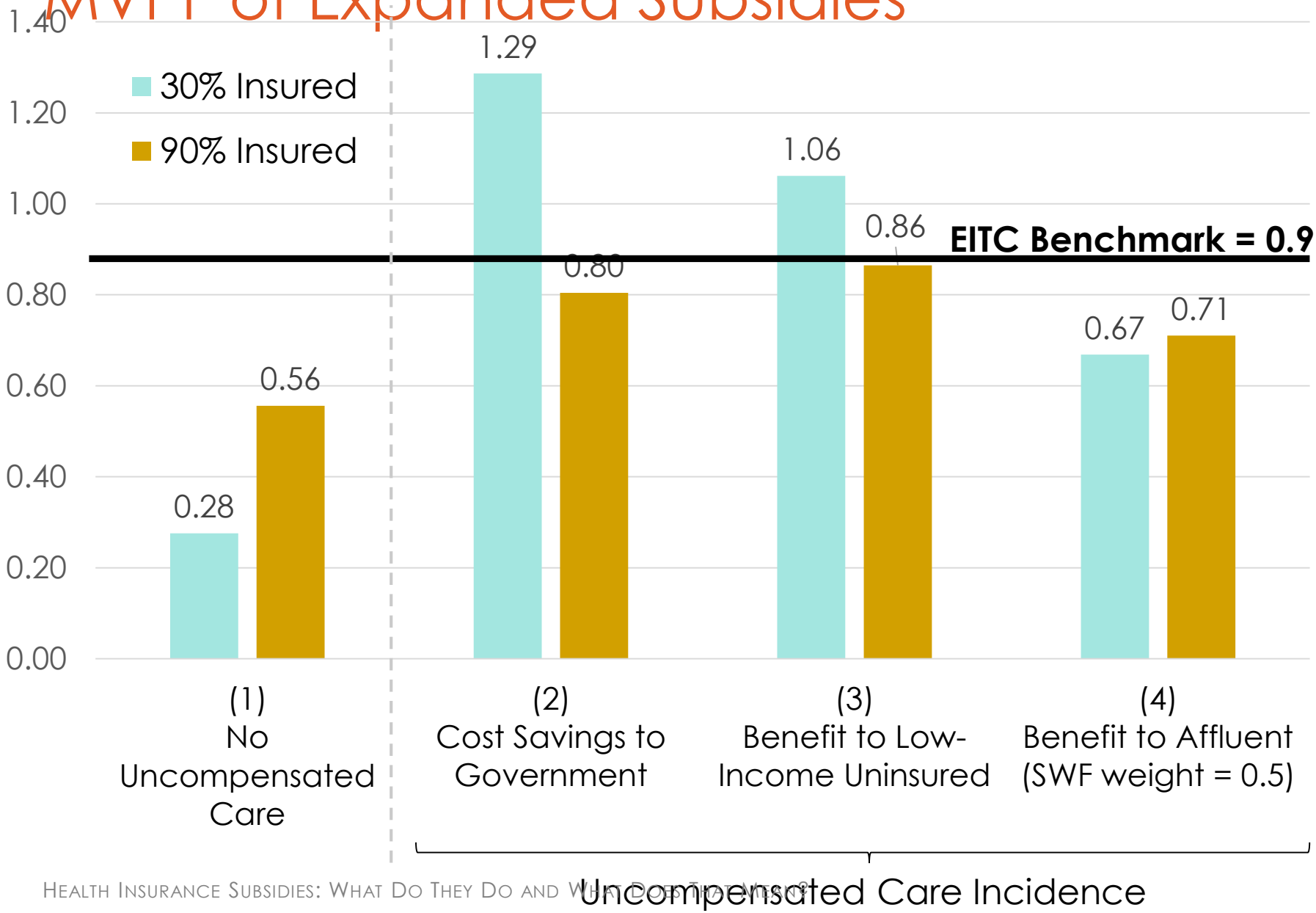
MVPF of Expanded Subsidies



MVPF of Expanded Subsidies



MVPF of Expanded Subsidies



Social Cost-Benefit Analysis

- Consider a utilitarian social welfare function
  - Social value of Medicaid is therefore recipient value of Medicaid(V) multiplied by the ratio of the marginal utility of consumption for recipient to that of the median individual in the population
  - In Oregon Medicaid, median consumption about 40% that of general population, in MA comm care, about 60%
  - With CRRA utility over consumption $(u(c) = \frac{c^{1-\sigma}}{1-\sigma}, u'(c) = c^{-\sigma}), and\ \sigma = 3)$ social value is 15 times recipient value in OR and 5 times recipient value in MA
    - Even with log utility, social value is 1.7 times recipient value in MA and 2.5 times recipient value in Oregon
- Given how close V/C was already to 1, such calculations suggest subsidies would easily pass the "social efficiency" test.
  - And naturally more concave social welfare functions than utilitarian would yield even higher social value

Comment: Recipient vs. Social Value- the Case of Depression

- Medicaid reduces probability of depression by 9 percentage points
  - Worth ~ 0.03 quality-adjusted life years per Medicaid beneficiary(QALY)
    - A year in perfect health yields 1 QALY; a year in which one is dead yields 0 QALYs
- This QALY benefit, multiplied by "standard" value of a statistical life year (VSLY) of $100,000 would imply $3,000 in value *from depression reduction alone*
  - Compared to gross cost of Medicaid of about $3,600
- So how come ex-post approach is yielding such a low value of V compared to G?

Comment: Recipient vs. Social Value- the Case of Depression (con't)

- How come ex-post approach is yielding such a low value of V compared to G?
  - VSLY defined as (hypothetical) willingness to pay by recipient for a small change in the probability of death
  - Can't apply VSLY for low income population – average consumption is 40 percent of the general population's!
  - We scaled "consensus" VSLY for "typical" US individual by ratio of marginal utility of consumption of general population to the (much higher) marginal utility of consumption of the Oregon population
    - Note that moving from recipient value to social value for utilitarian SWF was precisely undoing this!
    - Social willingness to pay for a life year is higher for a lower income individual

Medicaid compared to alternative distributional tools?

- Results suggested that Medicaid likely easily passes *social* cost-benefit test
  - V / C is already close to 1, and social value of a dollar to poor likely several times recipient value (simply through concavity of utility function, let alone any curvature on social welfare function
- Passing the "social cost benefit test" seems necessary but not sufficient
  - Could we get same amount of distribution at lower cost?
  - In general cash considered more efficient to in-kind
  - But recall reasons why in-kind transfers can be more efficient

Comparison of Distributional Tools

- How costly is distribution through Medicaid vs. Taxes
- Compare welfare generated per dollar of expenditure under Medicaid (V/G ~0.2 to 0.5) to EITC
  - For EITC, given labor supply distortions, V/G ~0.9 (Hendren, 2016)
  - NB: For EITC, V is simple (cash is valued at a dollar) so only "work" is estimating labor supply distortions (push up G).

Ultimate Economic Incidence of "Non-Recipient" Benefits is Key

- EITC: Generates about $0.90 of value per dollar of expenditures
- Medicaid: generates $0.20 to $0.50 of value to recipient per dollar of expenditures and $0.60 of transfer
  - If ultimate economic incidence of transfers is all on low income individuals, looks about like EITC
    - (V + 0.6G)/G ~$0.8 to $1.1
  - If ultimately economic incidence is all on top of income distribution (CEO pay?), then looks more costly than EITC
    - Hendren (2014) estimates that can turn $ at top of income distribution into about $0.50 to bottom through modifications of tax schedule
    - Then (V + 0.3G)/G ~0.5-0.8

Implications: Recap

- Value of Medicaid to recipients (V) substantially below Medicaid expenditures (G)
- Efficiency case for Medicaid (V/C >1?) inconclusive
- Distributional case for Medicaid
  - Social Value of Medicaid likely exceeds need cost $(V_{social}/C > 1)$ given recipients' high marginal utility of consumption
  - Other forms of distribution transfer more value per dollar of expenditures
    - E.g. EITC compared to Medicaid
    - Although if ultimate incidence of transfers to non-recipients is the low income, might be comparable to EITC

Implications: Other Considerations

- Political Economy
  - Easier to generate political support for in-kind vs. cash transfers?

- Society values "equal access to care"
  - Now moral hazard (increased care due to health insurance) is a benefit not a cost!
  - "Rights-based" notion

- Society values "access to care" even if the low income individual prefers the cash?
  - "Non-individualist" social welfare function

Who are The "Non-Recipient" Beneficiaries? Some Anecdotes

- First hospital insurance in US (Blue Cross plans in 1930s) were designed to help patients and hospitals during Great Depression
  - "I could remember the difficulties we had then, trying to keep our doors open... People brought chickens in and meat to pay their bills. They would paint or do work around the hospital of some kind..." – Cunningham & Cunningham 1997
- Hospitals have actively lobbied for state Medicaid expansions under ACA and against ACA repeal


The Washington Post

Hospitals warn Trump, Congress of massive losses with Affordable Care Act repeal

Who are The "Non-Recipient" Beneficiaries? Some Evidence

- (Easier) question: who pays for the uninsured's care?
  - Ex ante charity care (non profit hospitals; public clinics)
    - Garthwaite, Gross and Notowidigdo (2016): each uninsured individual costs hospitals approximately $800
  - Ex post charity care: bad debt
    - Dobkin et al. (2016): each uninsured hospitalization generates approximately $6,000 in unpaid medical bills sent to collection
  - Public Sector may reimburse for some of this (e.g. DSH)

- (Much harder) question: who bears ultimate economic incidence of this informal insurance?
  - Crucial for normative analysis of health insurance subsidies

Implications for health policy

- Low-income "uninsured" have a lot of implicit insurance
  - This makes it hard to generate substantial take-up of even heavily subsidized formal health insurance

- Implication I: Samaritan's dilemma (Buchanan 1975; Coate 1995)
  - New testament parable of the Good Samaritan
    - Traveler attacked by robbers and left for dead by side of road. Samaritan traveling along sees him and takes care of him and revives him.
    - Morality tale about virtue of kindness to strangers
  - What's the dilemma?

Samaritan's dilemma

- Samaritan's dilemma I (Buchanan 1975; Coate 1995)
  - Moral society unwilling to let sick, poor people go unaided
- Ex-post charity care reduces demand for insurance
  - Forgo insurance because know society will provide care ex-post
- Why is this a problem / what is the inefficiency?
  - No reason to expect society to choose "the right" level of protection for the poor
    - Indeed presumably heterogeneity across individuals in optimal level
  - Free rider problem suggests level of charity likely sub-optimal from rich's perspectives

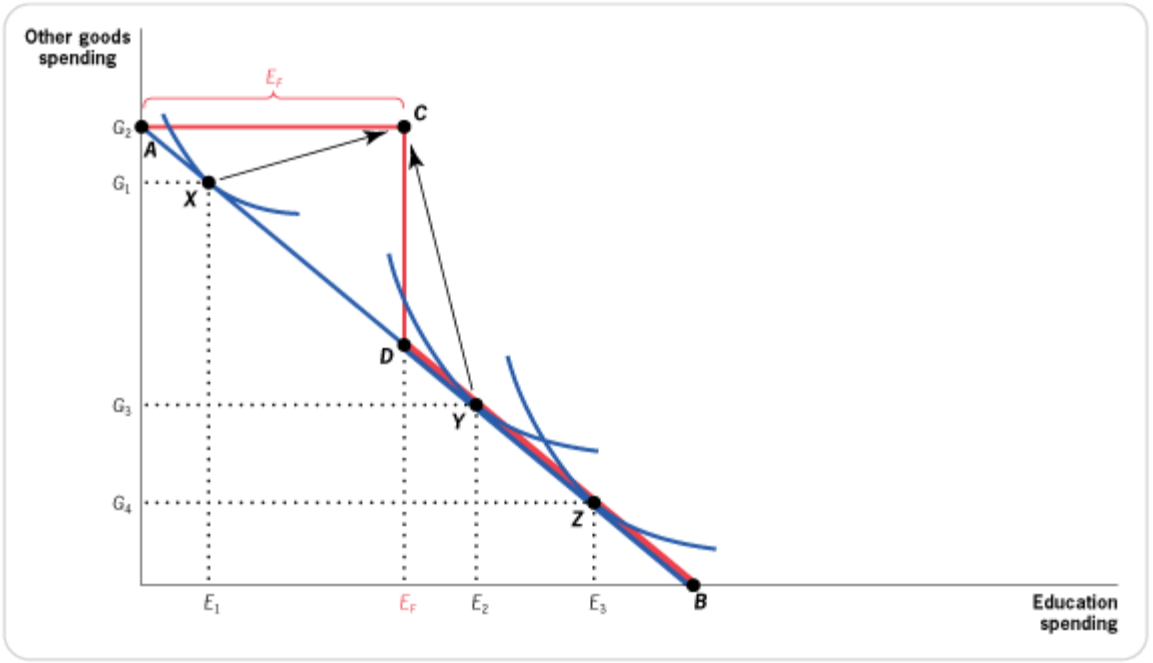
General Problem: Crowd-out / no top-up

- Could think of charity care as guaranteeing a basic level of care, that individuals can then top-up on margin
  - But in practice cannot do that.
  - If buy insurance (or care directly) have to pay all the *inframarginal* costs that would have been covered by charity

- Inefficiency arises because WTP on margin for more of good may exceed cost but cannot purchase that without paying for inframarginal

Public Education: Peltzman (1973)

- Classic article on crowd-out



Public Education Spending Crowds Out Private Spending • When the government introduces free public education in the amount of E_F, the budget constraint changes from *AB* to *ACDB*. This leads families such as *X* to increase the amount of education they obtain from E_1 to E_F and families such as *Z* to maintain their educational spending of E_3. Families such as *Y*, however, reduce their educational spending from E_2 to E_F.

Crowd-out

- Key is that cannot pay on margin for incremental amount of good
  - Cutler and Gruber (1996) "Does Public Insurance Crowd Out Private Insurance?"
  - Brown and Finkelstein (2008): Medicaid crowd out of LTC Ins.
- Conceptual solution: allow "top up"
  - Can we replicate the informal contract with a formal one?
  - E.g. public sector covers emergency room and individuals can buy "top up" insurance

Implications for health policy

- Low-income "uninsured" have a lot of implicit insurance
  - This makes it hard to generate substantial take-up of even heavily subsidized formal health insurance

- Implication II: Potential distortion in provider location and investment
    - Dranove, Garthwaite, Ody (2015): "Floor and trade" proposal for charity care

Many open & important research questions

- Samaritan's dilemma has received too little empirical attention (relative to say, adverse selection!)
- Descriptive: Nature and form of uncompensated care?
- Empirical evidence: impact of available charity care on:
  - Demand for private health insurance?
  - Location and investment decisions of healthcare providers?
- Efficiency of informal insurance vs. formal insurance?
- Economic incidence of implicit insurance?

Summary: What Did We Find and What Does It Mean?

- **Medicaid benefits recipients:** improves health, reduces out of pocket spending, lowers medical debt

- **Medicaid produces large transfers to non-recipients:** About $.60 of every Medicaid dollar goes to providers of charity care for low income uninsured (e.g. hospitals)
  - Low-income "uninsured" in fact have implicit insurance

- **Value of a Medicaid to recipients:** 20 to 50 cents per (gross) dollar of Medicaid spending

- **Medicaid as a way to redistribute to poor:** Social Value exceeds net costs, but may deliver less bang for the buck than cash transfers like EITC

Complementarities Between Empirical Evidence and Economic Theory

- Need empirical research design that yields credible causal estimates of impact of insurance
  - Randomized evaluations extremely valuable in this regard

- Need economic theory to discipline interpretation of estimated impacts of Medicaid
  - Estimating value to recipients requires more assumptions (and therefore caveats) than estimating impacts
  - But formal analysis preferable to undisciplined assertions about value of estimated impacts

Two Great Tastes That Taste Great Together