The Supplemental Poverty Measure and MOOP

Kathleen S. Short
U.S. Census Bureau

CNSTAT Panel:
Measuring Medical Care Risk in Conjunction with the
New Supplemental Income Poverty Measure

September 8, 2011

United States Census Bureau

Supplemental Poverty Measure

- Observations from the Interagency Technical Working Group - March 2, 2010
- Based on National Academy of Science (NAS) 1995 recommendations
- Will not replace the official poverty measure, and will not be used for resource allocation or program eligibility
- Without funding, Census Bureau and BLS will produce research SPM national estimates using recommendations from Interagency Technical working group, along with other alternative poverty measures

NAS Report on Medical Care: 1995

- *Such needs are highly variable across the population,* much more variable than needs for such items as food and housing.
- Some people may need no medical care at all while others may need very expensive treatments.
- Large number of thresholds to reflect different levels of medical care need, thereby complicating the poverty measure.
- *The result would be that it would be very easy to make an erroneous poverty classification*."

NAS Recommendations: 1995

Recommended a two index poverty measure

1. Adequate resources to obtain non-medical necessities: food, clothing, shelter, utilities (FCSU) - **measure of economic poverty**

2. Adequate medical insurance coverage or resources to buy needed treatment - **medical care risk index**

Economic poverty measure

- Thresholds do not include need for medical care
- Subtract medical out of pocket expenses from income to determine resources available for FCSU
- Do not add value of medical benefits to income

Open Letter, August 2000

3. For persons without health insurance coverage, medical care costs should be based on the cost of a standard, unsubsidized insurance package plus added out-of-pocket spending on medical services. In order to avoid imputing an estimate of out-of-pocket spending that includes expenditures on nonessential care, we recommend that estimates of out-of-pocket spending be based on expenditure patterns in similar families which have incomes between one-half and one times the national median income. Similarity should be based on family size, age of family head, region of residence, and health status.

4. We do not recommend using the actual out-of-pocket medical expenses for those without insurance coverage, because their lack of insurance protection combined with low income may lead them to spend too little on necessary medical care.

Interagency Technical Working Group Document on Medical Care: 2010

- Self-reported out-of-pocket medical expenses will be collected in the Current Population Survey (CPS) for the first time in 2010. If this proves to be reasonably reliable for statistical adjustment purposes, then these data should be used as the MOOP adjustment for each family.

- It is important to emphasize that this approach does nothing to estimate the value of medical care that families are receiving relative to their needs.

- Additional and improved measures of the affordability of medical care and/or the quality of medical care which U.S. families receive may be highly useful and important, but these are different statistics and will need to be separately developed and funded.

ITWG and medical needs

- It has been argued in the past that an adjustment to MOOP should be made for the uninsured, who may be spending less than is customary because they lack health insurance and cannot pay for health services.

- *The Census Bureau should investigate the pros and cons of such an adjustment and its computation. If policy changes make health insurance coverage more broadly available, those without insurance are more likely to have preferred this status. In this case, an adjustment for lack of insurance seems less attractive.*

Supplemental Poverty Measure (SPM)

- Thresholds
  - Based on spending from CE data for FCSU at BLS
    - Separate thresholds by housing status
  - Equivalence scales – 3 parameter scale
  - Geographic adjustments based on ACS
- Unit of Analysis
  - Consumer units and SPM resource units, include cohabitors and foster children

Family Resource Definition

- Gross money income
- PLUS value of in-kind NON-MEDICAL benefits for FCSU
  - SNAP, school lunch, WIC
  - Housing subsidies
  - LIHEAP
- MINUS income and payroll taxes and other nondiscretionary expenses

Nondiscretionary Expenses

Payroll and State and Federal Income Taxes

- Use current methods using new CPS ASEC questions

Medical Out of Pocket Expenditures (MOOP)

- New CPS ASEC questions

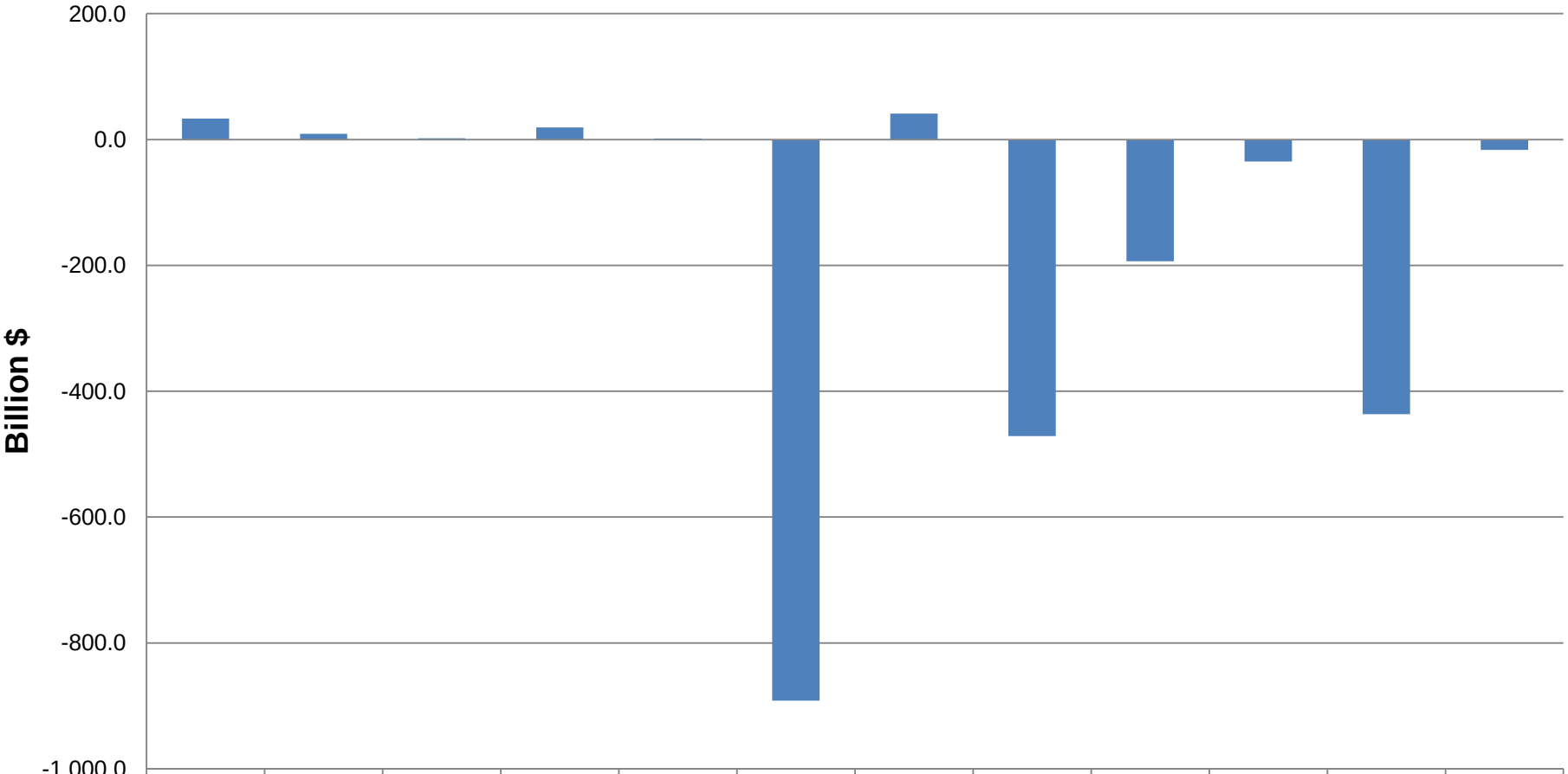
Child Care and Other Work Related Expenses

- New CPS ASEC questions on child care expenses
- Other work expenses based on SIPP

Child Support Paid

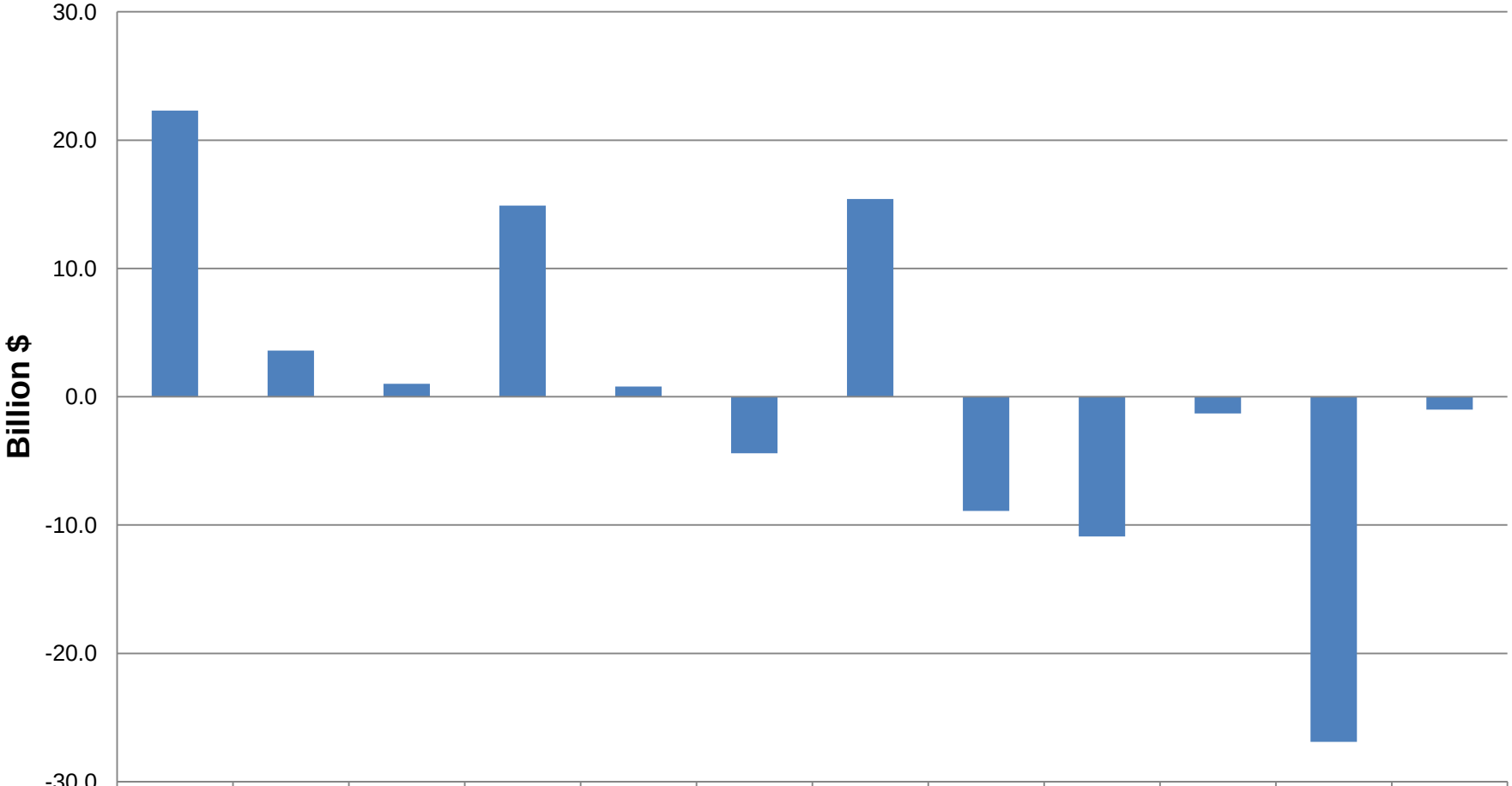
- New CPS ASEC questions to subtract child support paid from income

Additions and Subtractions: All SPM resource units 2009



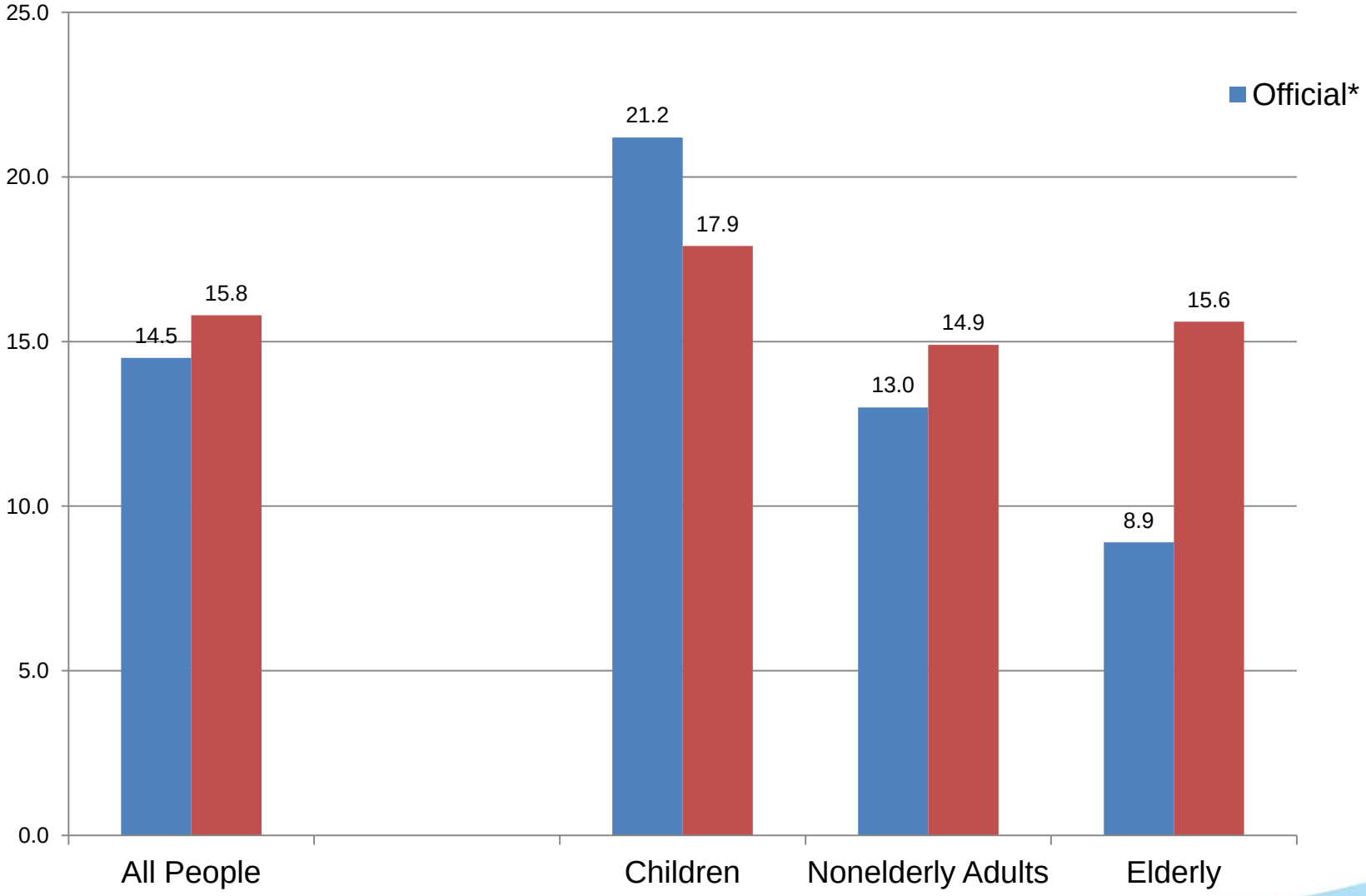
	SNAP	School lunch	WIC	Housing subsidy/cap	LIHEAP	Taxes before credits	EITC	FICA	Work expenses	Childcare	MOOP	Child support paid
Series1	33.1	9.2	1.9	19.4	1.6	-891.9	41.0	-471.2	-193.5	-34.9	-436.6	-16.4

Additions and Subtractions: Poor*

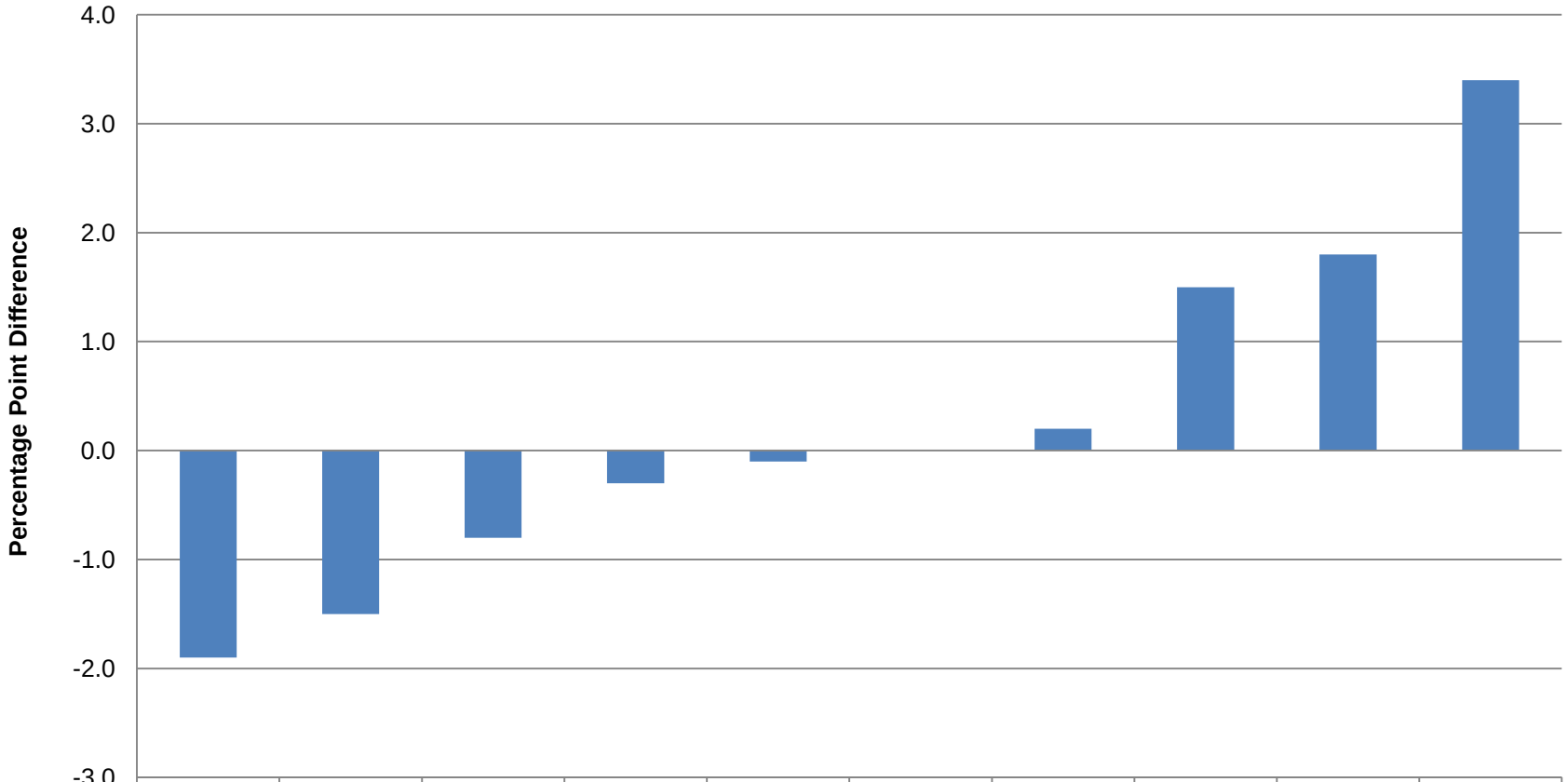


	SNAP	School lunch	WIC	Housing subsidy/cap	LIHEAP	Taxes before credits	EITC	FICA	Work expenses	Childcare	MOOP	Child support paid
Series1	22.3	3.6	1.0	14.9	0.8	-4.4	15.4	-8.9	-10.9	-1.3	-26.9	-1.0

Poverty rates using two measures: 2009

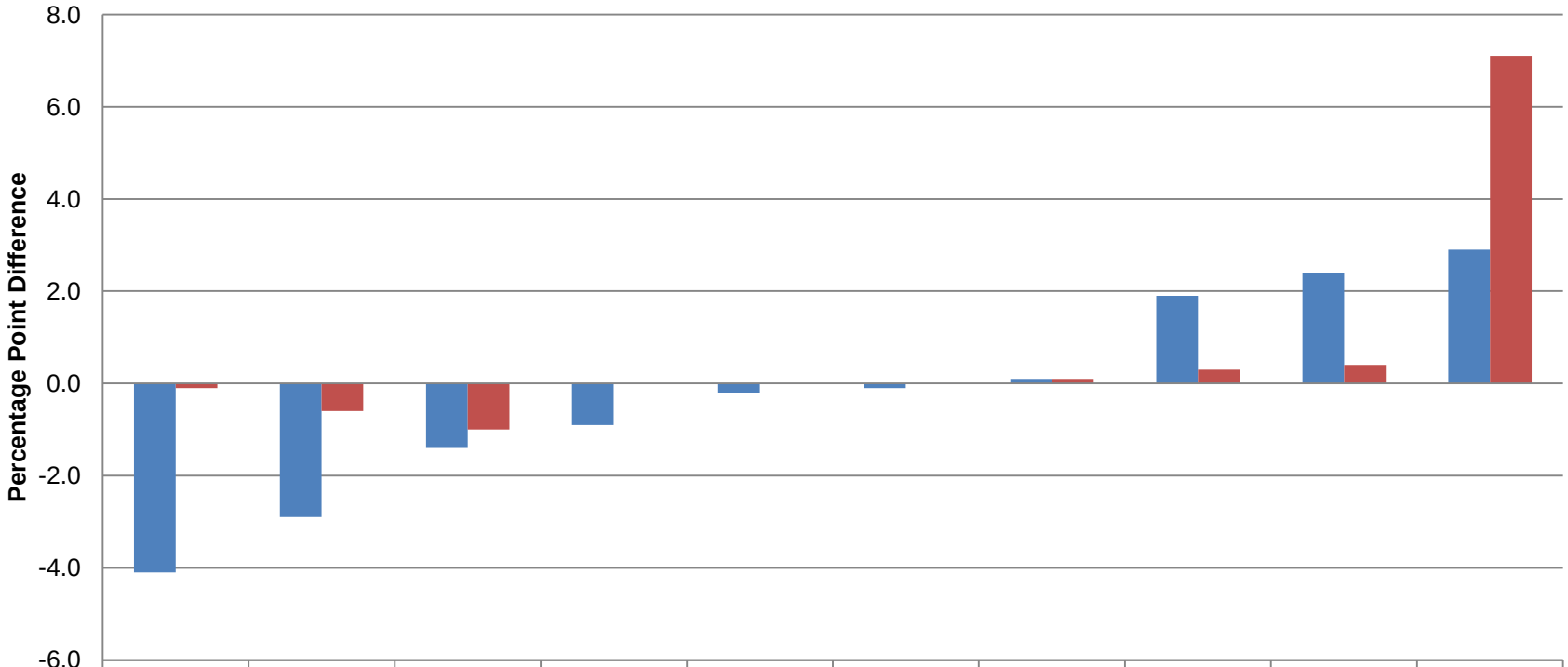


Difference in percent below threshold after including each element



	EITC	SNAP	Hsg subsidy	School lunch	WIC	LIHEAP	Child support	FICA	Work expense	MOOP
All persons	-1.9	-1.5	-0.8	-0.3	-0.1	0.0	0.2	1.5	1.8	3.4

Difference in percent below threshold after including each element for Children and Elderly: 2009



	EITC	SNAP	Hsg subsidy	School lunch	WIC	LIHEAP	Child support	FICA	Work expense	MOOP
Children	-4.1	-2.9	-1.4	-0.9	-0.2	-0.1	0.1	1.9	2.4	2.9
Elderly	-0.1	-0.6	-1.0	0.0	0.0	0.0	0.1	0.3	0.4	7.1

Joint Statistical Meetings

Miami, Florida
August 2, 2011

CHAIR – Kathleen Short, Census Bureau

- Thesia Garner, Bureau of Labor Statistics, and Charles Hokayem, Census Bureau, ***SPM Poverty Threshold***
- Ashley Provencher, Census Bureau, ***SPM Families***
- Kyle J. Caswell and Kathleen Short, Census Bureau, ***Medical Out-of-Pocket Spending among the Uninsured: Differential Spending & the Supplemental Poverty Measu***re
- Melanie Rapino. Brian McKenzie and, and Matthew Marley, Census Bureau, ***Commuting and Geographic Adjustments for Poverty Measures***

DISCUSSANT – Constance F. Citro, Committee on National Statistics, National Academy of Sciences

Purposes of JSM paper

- Examine poverty rate under different treatments of MOOP
  - Adjustment for the uninsured
- Assess how SPM responds to policy changes in health care

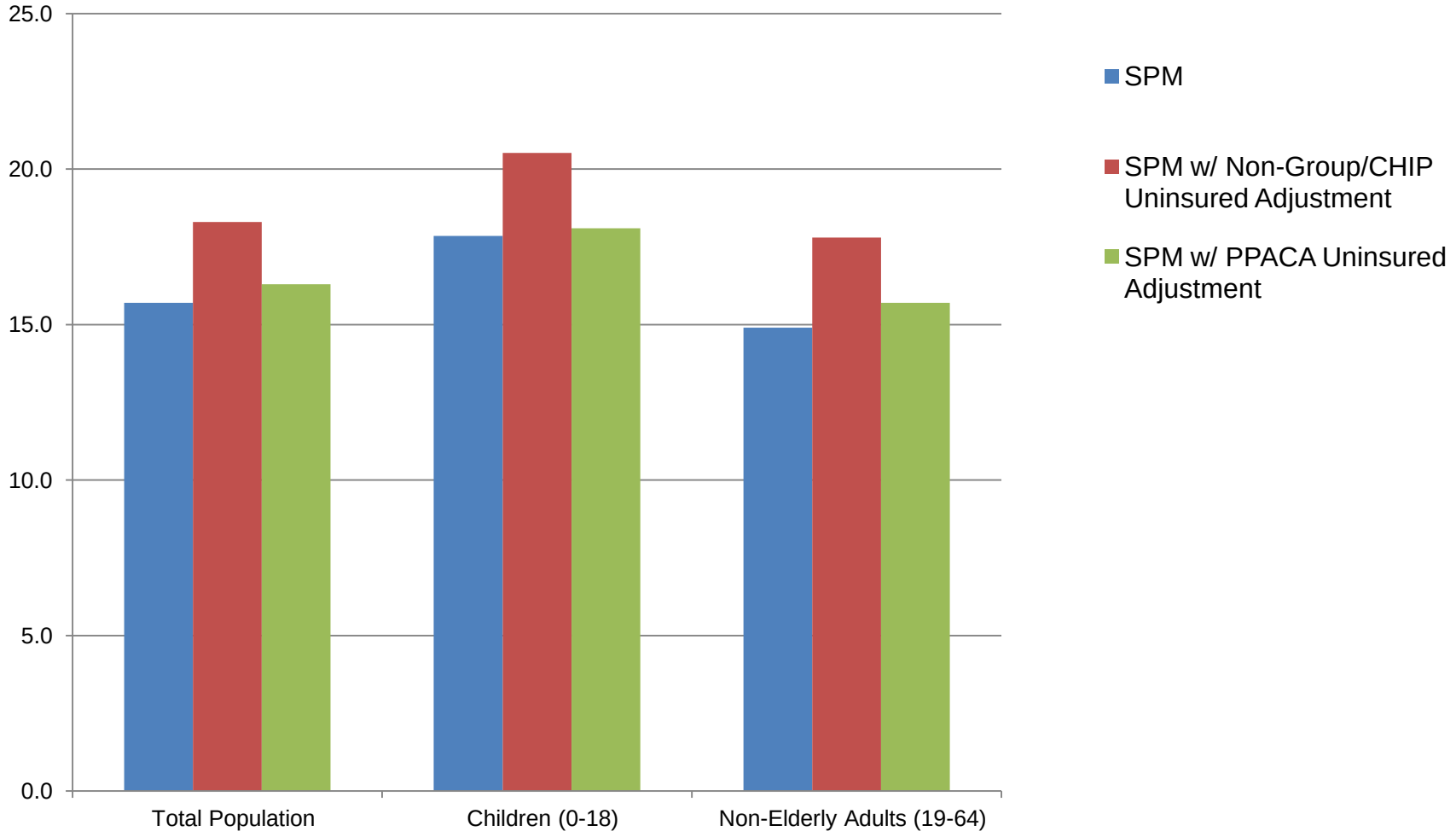
- SPM – subtract reported MOOP from income
- Two counterfactuals
  - Uninsured adults & children receive insurance via the non-group market or CHIP
  - Key features of the Patient Protection and Affordable Care Act (PPACA)

Methods

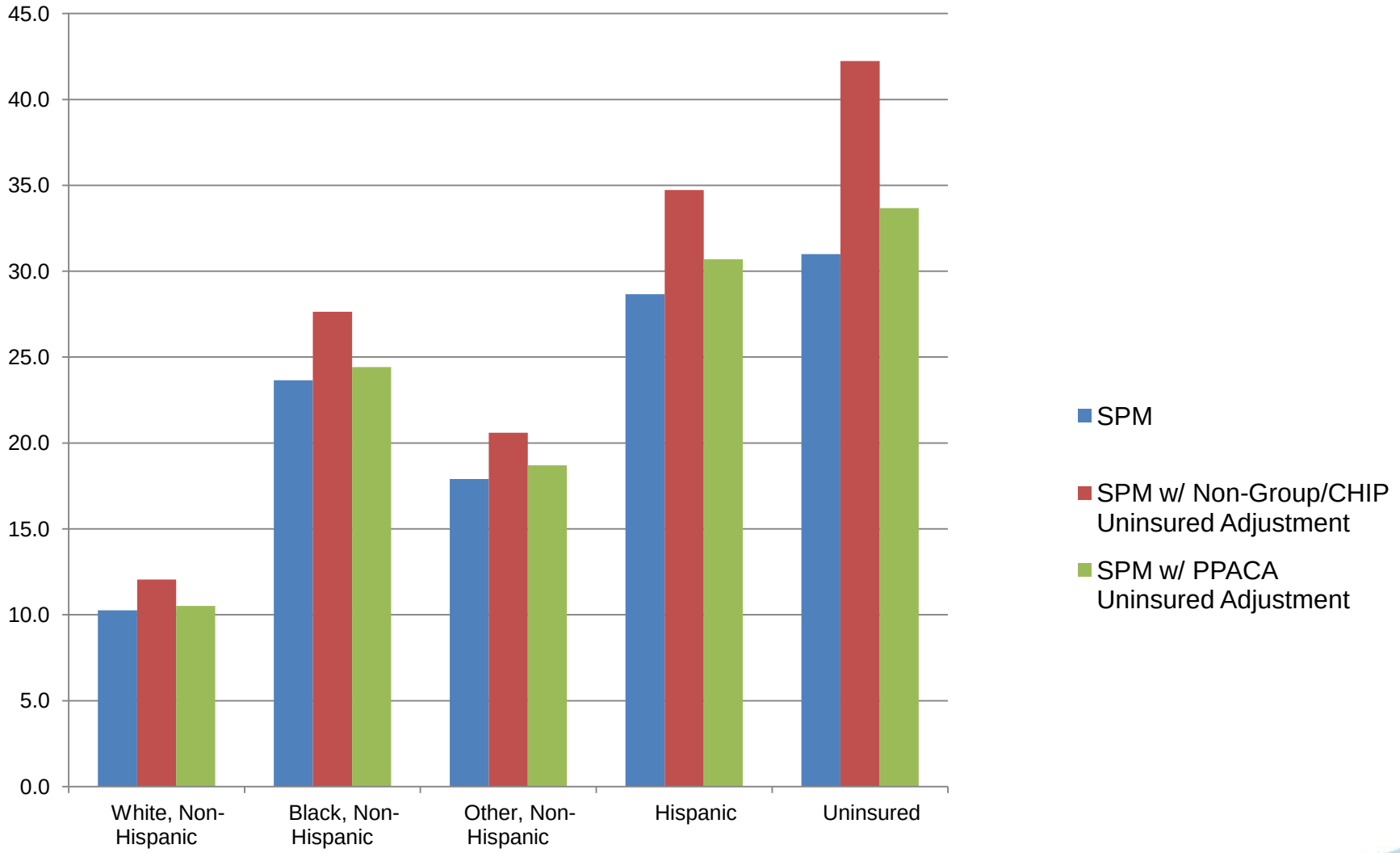
- Statistical match between insured and uninsured
  - Non-premium spending
  - Non-group premiums

- Key PPACA 2014 Provisions Considered
  - Adult Medicaid expansion for those with family income up to138 percent of the FPL
  - States are to maintain CHIP eligibility levels (FPL)
  - State health insurance “exchanges"
  - Insurance premium subsidies for up to 400 percent of the FPL

SPM poverty rates by select groups and non-elderly uninsured adjustment



SPM Poverty Rates: Non-elderly Adults by race and ethnicity



Pros and cons of adjustment

- Inconsistent with other elements of the SPM
  - Compares spending with income
  - Does not measure “need”
- Health care reform
  - Increased spending compared to same income
  - “Worse off”

Complementary measure

- Uninsured who become insured are ‘worse off’ economically
- ‘Better off’ in the domain of health care with health insurance coverage
- Medical care risk index

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United States™ Census Bureau

The Conceptual Framework for Measuring Medical Care Economic Risk

Sarah Meier and Barbara Wolfe

September 8th, 2011

Why capture medical risk in the measurement of poverty?

- Increase accuracy of measurement of poverty
- Medical care as a percentage of GDP has grown substantially since poverty measurement began
  - In 1965, ~ 5% of GDP (CBO, 2008, p.3)
  - In 2010 ~17.6% and expected to grow to nearly 20% by 2020 (Office of the Actuary, 2011, p. 1).
  - Thus, capturing medical care expenditure risk increasingly important.
- Risk sensitive to public policy such as Medicaid, Medicare and ACA.
  - Targeting of programs
  - Inclusion make it far easier to evaluate effect of policies on both risk and effectiveness for those with low incomes
- Risk sensitive to all policies that influence medical care coverage

Difference between medical risk and MOOP

- MOOP=medical out of pocket expenditures
  - Premium and out of pocket medical expenditures
- An ex-post concept
- Refers to expenditures (utilization rather than risk of need)
- Does not adjust for underutilization
- Does not adjust for a defined benefit package
- Does not capture risk.

Big issues

- Ex post or ex ante (Prospective)
- Individual or family as core unit (Individual)
- Treatment of over or under utilization (preferable)
- Tie to specific benefit package? (preferable)
- Measurable within relatively short period (data requirements)
- How complex?
- How capture resources (coverage and income)?
- How capture extreme risks – tail expenditures?

Our approach

I. **Review:**
- Treatment of medical need and resources under current poverty measures
- Literature on medical risk measures

II. **Identify:**
- Design considerations
- Suggested framework
- Framework limitations and challenges to address

Background: Medical Needs in Poverty Measurement

- **Original Poverty Measure**
  - Implicit inclusion of some MOOP; does not capture variability

- **Supplemental Poverty Measure**
  - Subtracts MOOP from the calculation of family-level resources
  - Does not include the value of insurance benefit(s) in resources
  - Does not incorporate medical need variability in thresholds

- **Recommendation from the 1995 NAS Panel**

  Appropriate agencies should work to develop one or more 'medical care risk' indexes that measure the economic risk to families and individuals of having no or inadequate health insurance coverage. However, such indexes should be kept separate from the measure of economic poverty (Citro and Michael, 1995, p. 225).

Why a separate index?

- Non-fungible nature of medical benefits – computing resources (resolved by separate index)
- Defining medical needs (not directly resolved by separate index!)
  - Limited ability to predict future *individual* expenditures – result in misclassification
  - Variation in medical needs might necessitate a large number of thresholds – tradeoff in accuracy and complexity

Existing Measurement Strategies

Short and Banthin (1995)

- Estimate underinsurance among privately insured <65 adult population
- Risk group assignment based on expected expenditures, simulated catastrophic event per risk group, expenditures > 10% income

Banthin and Bernard (2006)

- Expanded sample (public & private insurance, uninsured)
- Actual expenditures > 10%, 20% family income

Existing Measurement Strategies

Handel (2010) Section 5.2: Cost Model

- Individuals are assigned to a risk cell for each claim type (4 categories), each cell includes similarly risky individuals as determined by the Johns Hopkins ACG software.
- Expenditure distributions are fit to risk cell/claim type combinations using actual claims.
- Each individual is assigned a joint claims distribution based on his/her risk profile (e.g. risk cell membership for each claim type) and the respective estimated distributions.
- Joint claims distribution can be “mapped” to a distribution of OOP expenditures.
- Family-level distributions of OOP expenditures are formed using individual distributions and coverage characteristics.

Overview of Suggested Framework

1. Baseline measurement of medical expenditure risk at the individual-level.

2. Adjustment of individual expenditure risk for risk protection (insurance); aggregation of individual risk measures to form a family-level measure of medical care expenditure risk.

3. Measurement of family economic resources, preferably including annuitized value of financial assets. Examination of the relative affordability of a family's premium costs and medical expenditure risk given this economic baseline.

Criteria for MCER Design (Prior Literature)

Design recommendations from 1995 Panel

- Prospective
- Family-level (official poverty measure or SPM definition)

Doyle (1997) criteria

- Index must reflect risk
- Index must reflect resource and medical need (insurance adequacy, subsidized care and affordability)
- Index must be quantifiable
- Index requires well-defined accounting period
- Index is defined by available data

MCER Design Considerations (Framework Specific)

- Individual health risk classification – selection of risk factors:
- Definition of appropriate medical care coverage
- Selection of a meaningful risk measure
- Modeling expenditures
- Assessing risk protection (insurance)
- Measuring family resources
- The definition of affordability

MCER Design Considerations (Framework Specific)

Individual health risk classification – selection of risk factors:

- Predictive capacity of selected characteristics
- Data limitations (availability, observations per risk cell)
- Feasibility (complexity, timeliness, cost)

Definition of appropriate medical care coverage

- Expenditure risk under a standard minimum basket of medical care services. Benefits standard under ACA?
- Adjustment for over/underutilization observed in base data

MCER Design Considerations

Selection of a meaningful risk measure

How to move from a range of plausible outcomes to a singular measure of economic impact?

- Probability of expenditures exceeding an unaffordability threshold
- Expected expenditures per family unit

Modeling expenditures

- Fitting loss distributions
- Regression-based methods

MCER Design Considerations

Assessing risk protection (insurance)

- Individual-level assessment, followed by family-level aggregation
- Deductibles & stop loss (minimum); coinsurance/copayments
- Actuarial value?

Measuring family resources

- Income definition consistent with official poverty measure or SPM, *plus consideration of assets:*
  - Annuitized value where a family receives the value of an annual flow of income from their financial assets based on the life expectancy of adults in the family using existing life tables.
  - This annuitized value would be added to income and compared to unprotected expenditure risk.

MCER Design Considerations

The definition of affordability (risk of exceeding affordability threshold?)

- Threshold defined as a percentage of family income?
- Consideration of family resource level and resources required to cover base needs under SPM/official poverty measure
- Consideration of affordability thresholds outlined in the ACA
- Does any risk (no matter how small) of a catastrophic outcome place a family at economic risk?

Specific Steps - Framework for MCER Development

Stage One: Measuring Individual Medical Expenditure Risk

Specify a risk cell/factor based approach to individual risk classification

- Might include age/gender, high cost chronic condition, disability, and pregnancy.
- Variable availability, model complexity and observations per cell are relevant considerations.

Develop an expenditure risk model

- Expenditures should reflect only those expenditures covered under the specified 'minimum' benefits package and should include adjustment for underutilization of uninsured/underinsured.
- Might select a cell-based loss model approach; or model risk factor expenditure effects.

Identify an appropriate measure of medical expenditure risk

- ***Risk Measure I (Recommended):*** Probability of exceeding expenditure threshold per risk characteristics.
- ***Risk Measure II:*** Expected expenditures and one standard deviation above and below this value.

Stage Two: Adjustment for Insurance and Aggregation to the Family-Level

- Assess the impact of an individual's insurance coverage on expenditure outcomes (across a modeled distribution, or at an expected expenditure estimate).
    - Plan deductible
    - Out-of-pocket maximum
    - Estimate of percent post deductible expenses covered before reaching OOP maximum
- Individual risk measures/loss distributions for the uninsured remain unadjusted.
- Aggregate these adjusted individual risk measures to a family unit level.
- An econometric approach to modeling the probability of exceeding an expenditure threshold would require alternative methods.

Stage Three: Indexing Economic Resources to Family-Level Risk

- Assign the appropriate threshold to a family based on family resources and characteristics.
- Combine threshold and family-level income (and asset) information to determine the amount of medical expenditures that meets this threshold.

In the case of the loss distribution risk measure I (probability of exceeding the affordability threshold) approach, the next steps include:

- Subtract premium costs (for standard benefits only) from the assigned threshold.
- If premium costs exceed this threshold, the family experiences unaffordable medical care costs (e.g. not a 'risk' based outcome).
- If premium costs do not exceed the threshold, determine the amount of OOP expenditures that (with premium costs) places a family at their threshold.
- Determine the family's probability of exceeding this amount of OOP expenditures using the family-level adjusted loss distribution.

Limitations & Challenges

- Important to reach consensus on conceptualization and measurement of expenditure risk in early stage of development
- Agreement on a minimum benefits standard
- Concrete definition of affordability (what percent income(+annuitized assets)?)
- Adjustments for underutilization?
- Data – Collection/design of new variables (ex: sufficient information to compute actuarial value?)

Conclusions

- Medical risk an increasingly important component of poverty
  - Risk is prospective & individual but can be aggregated to family or HH
  - Recommend that MCER be developed as a separate index: potential for incorporation into single measure left for future after MCER developed.
  - MCER not MOOP
- Basic framework for MCER development
- Developing MCER Complex
  - Normative considerations in the design of an index
  - Well-formed measure requires attention to numerous methodological details
- Several areas require particular focus in future work

Citations

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Tracking Geographic Variations in Exposure to Medical Care Economic Risk: Moving Beyond One National Estimate

Sara R. Collins, Ph.D.
Vice President, Affordable Health Insurance
The Commonwealth Fund

Developing a Measure of Medical Care Economic Risk
National Academies of Sciences
September 8, 2011

Exhibit 1. Overview of Remarks

- **High out-of-pocket medical costs are a risk for insured as well as uninsured**
  - **Schoen et al. analysis of national out-of-pocket spending on health care services, not counting premiums, finds rapid increase in the number and percent who are "underinsured" between 2003-2010**
- **The Affordable Care Act will expand and improve coverage, with Medicaid expansion, income-related premium tax credits and reduced cost-sharing to limit risk of high out-of-pocket costs and enable timely access to care**
  - **However, households with low and modest incomes could still be at risk of high costs depending on the design of health plans, and**
  - **State implementation decisions**
- **The Current Population Survey added questions about medical care out-of-pocket costs, thus enabling estimates of risk at the state level**
  - **Preliminary estimates based on one year of data, 2010, indicate significant variation in percent of families with high out-of-pocket spending across states**
- **Tracking trends in out-of-pocket costs nationally and by state for those insured, uninsured and by poverty will help inform reform implementation and future policies**

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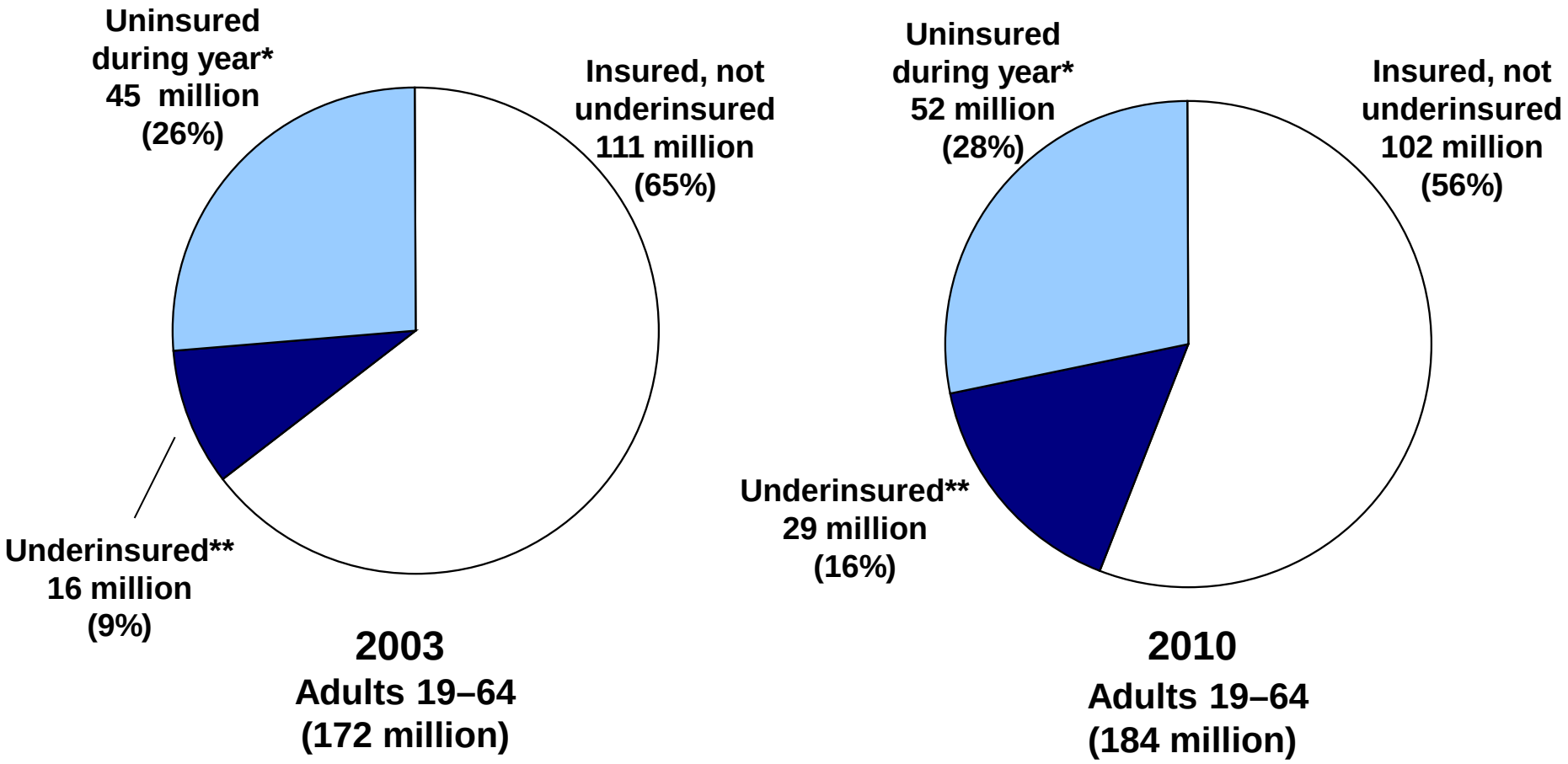
Exhibit 2. 29 Million Adults Ages 19-64 Underinsured in 2010, Up From 16 Million in 2003



*Uninsured during the year combine 'insured now, time uninsured in the past year' and 'uninsured now'

* *Underinsured defined as insured all year but experienced one of the following: medical expenses equaled 10% or more of income; medical expenses equaled 5% or more of income if low income (<200% of poverty); or deductibles equaled 5% or more of income.

Source: C. Schoen, M. Doty, R. Robertson, S. Collins, "Affordable Care Act Reforms Could Reduce the Number Underinsured by 70 percent," *Health Affairs*, September 2011. Data: 2003 and 2010 Commonwealth Fund Biennial Health Insurance Surveys

Exhibit 3. Premium Tax Credits and Cost-Sharing Protections Under the Affordable Care Act

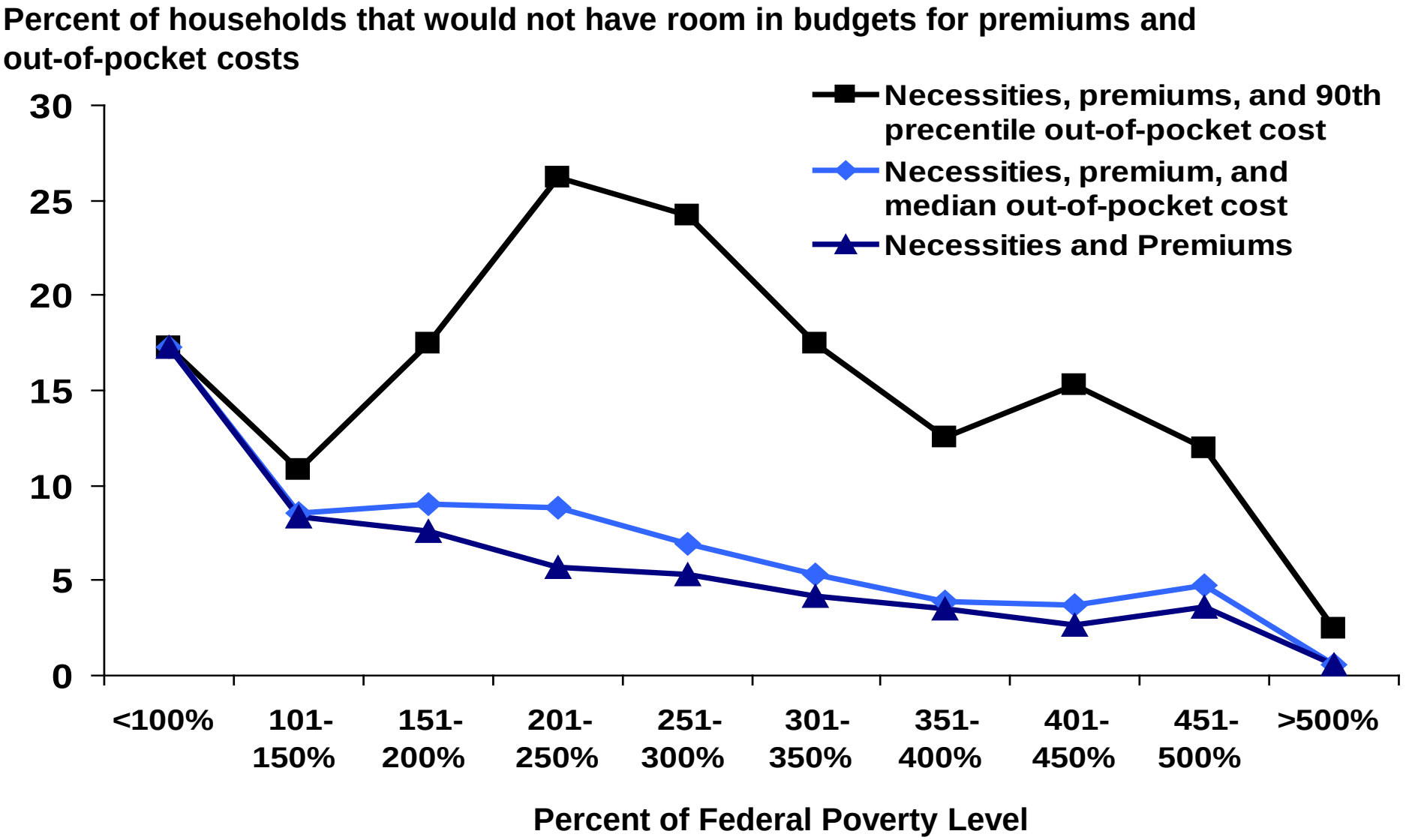
FPL	Income	Premium contribution as a share of income	Out of Pocket limits	Actuarial value: Silver plan
<133%	S: <$14,484 F: <$29,726	2%	S: $1,983 F: $3,967	94%
133%- 149%	S: $16,335 F: $33,525	3.0%–4.0%		94%
150%–199%	S: $21,780 F: $44,700	4.0%–6.3%		87%
200%–249%	S: $27,225 F: $55,875	6.3%–8.05%	S: $2,975 F: $5,950	73%
250%–299%	S: $32,670 F: $67,050	8.05%–9.5%		70%
300%–399%	S: $43,560 F: $89,400	9.5%	S: $3,967 F: $7,933	70%
≥400%	S: ≥$43,560 F: ≥$89,400	—	S: $5,950 F: $11,900	—

Four levels of cost-sharing: 1st tier (Bronze) actuarial value: 60%
2nd tier (Silver) actuarial value: 70%
3rd tier (Gold) actuarial value: 80%
4th tier (Platinum) actuarial value: 90%

Catastrophic policy with essential benefits package available to young adults and people who cannot find plan premium <=8% of income

Note: FPL refers to Federal Poverty Level. Actuarial values are the average percent of medical costs covered by a health plan. Premium and cost-sharing credits are for silver plan.
Source: Federal poverty levels are for 2011; Commonwealth Fund Health Reform Resource Center: What's in the Affordable Care Act? (PL 111-148 and 111-152), http://www.commonwealthfund.org/Health-Reform/Health-Reform-Resource.aspx.

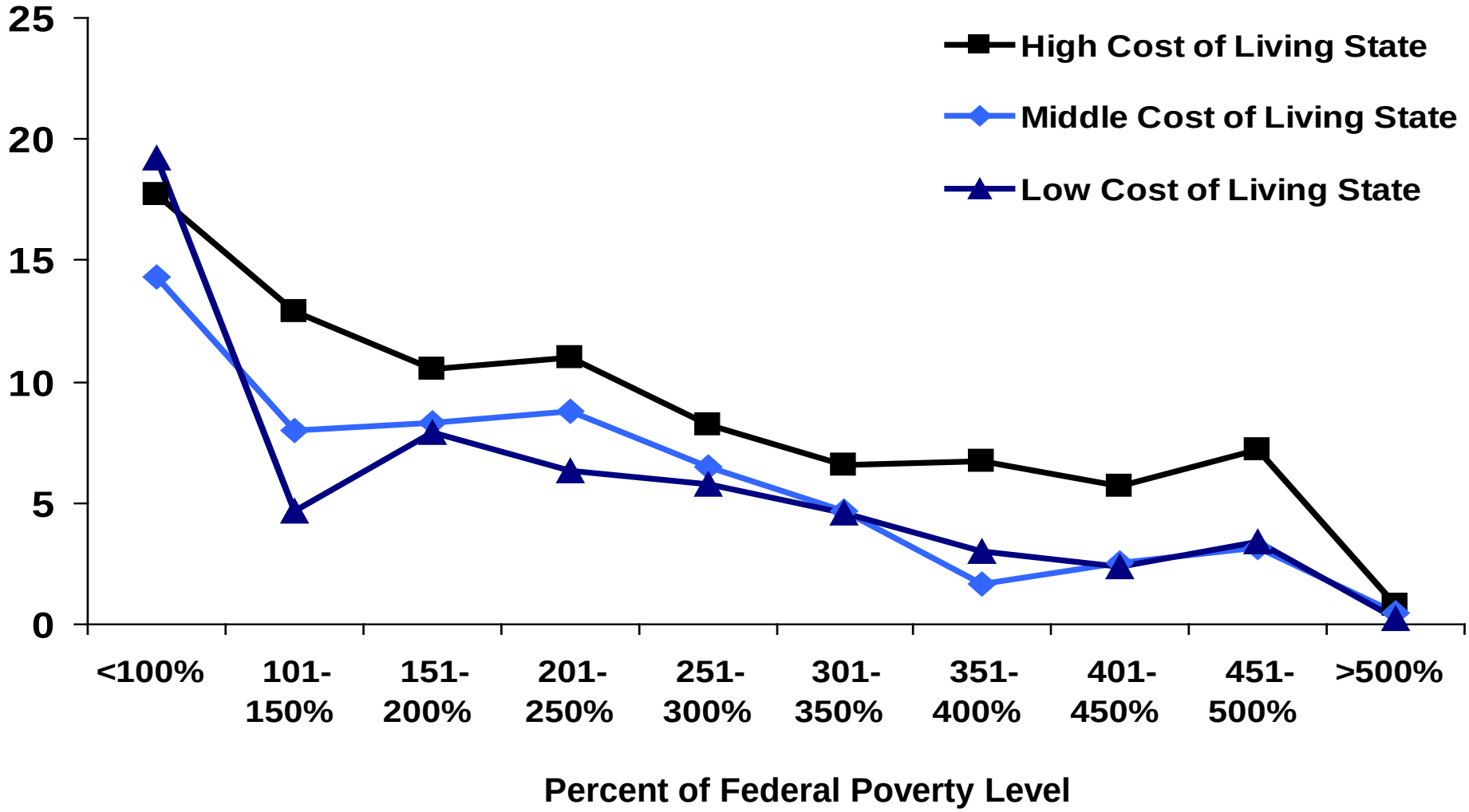
Exhibit 4. Percentage of Households That May Not Have Room in Budget for Health Care Costs, after Full ACA Implementation



Source: J. Gruber and I. Perry, *Realizing Health Reform's Potential: Will the Affordable Care Act Make Health Insurance Affordable?* The Commonwealth Fund, April 2011.

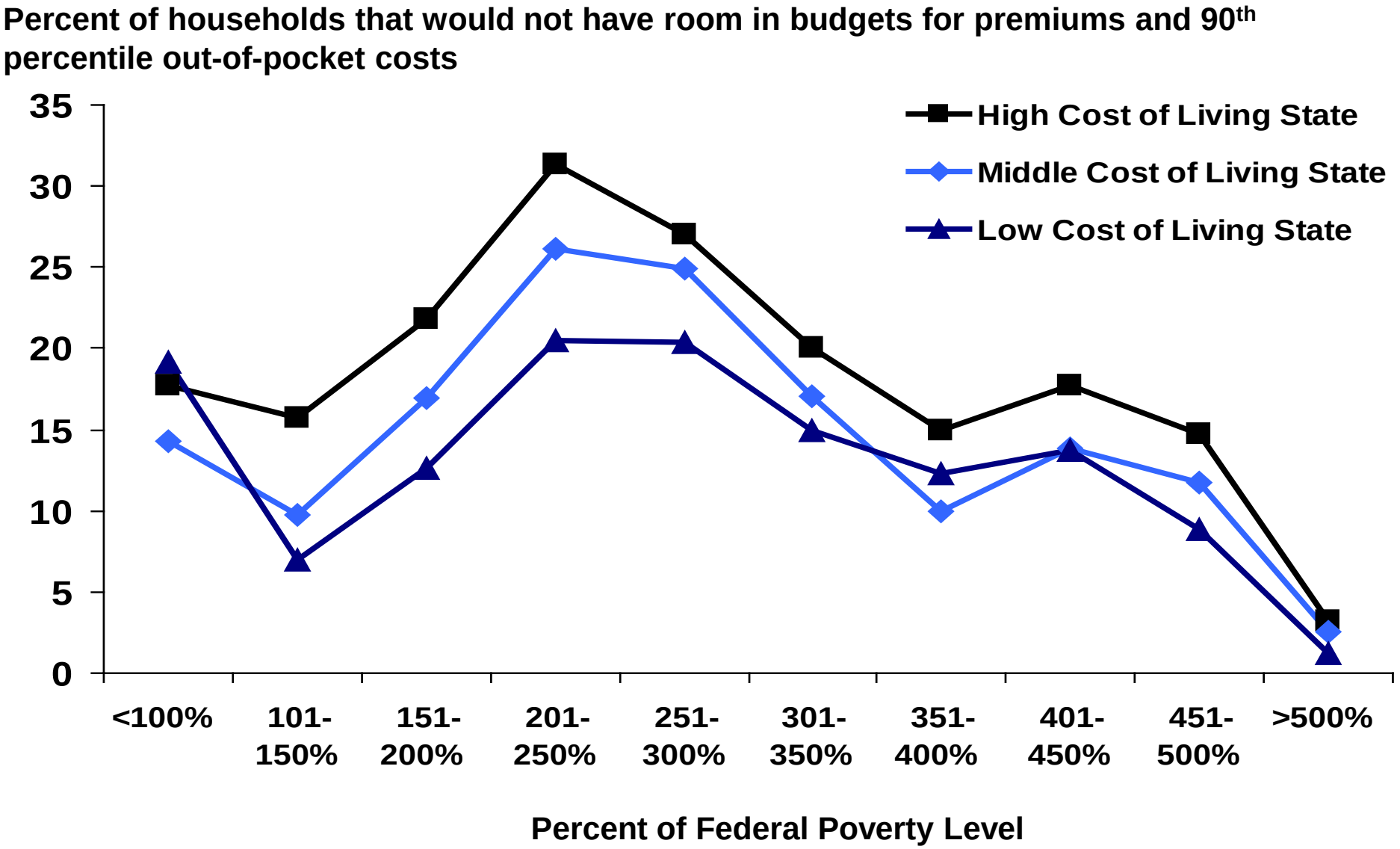
Exhibit 5. Percentage of Households With Median Out-of-Pocket Costs That May Not Have Room in Budget for Health Care, after Full ACA Implementation, by State Cost of Living

Percent of households that would not have room in budgets for premiums and median out-of-pocket costs



Source: J. Gruber and I. Perry, *Realizing Health Reform's Potential: Will the Affordable Care Act Make Health Insurance Affordable?* The Commonwealth Fund, April 2011.

Exhibit 6. Percentage of Households With High Out-of-Pocket Costs That May Not Have Room in Budget for Health Care, after Full ACA Implementation, by State Cost of Living



Source: J. Gruber and I. Perry, *Realizing Health Reform's Potential: Will the Affordable Care Act Make Health Insurance Affordable?* The Commonwealth Fund, April 2011.

Exhibit 7. Tracking Out-of-Pocket Medical Spending Risk, Nationally and State by State: Data and Methods

- **Data are from the March 2010 Current Population Survey (CPS), analyzed at the household/family level, annual family income**

- **CPS asks about total out-of-pocket costs for medical care services in 2009, excluding premiums and costs reimbursed by insurance**
  - **Where households have more than one member, the data files aggregate spending for each family member for total family expense**

- **Insurance coverage: We classify a household as insured if all members in the family are insured. Uninsured families are families where everyone is uninsured or some members are uninsured**

- **High out-of-pocket thresholds as percent of income, vary by income**
  - **10% or more a year OR**
  - **5% or more a year if annual income is less than 200 percent of poverty**

- **The results show the percent of families, and the total counts of people in families, with high medical care expenses compared to income**

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Exhibit 8. Families with high medical care spending relative to income, 2009

	Spent 10% or more of income on out-of-pocket medical care expenses		Spent 10% or more of income on out-of-pocket medical care expenses or 5% or more if low income	
	Millions	Percent	Millions	Percent
Total				
Family units	14.6	13%	18.8	17%
People in these families	33.0	12%	44.0	16%
Insured families				
Family units	9.3	11%	11.9	15%
People in these families	19.7	10%	26.0	13%
Uninsured families				
Family units	5.4	18%	7.0	23%
People in these families	13.3	17%	18.0	22%

Note: Households under 65 years old. Expenses are family out-of-pocket for medical care as a share of annual income, not including premiums. 5% threshold applies to incomes below 200% of poverty. Insured families have no uninsured members.
Source: Analysis of the 2010 Current Population Survey by N. Tilipman and B. Sampat of Columbia University for The Commonwealth Fund.

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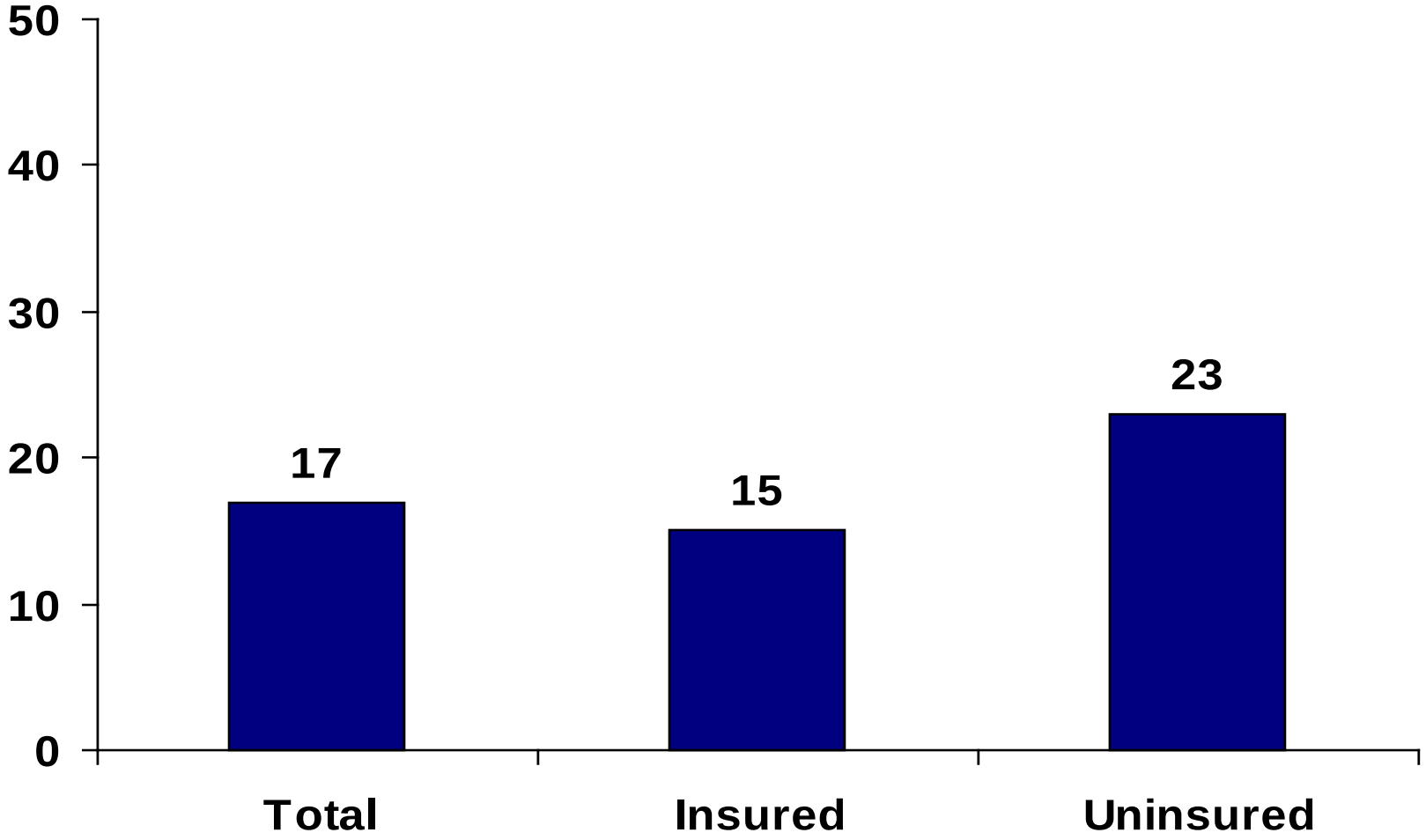
Exhibit 9. Percent of Families Who Spent a High Share of Income on Medical Care, 2009

Percent of non-elderly families who spent 10% or more of income on out-of-pocket medical care expenses or 5% or more if low income



Note: Households under 65 years old. Expenses are family out-of-pocket for medical care as a share of annual income, not including premiums. 5% threshold applies to incomes below 200% of poverty. Insured families have no uninsured members.

Source: Analysis of the 2010 Current Population Survey by N. Tilipman and B. Sampat of Columbia University for The Commonwealth Fund.

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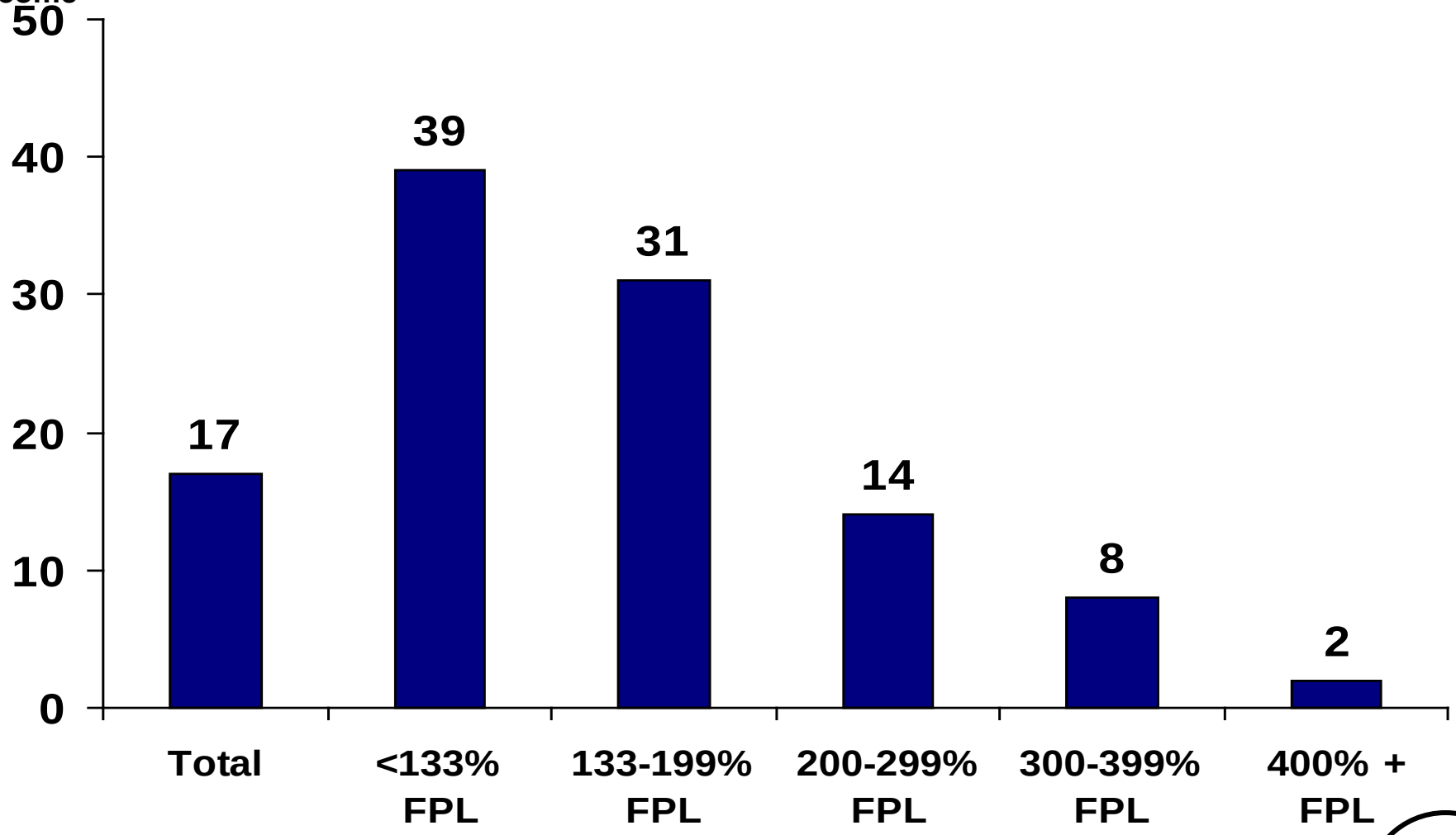
Exhibit 10. Percent of Families with High Medical Care Expenses Compared to Income, by Poverty, 2009

Percent of families who spent 10% or more of income on out-of-pocket medical care expenses or 5% if low income



Note: Households under 65 years old. Expenses are family out-of-pocket for medical care as a share of annual income, not including premiums. 5% threshold applies to incomes below 200% of poverty.
Source: Analysis of the 2010 Current Population Survey by N. Tilipman and B. Sampat of Columbia University for The Commonwealth Fund.

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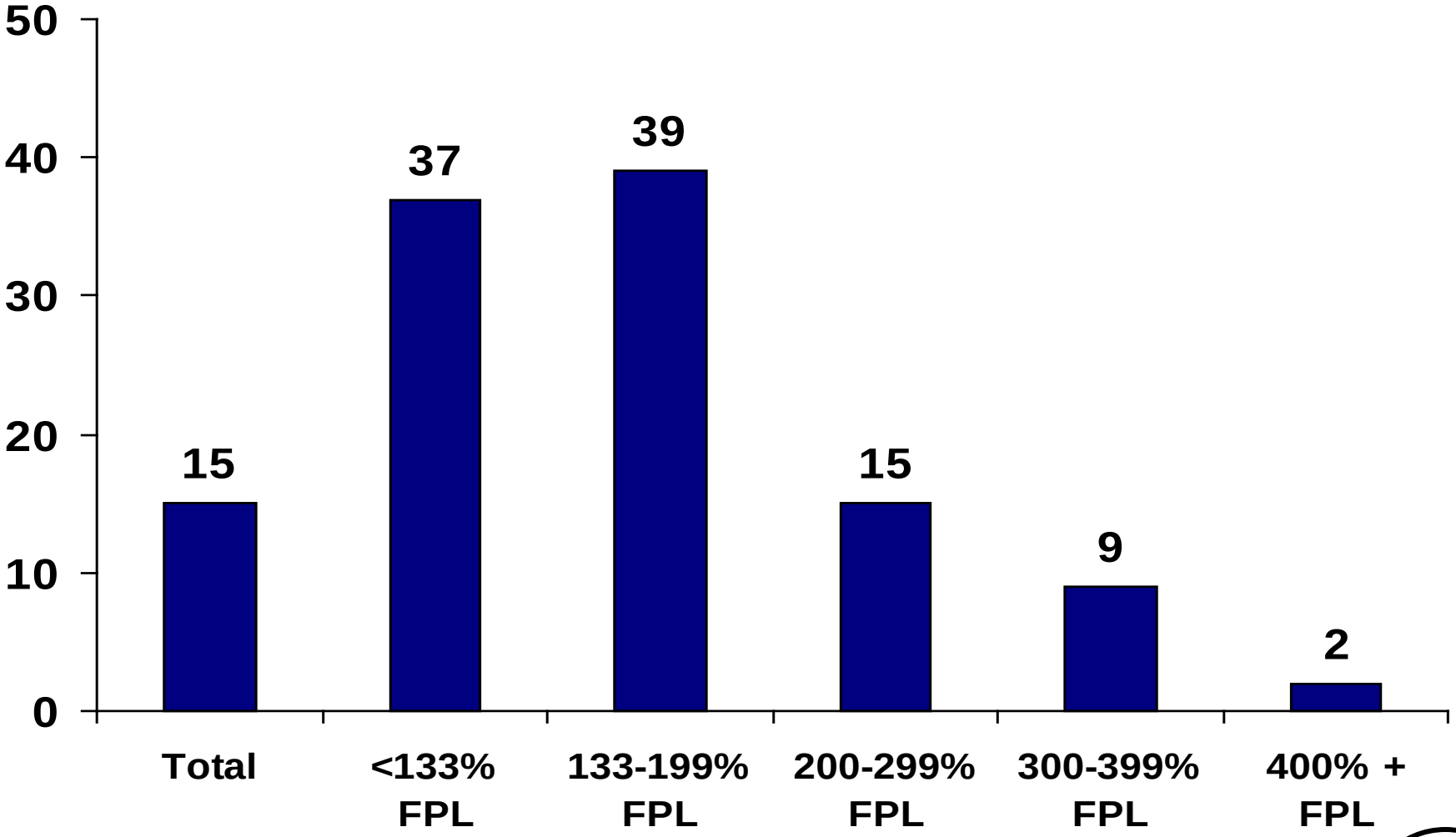
Exhibit 11. Share of Insured Families with High Medical Care Expenses Compared to Income, by Poverty Group

Percent of insured families who spent 10% or more of income on out-of-pocket medical care expenses or 5% if low income



Note: Households under 65 years old. Expenses are family out-of-pocket for medical care as a share of annual income, not including premiums. 5% threshold applies to incomes below 200% of poverty. Insured families have no uninsured members.

Source: Analysis of the 2010 Current Population Survey by N. Tilipman and B. Sampat of Columbia University for The Commonwealth Fund.

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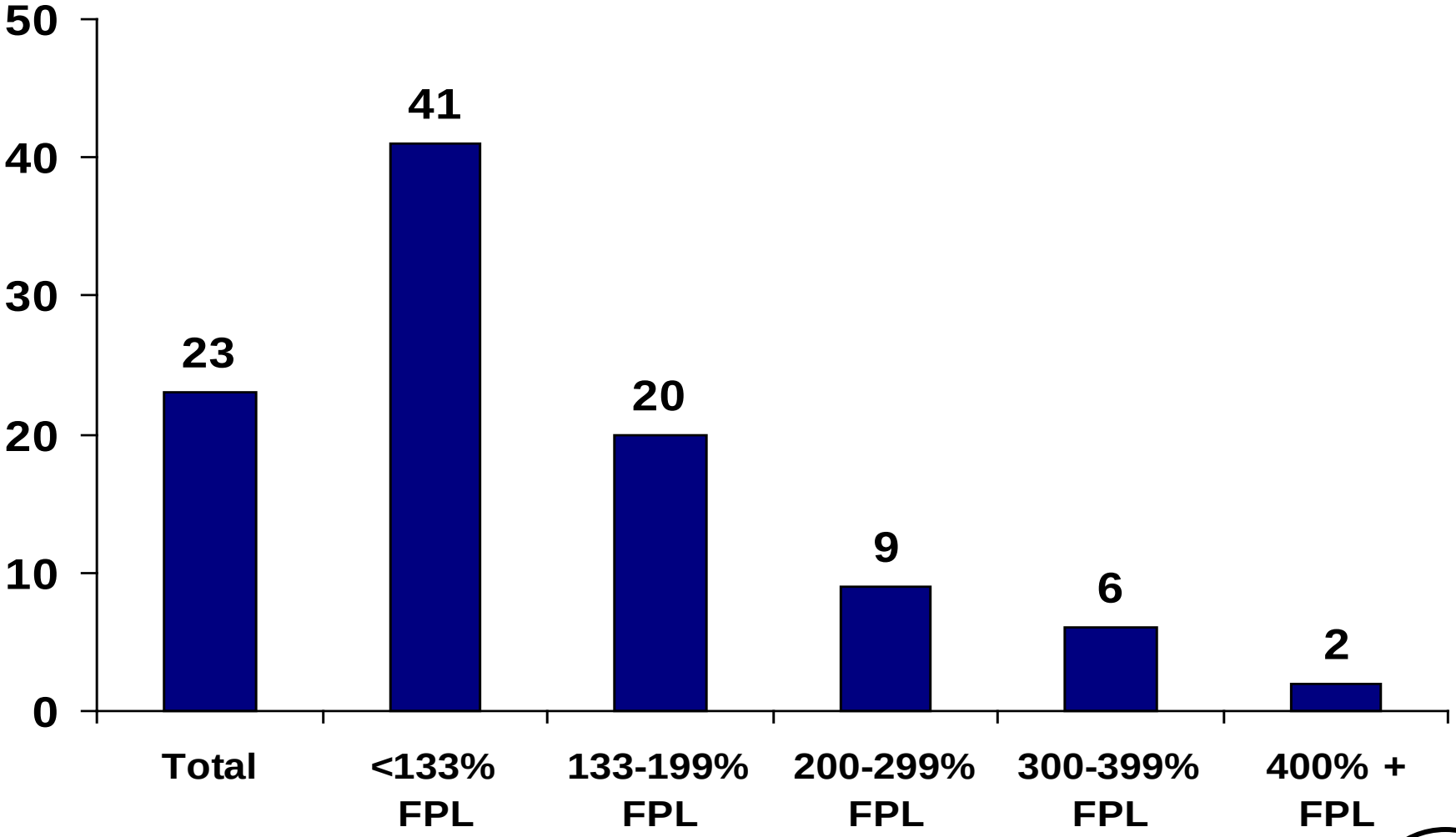
Exhibit 12. Percent of Uninsured Families Who Spent a High Share of Income on Medical Care Expenses, by Poverty, 2009

Percent of uninsured families who spent 10% or more of income on out-of-pocket medical care expenses or 5% or more if low income



Note: Households under 65 years old. Expenses are family out-of-pocket for medical care as a share of annual income, not including premiums. 5% threshold applies to incomes below 200% of poverty. Uninsured families have at least one uninsured member.

Source: Analysis of the 2010 Current Population Survey by N. Tilipman and B. Sampat of Columbia University for The Commonwealth Fund.

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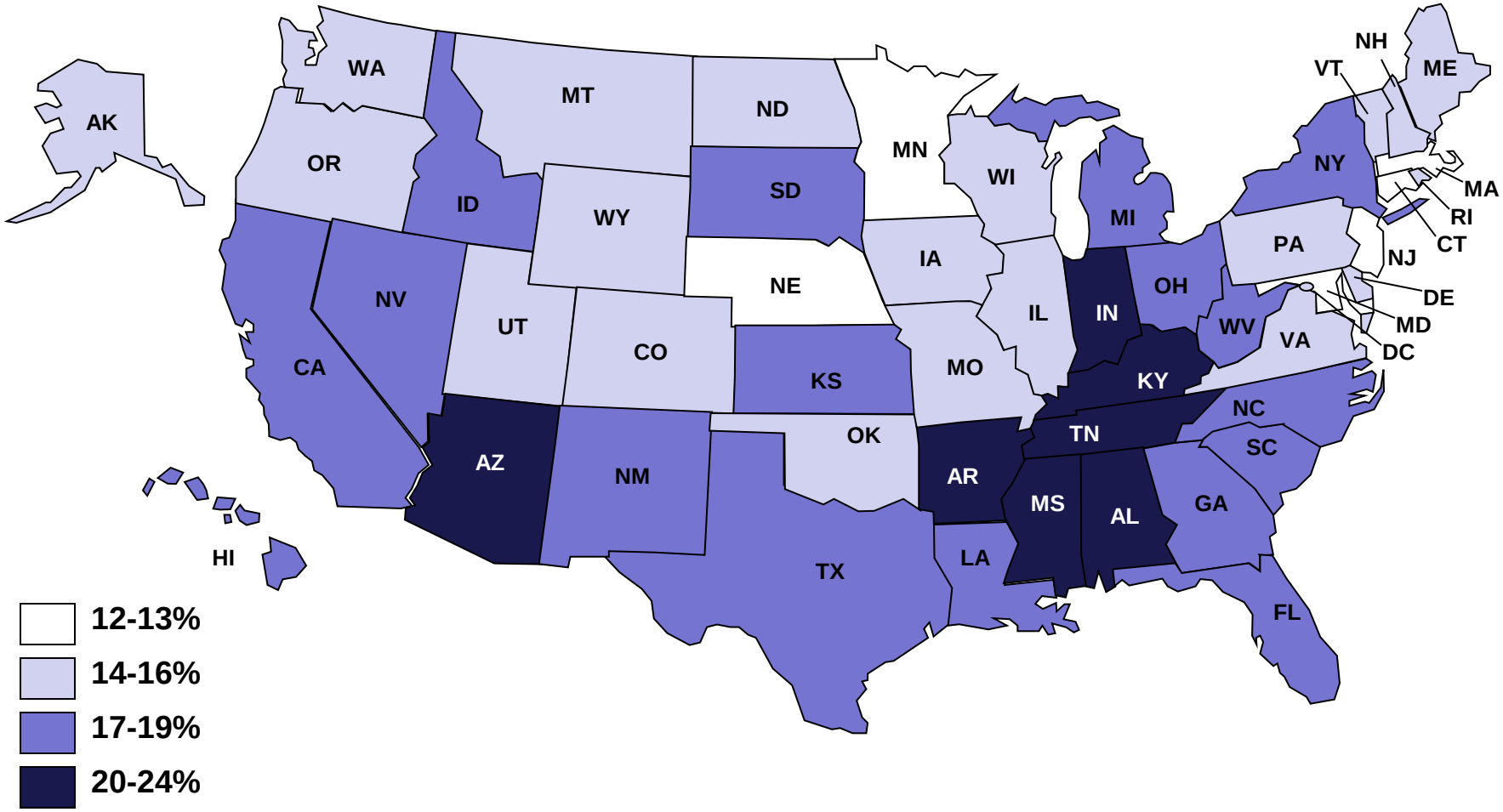
Exhibit 13. Percent of Families with High Medical Care Expenses Compared to Income, by State, 2009

Percent of families who spent 10% or more of income on out-of-pocket medical care expenses or 5% if low income



Note: Households under 65 years old. Expenses are family out-of-pocket for medical care as a share of annual income, not including premiums. 5% threshold applies to incomes below 200% of poverty.
Source: Analysis of the 2010 Current Population Survey by N. Tilipman and B. Sampat of Columbia University for The Commonwealth Fund.

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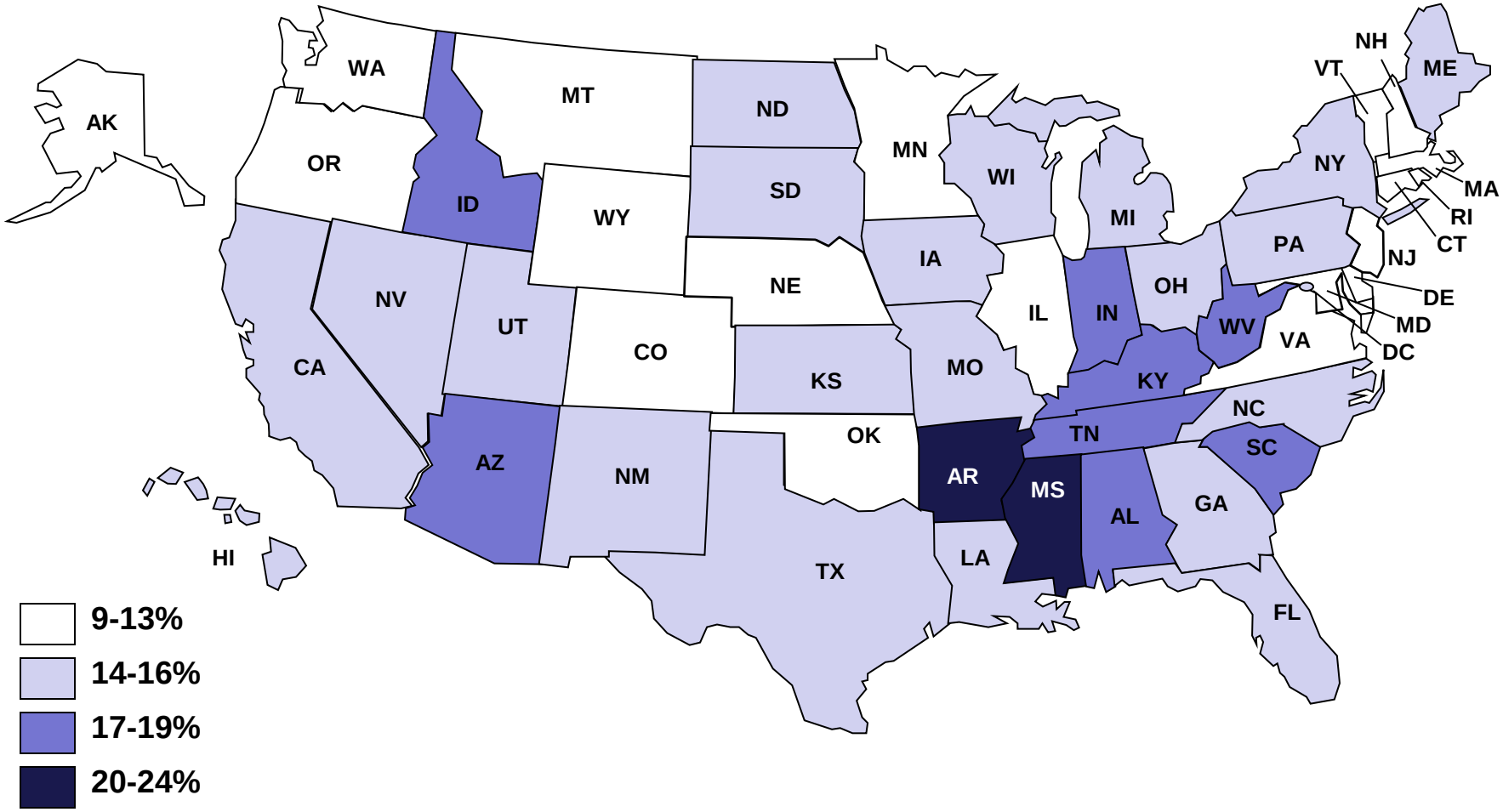
Exhibit 14.Percent of Insured Families with High Out-of-Pocket Medical Care Expenses by State, 2009

Percent of insured families who spent 10% or more of income on out-of-pocket medical care expenses or 5% if low income



Note: Households under 65 years old. Expenses are family out-of-pocket for medical care as a share of annual income, not including premiums. 5% threshold applies to incomes below 200% of poverty. Insured families have no uninsured members.

Source: Analysis of the 2010 Current Population Survey by N. Tilipman and B. Sampat of Columbia University for The Commonwealth Fund.

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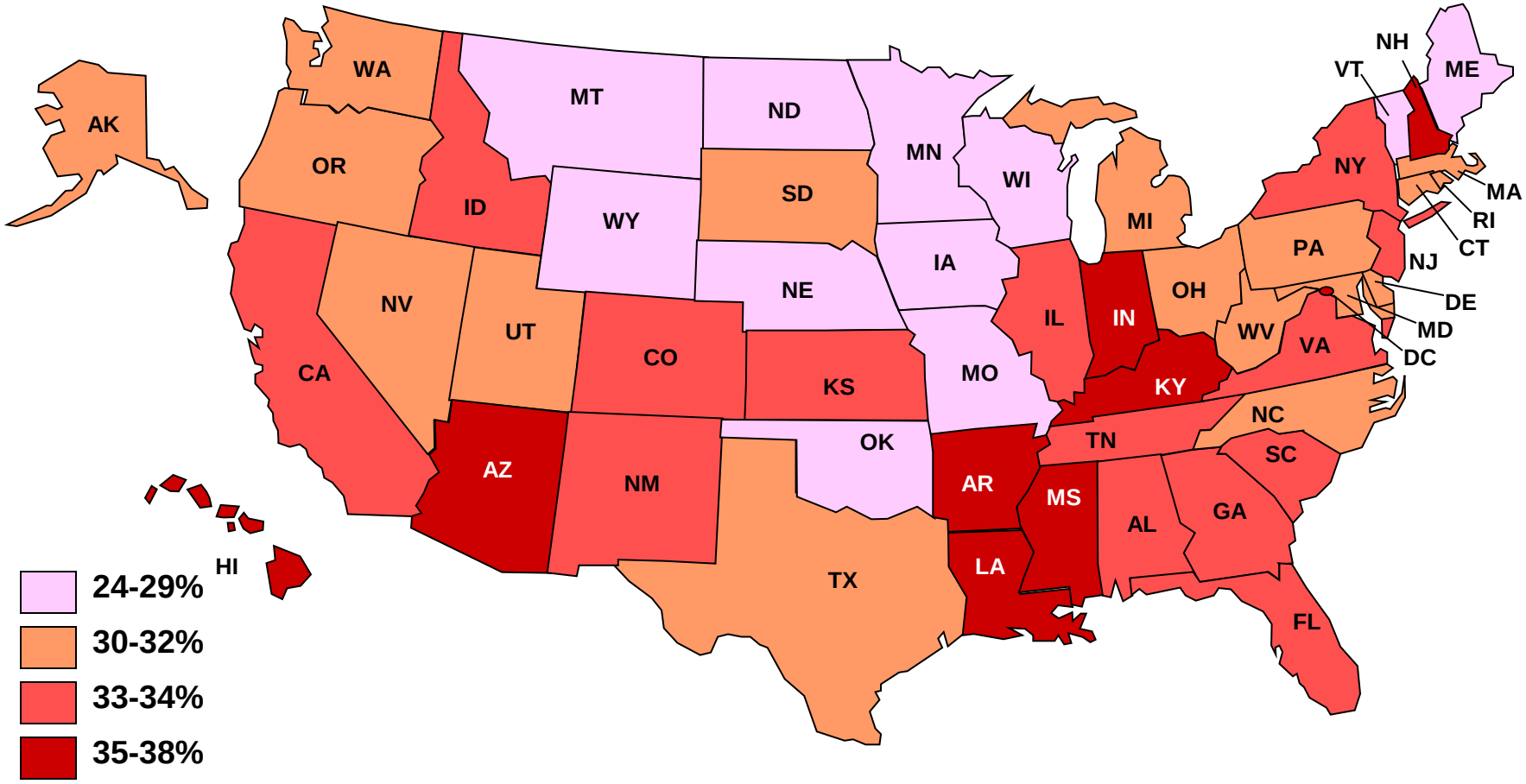
Exhibit 15. Percent of Low-Income Families with High Out-of-Pocket Medical Expenses, by State, 2009

Percent of low income* families who spent 10% or more of income on out-of-pocket medical care expenses or 5% if under 200% FPL



Note: Households under 65 years old. Expenses are family out-of-pocket for medical care as a share of annual income, not including premiums. 5% threshold applies to incomes below 200% of poverty.
*Low income is considered under 250% FPL
Source: Analysis of the 2010 Current Population Survey by N. Tilipman and B. Sampat of Columbia University for The Commonwealth Fund.

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Exhibit 16. Out of Pocket Medical Care Costs: Summary and Conclusion

- 17% of families – including 44 million people - had high OOP costs in 2009
  - 15% of insured families
  - Most at risk were low-income households: nearly 40% of insured families <200% FPL had high OOP costs
- High OOP costs varied greatly by state, ranging from 12 to 24% of families
  - Families most at risk live in the south: combination of high uninsured rates, high percent low income, poor coverage.
  - Among insured families, those in southern states still most at risk.
  - Rates particularly high among low income families <250% FPL, highest rates in south.
- 2014 reforms with Medicaid expansion, lower cost-sharing for qualified health plans <250% FPL, essential benefit package, market reforms
  - Should see dramatic reduction in share of families with high OOP costs as share of income nationally and across states
- But risks include:
  - Ongoing risk of rapid health care cost growth compared to income
  - Families with chronic illness
  - Design of plans and state exchanges, enrollment coordination between coverage options, pace of implementation, health plan exemptions
- A need to monitor over time at state and national level

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Acknowledgements and Resources

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Columbia University, Mailman School of Public Health

C. Schoen, M.M. Doty, R. Robertson, S. R. Collins, "Affordable Care Act Reforms Could Reduce the Number Of Underinsured U.S. Adults by 70 Percent," *Health Affairs*, September 2011

J. Gruber and I. Perry, *Realizing Health Reform's Potential: Will the Affordable Care Act Make Health Insurance Affordable?* The Commonwealth Fund, April 2011 http://bit.ly/r3etPG

Commonwealth Fund Health Reform Resource Center: What's in the Affordable Care Act? (PL 111-148 and 111-152), http://bit.ly/rjfR1s

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High Medical Cost Burdens Among Nonelderly Adults With Chronic Conditions

Peter Cunningham, Ph.D.

For presentation at Workshop on Developing Measures of Medical Care Economic Risk

Insurance Coverage by Health Conditions

	No conditions	Acute only	1 chronic condition	2 chronic conditions	3+ chronic conditions
ESI private	53.9	66.7	70.1	72.8	66.6
Nongroup private	3.5	4.1	4.3	4.2	3.4
Public	8.2	9.4	8.6	9.7	19.2
Uninsured	34.4	19.8	17.0	13.2	10.8

Includes persons age 18-64
Source: 2008 Medical Expenditure Panel Survey

Family Income by Health Conditions

	No conditions	Acute only	1 chronic condition	2 chronic conditions	3+ chronic conditions
LT 138%	19.9	16.8	15.8	14.2	18.7
138-200%	11.9	11.2	10.1	8.6	9.9
200-300%	19.9	18.0	16.5	15.9	15.8
300-400%	12.6	14.4	14.5	14.5	12.1
400% +	35.6	39.6	43.0	46.8	43.5

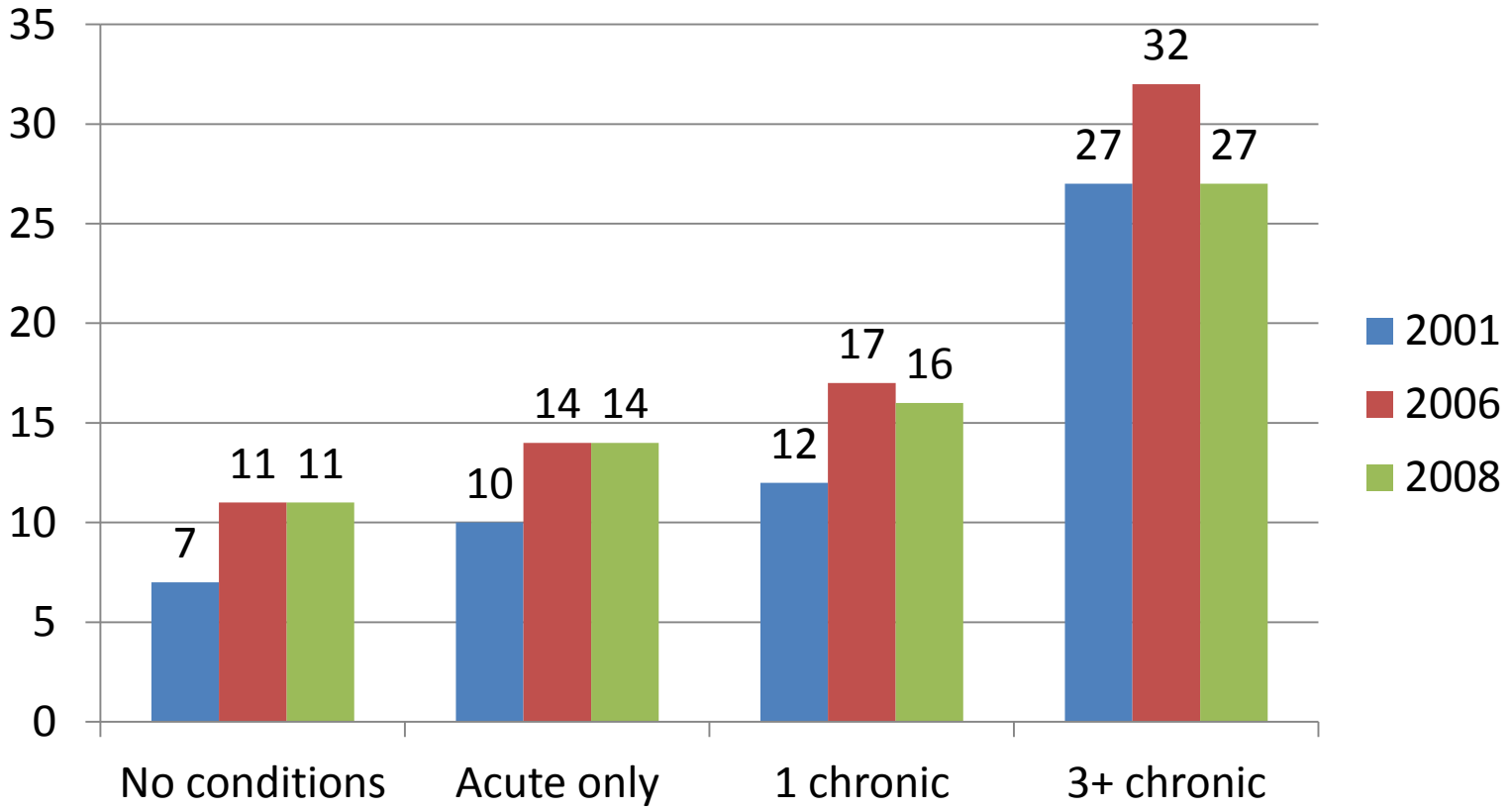
Includes persons age 18-64
Source: 2008 Medical Expenditure Panel Survey

Out-of-Pocket Spending by Health Conditions

	Family income	Family OOP premiums	Family OOP services	OOP > 10% of income
No conditions	$52,660	$1,300	$580	10.7
Acute only	61,150	1,670	910	13.3
1 chronic condition	66,100	1,830	1,070	16.4
2 chronic conditions	67,670	1,950	1,410	19.5
3+ chronic conditions	62,910	1,870	2,040	27.3

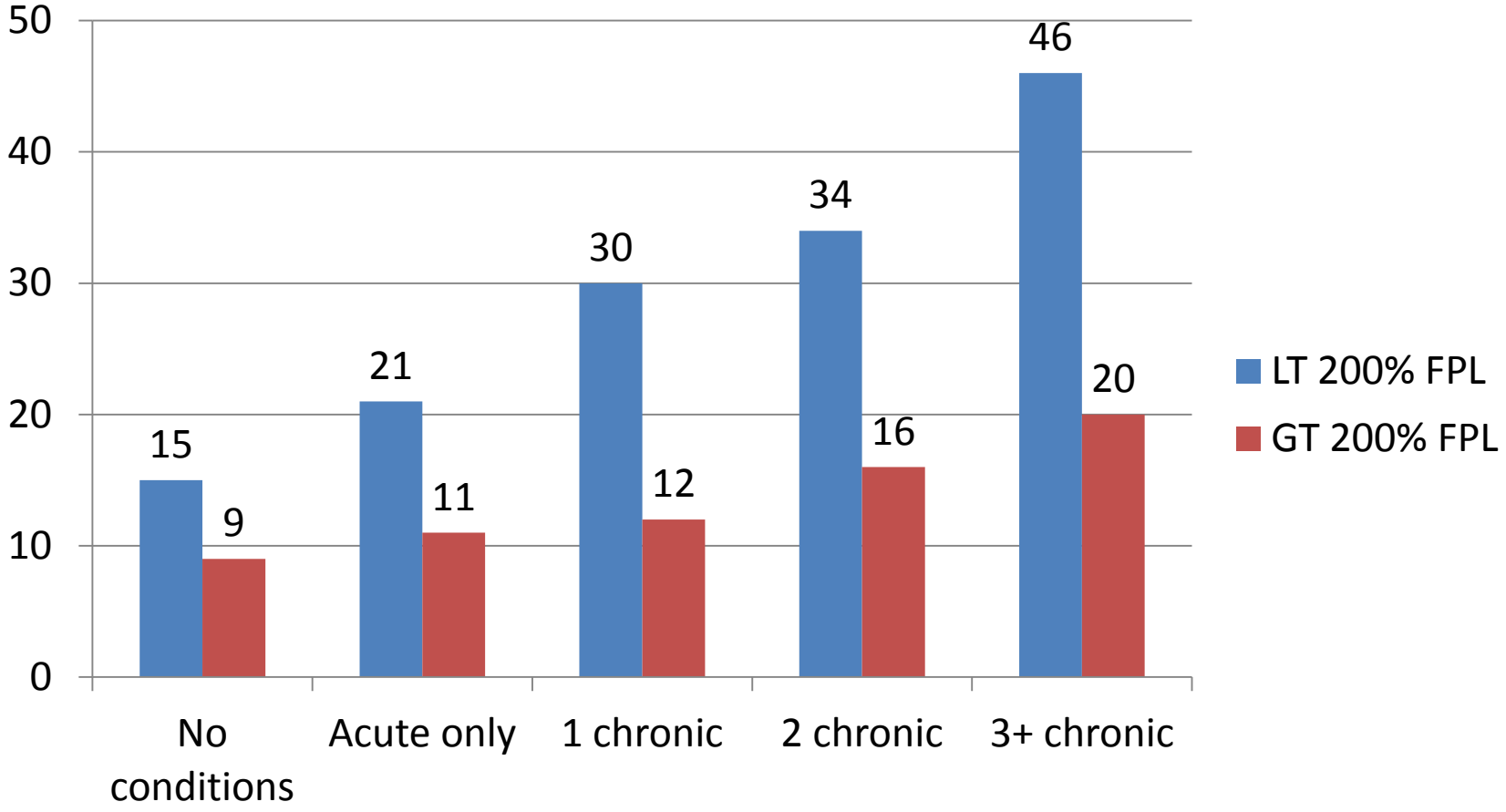
Includes persons age 18-64
Source: 2008 Medical Expenditure Panel Survey

Trends in High Financial Burden



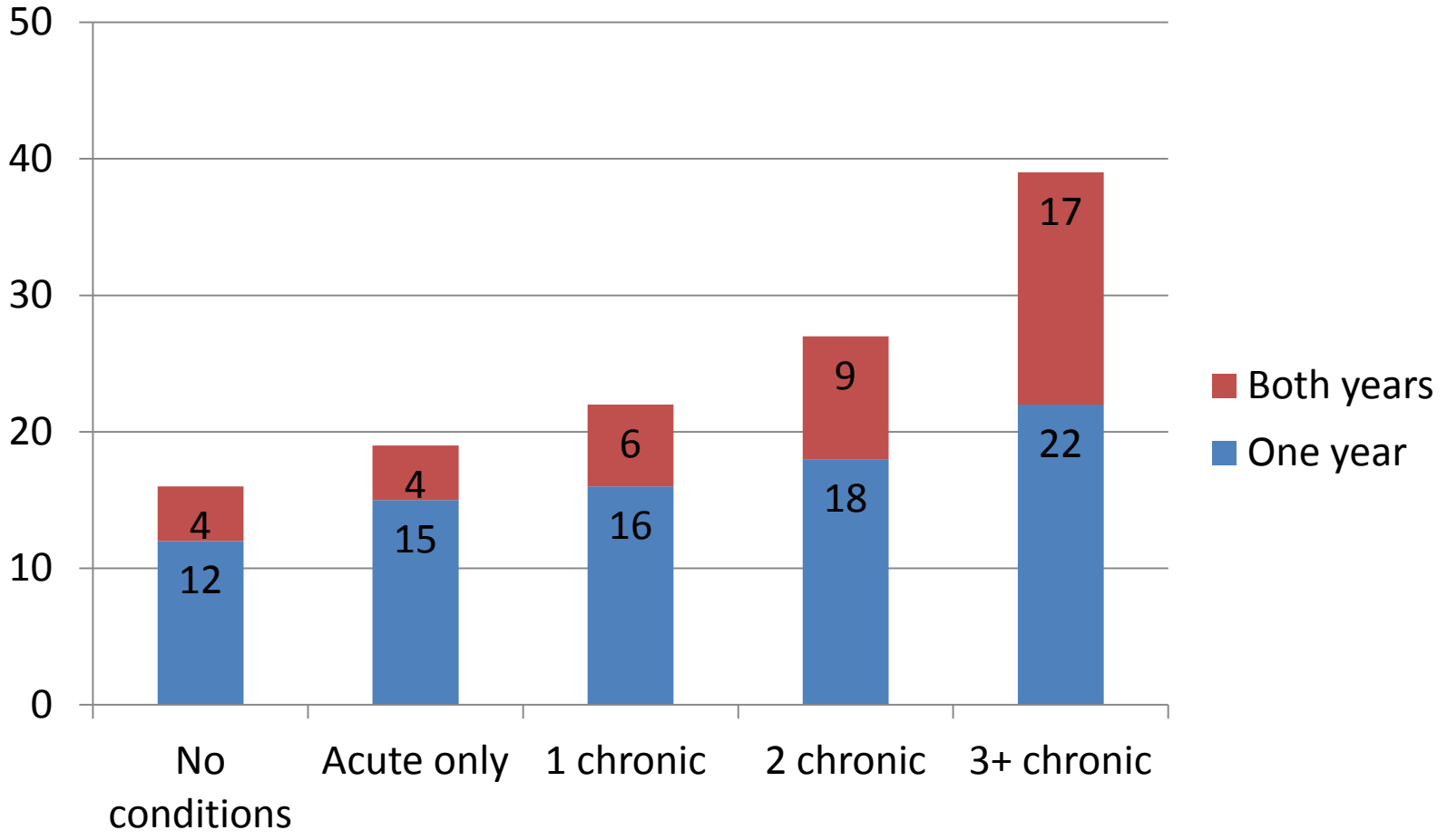
Includes persons age 18-64
High burden defined as total out-of-pocket spending greater than 10% of family income
Source: 2001, 2006, and 2008 Medical Expenditure Panel Survey

High Burden by Income



Includes ages 18-64.
High burden defined as total out-of-pocket spending greater than 10% of family income.
Source: Medical Expenditure Panel Survey, 2008

Persistent Financial Burden (Two Years)



Source: Medical Expenditure Panel Survey, panel samples for 2001-2005

Problems Paying Medical Bills

(by level of out-of-pocket spending relative to income)

	No chronic conditions	1 or more chronic conditions
All persons < 65 years	**18.5**	**29.9***
LT 2.5%	13.0	18.6
2.5 – 5.0%	26.9	40.3*
5.0 – 7.5%	30.4	44.1*
7.5 – 10.0%	43.4	63.7*
GT 10%	45.7	60.8*

*Difference with no chronic conditions is statistically significant at .05 level

Source: 2007 Health Tracking Household Survey

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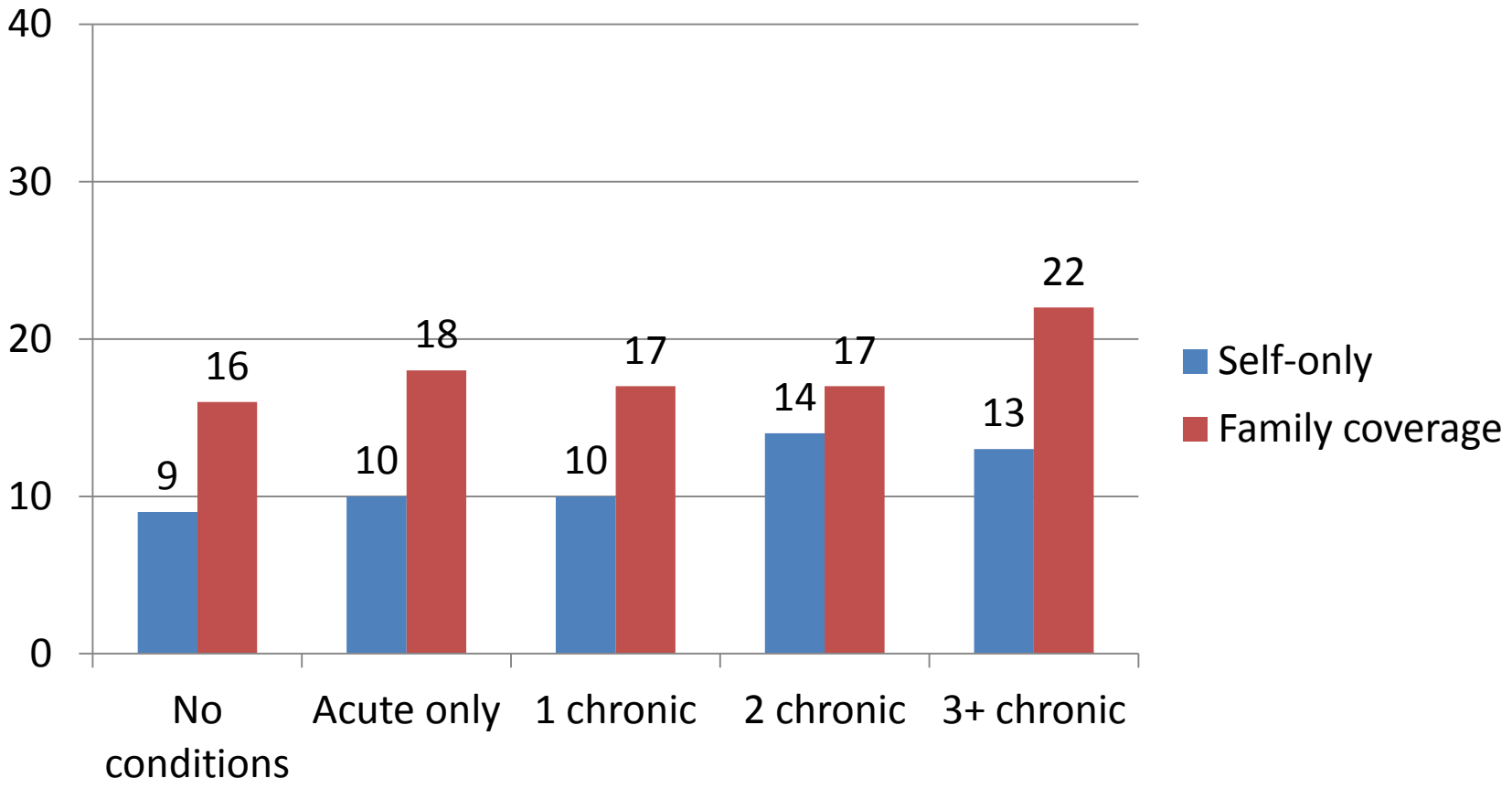
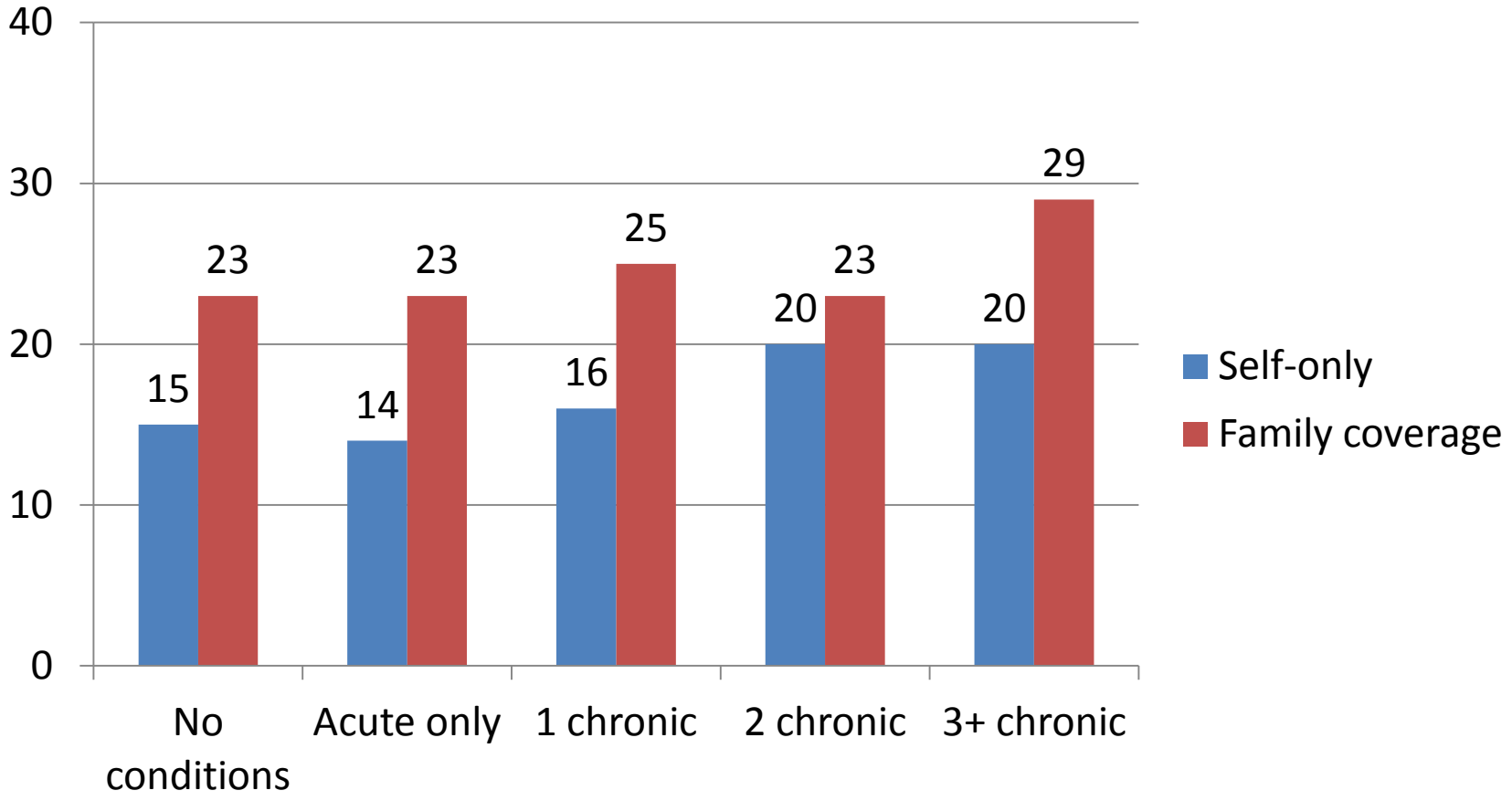
OOP Premium Exceeds 9.5% of income



Persons age 18-64 with employer-sponsored insurance, and incomes between 138-400% of poverty
Source: Medical Expenditure Panel Survey, 2008

OOP Premium Exceeds Cap for Subsidies



Persons age 18-64 with private insurance, and family incomes between 138-400% of poverty
Source: Medical Expenditure Panel Survey, 2008

Cost – Sharing for Services

(Self-Only Coverage, 138-400% of poverty)

	% with any expense	Average OOP expense	OOP as % of total expenditures	Exceeds PPACA Max
No conditions	23.7	$96	46.5	0
Acute only	66.2	$258	37.2	0.1
1 chronic	85.3	$462	36.7	3.1
2 chronic	91.7	$512	30.7	3.5
3+ chronic	98.6	$959	28.2	6.4

Persons age 18-64 with private insurance.
Source: Medical Expenditure Panel Survey, 2008

CENTER for STUDYING HEALTH SYSTEM CHANGE

Cost – Sharing for Services

(Family Coverage, 138-400% of poverty)

	% with any expense	Average OOP expense	OOP as % of total expenditures	Exceeds PPACA Max
No conditions	23.5	$614	26.6	1.2
Acute only	75.6	$907	25.1	1.1
1 chronic	89.0	$918	24.7	1.2
2 chronic	96.5	$1,304	24.2	2.8
3+ chronic	99.1	$1,676	21.0	4.0

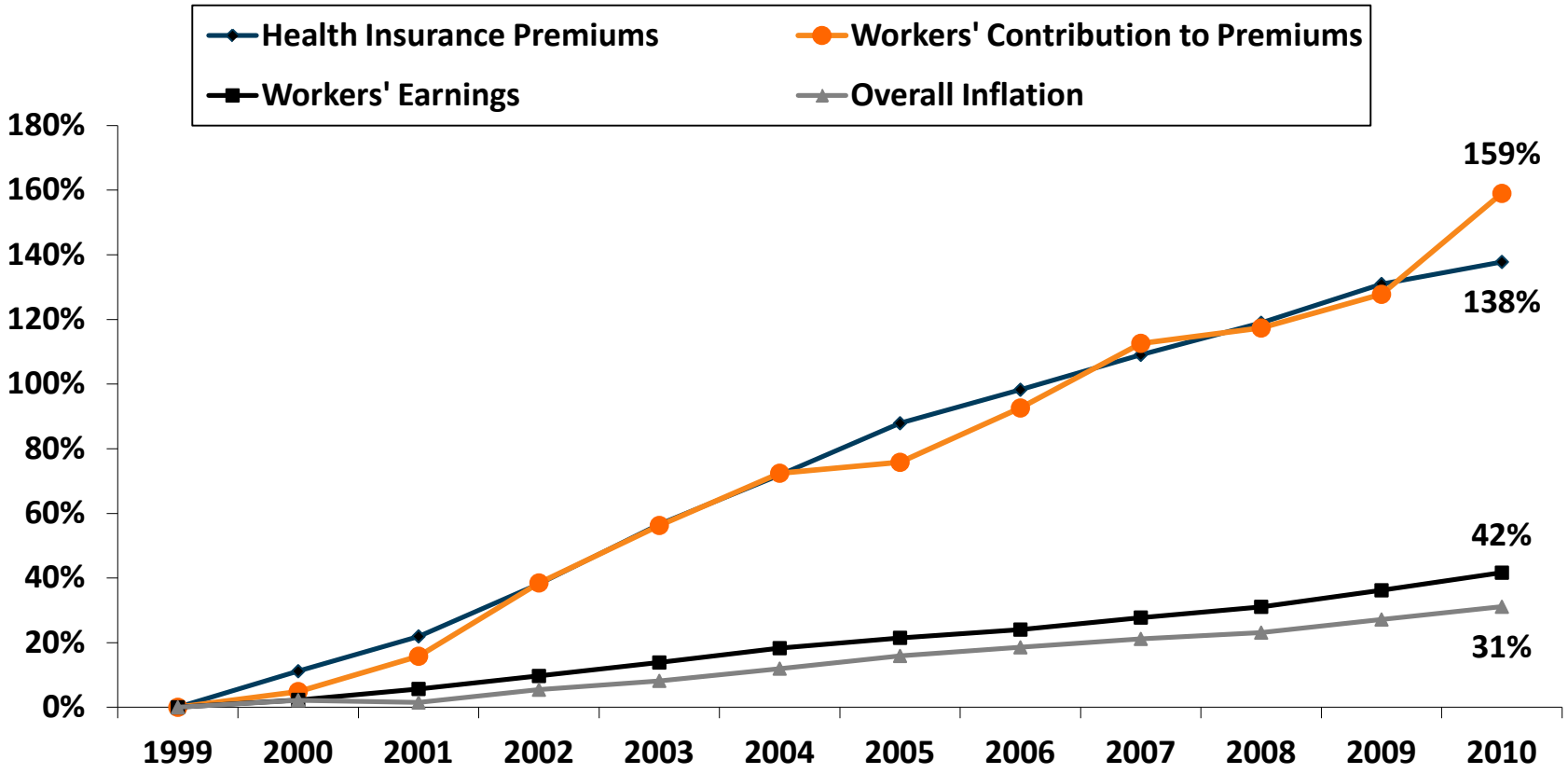
Persons age 18-64 with private insurance.
Source: Medical Expenditure Panel Survey, 2008

Trends Exposure to Out-of-Pocket Spending for Medical Care

Gary Claxton

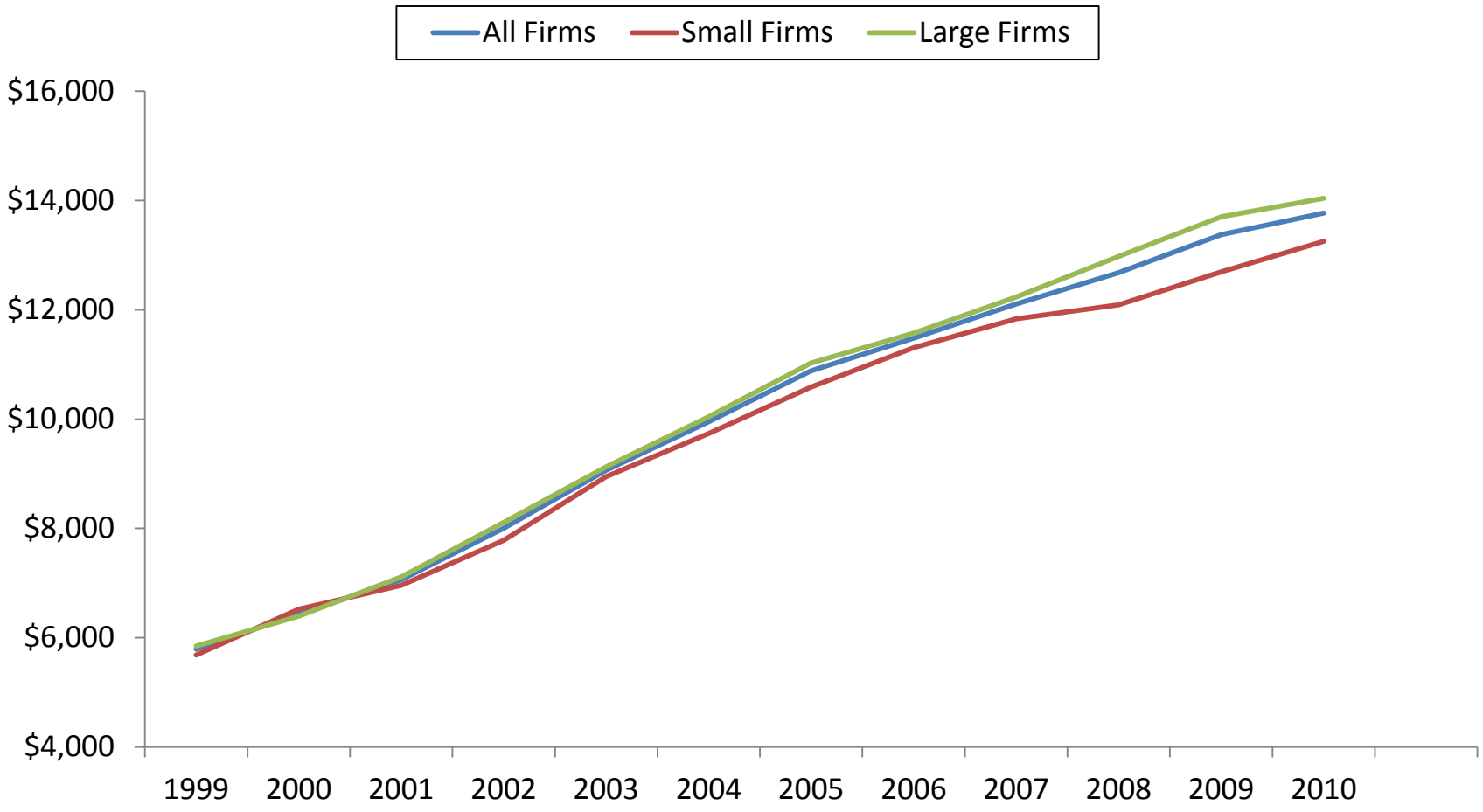
Vice President
Kaiser Family Foundation
September, 2011

Cumulative Increases in Health Insurance Premiums, Workers' Contributions to Premiums, Inflation, and Workers' Earnings



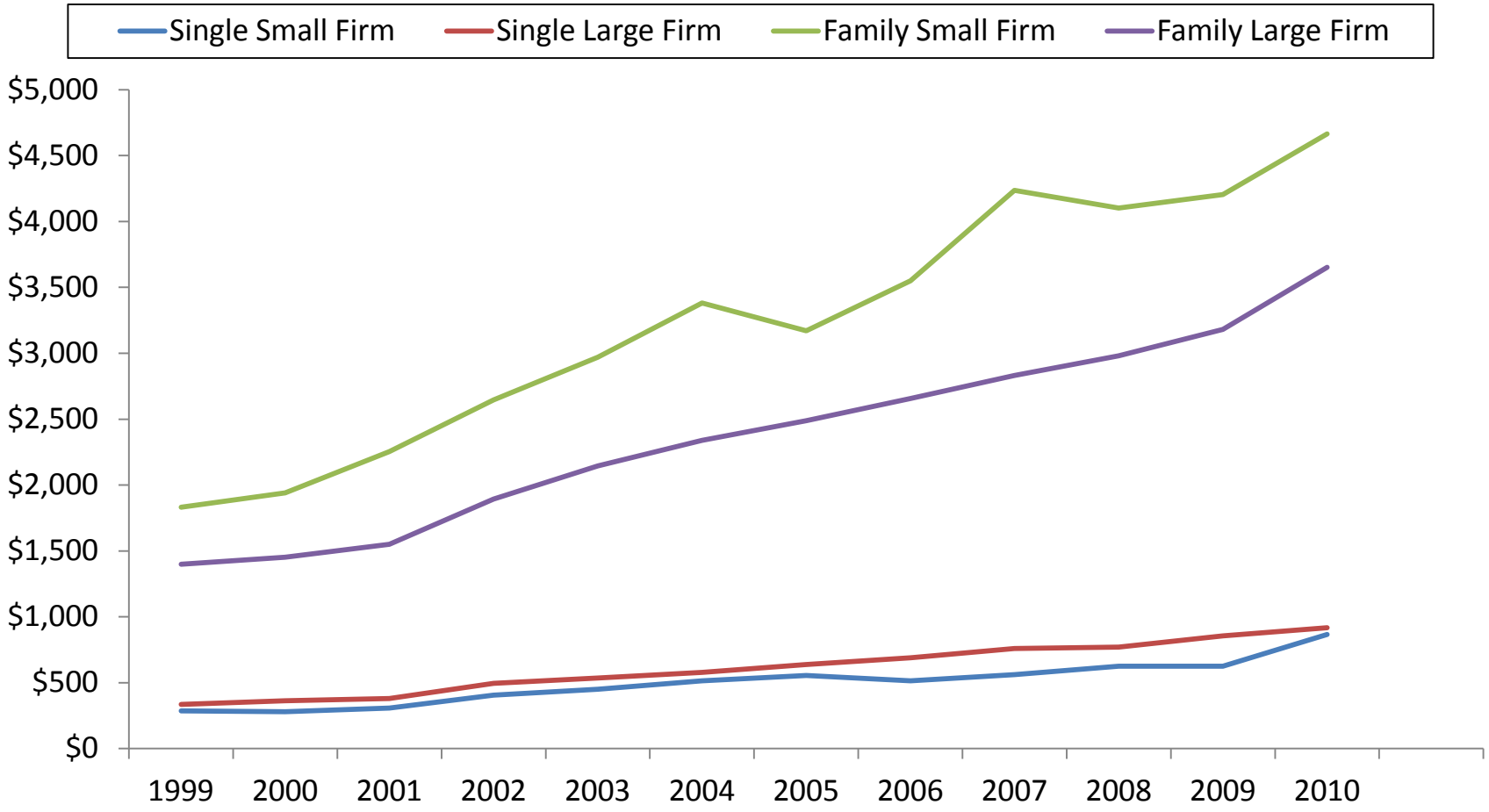
Source: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 1999-2010. Bureau of Labor Statistics, Consumer Price Index, U.S. City Average of Annual Inflation (April to April), 1999-2010; Bureau of Labor Statistics, Seasonally Adjusted Data from the Current Employment Statistics Survey, 1999-2010 (April to April).

Average Annual Premiums for Family Coverage



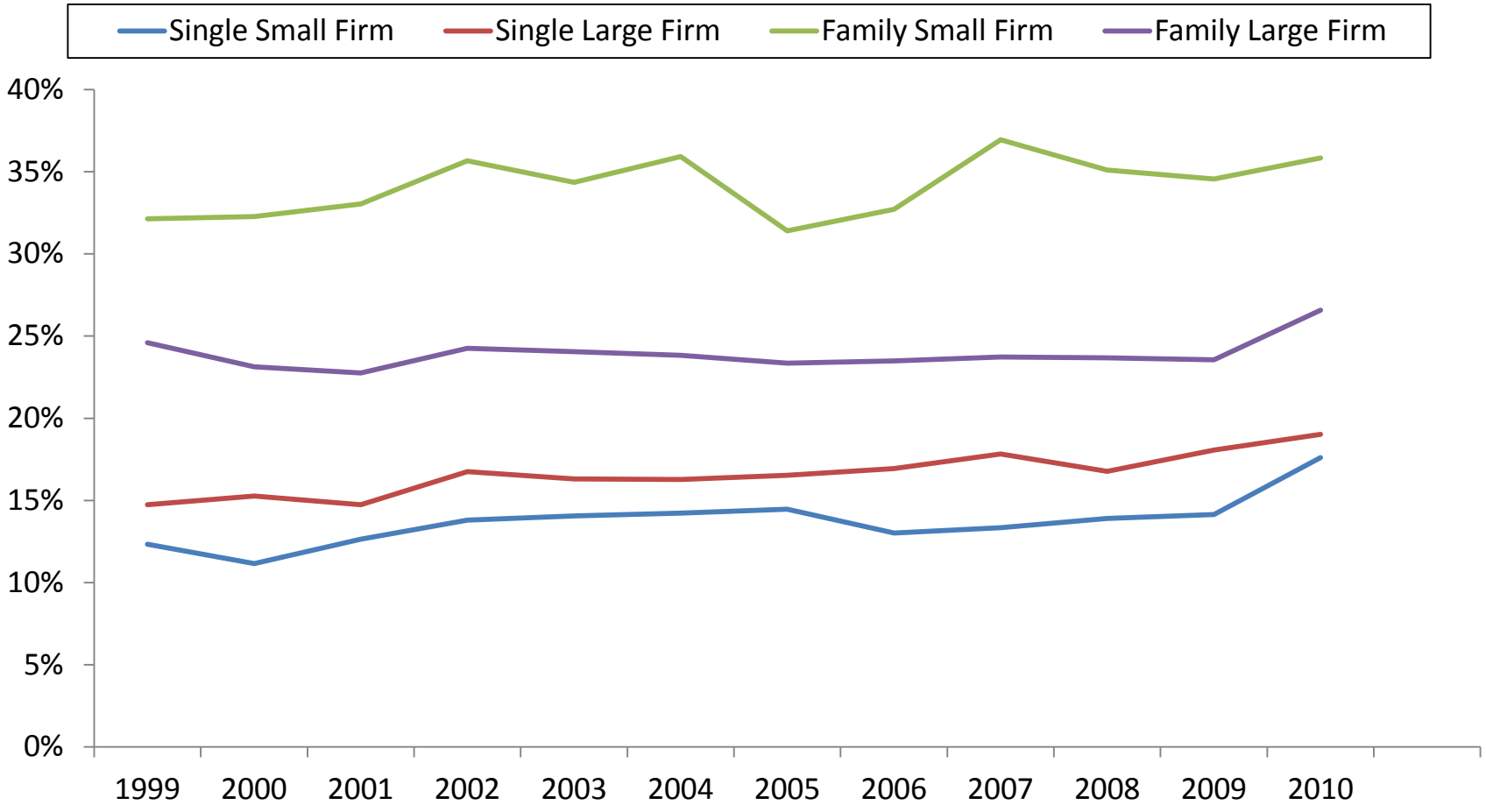
Source: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 1999-2010.

Average Annual Worker Contributions Towards Premiums Single and Family Coverage, by Firm Size



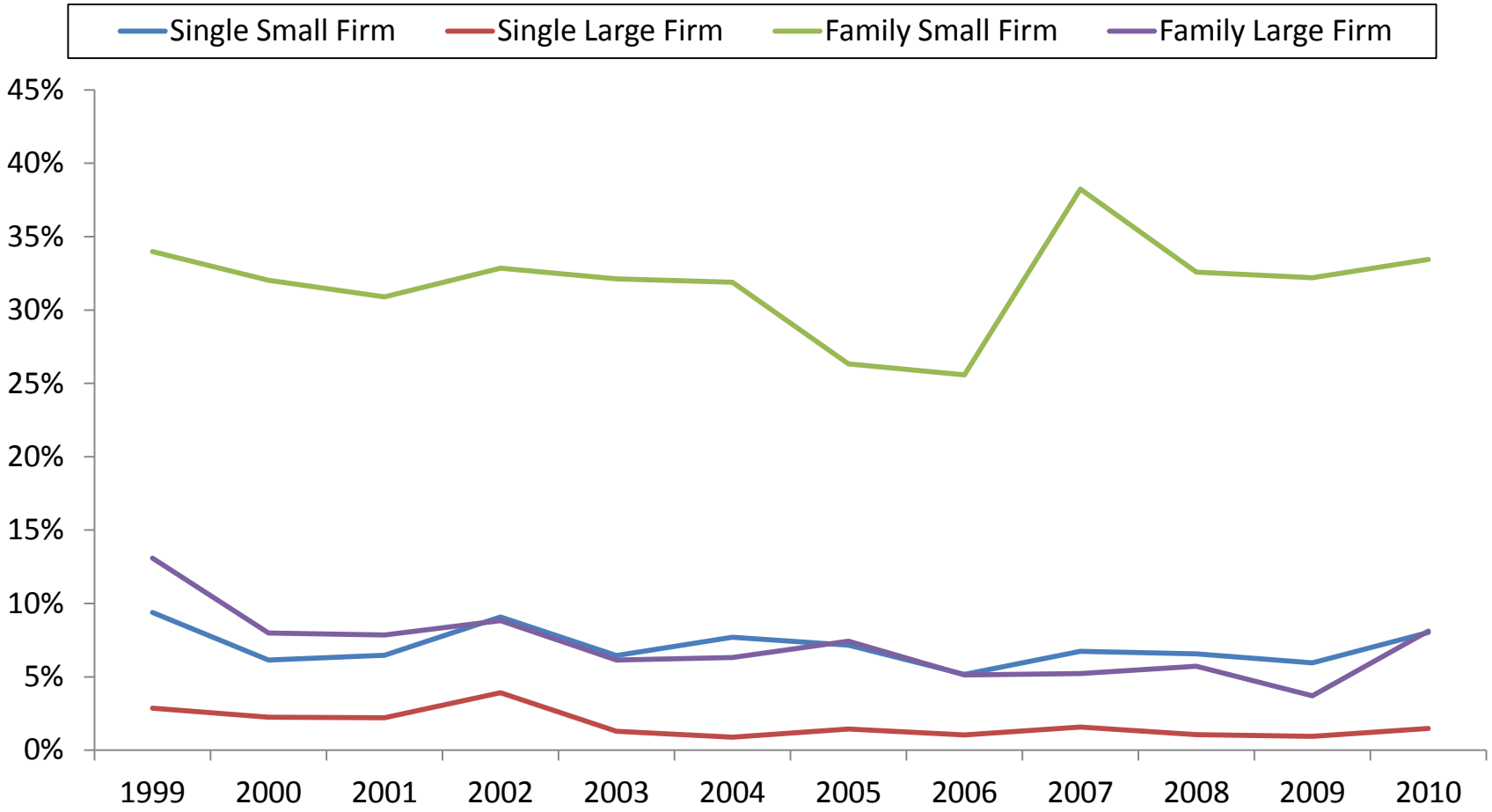
Source: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 1999-2010.

Average Percentage Worker Contributions Towards Premiums Single and Family Coverage, by Firm Size



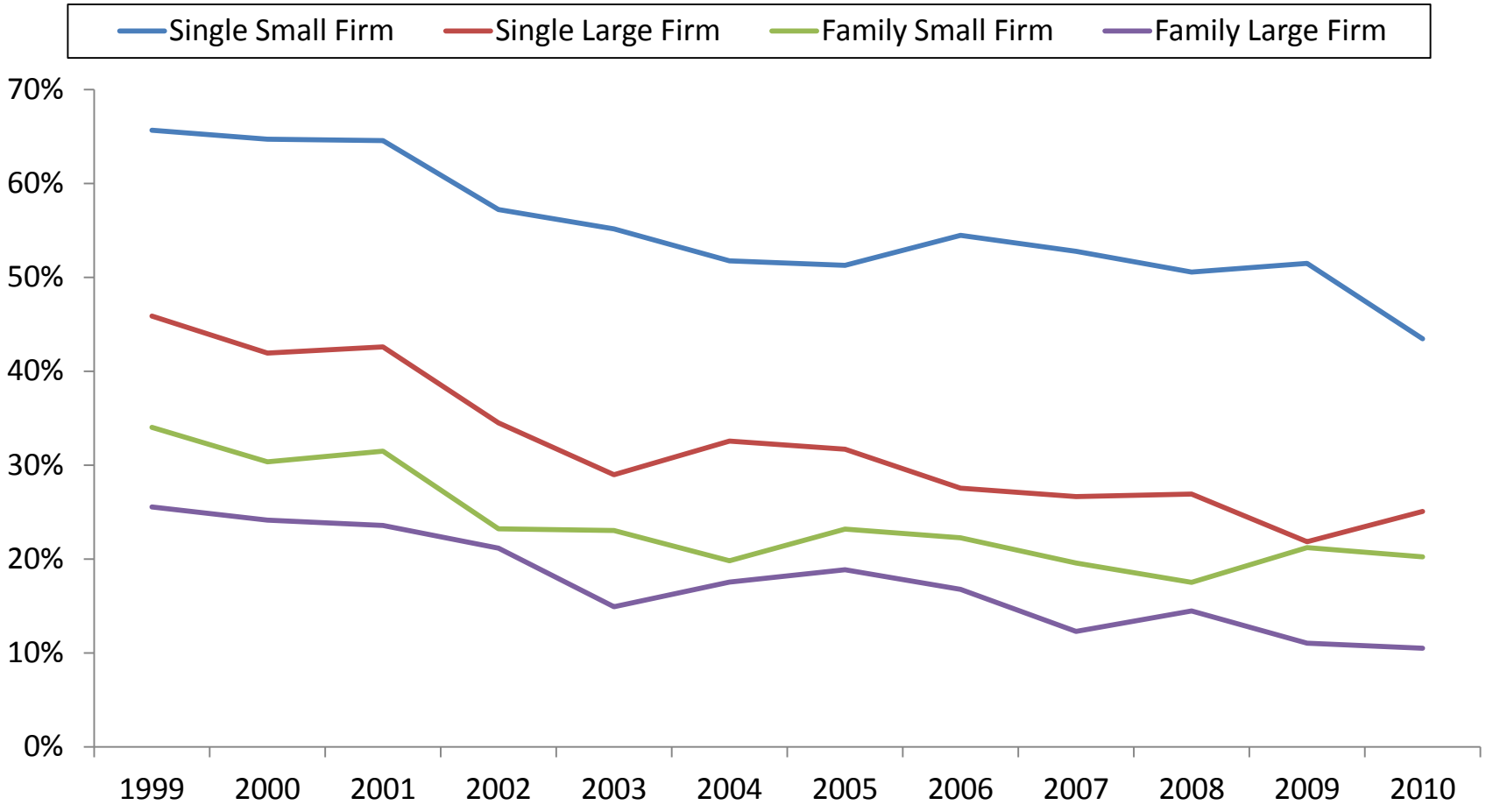
Source: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 1999-2010.

Percent of Covered Workers Contributing at Least 50% of Premium, Single and Family Coverage, by Firm Size



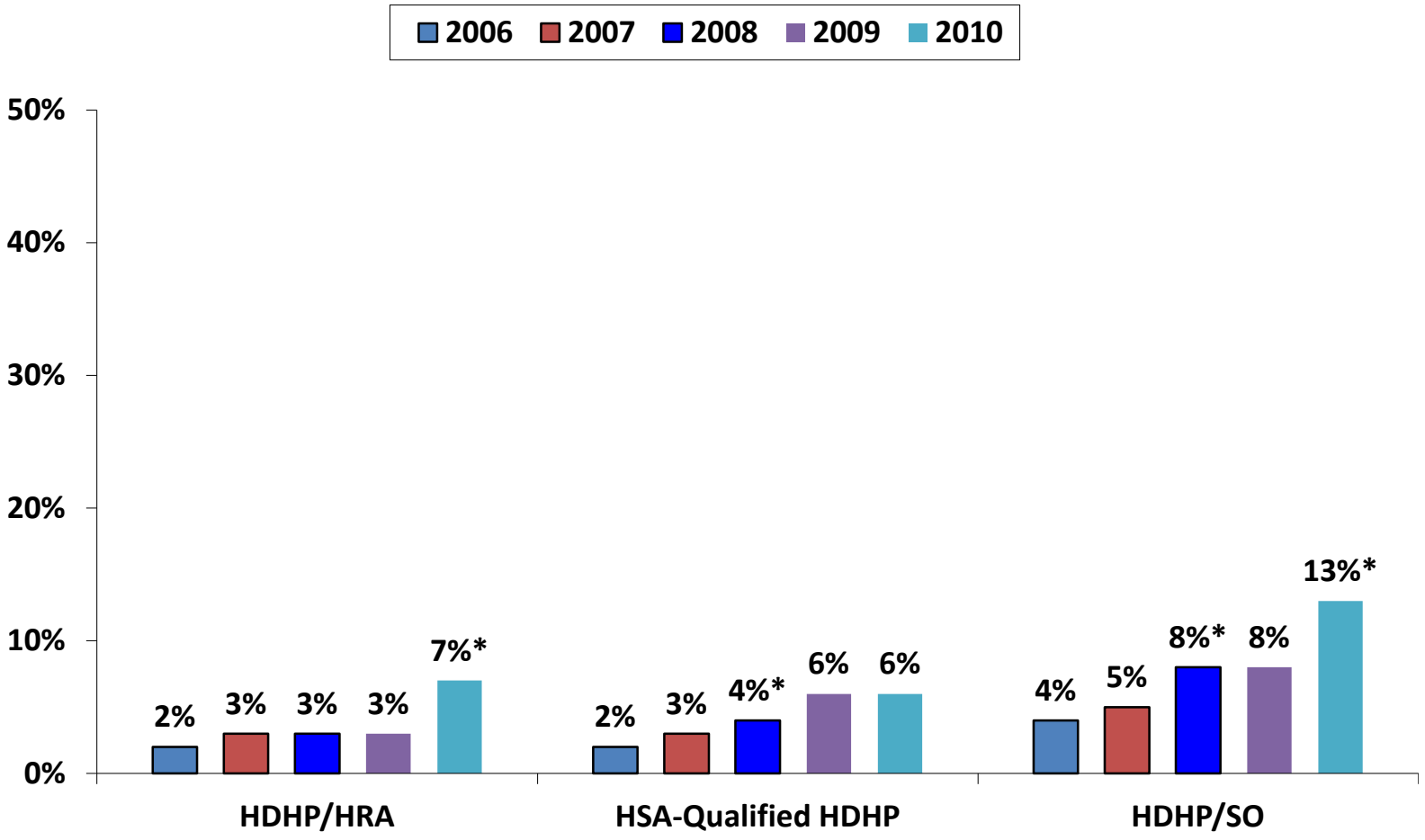
Source: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 1999-2010.

Percent of Covered Workers Contributing 10% or Less of Premium, Single and Family Coverage, by Firm Size



Source: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 1999-2010.

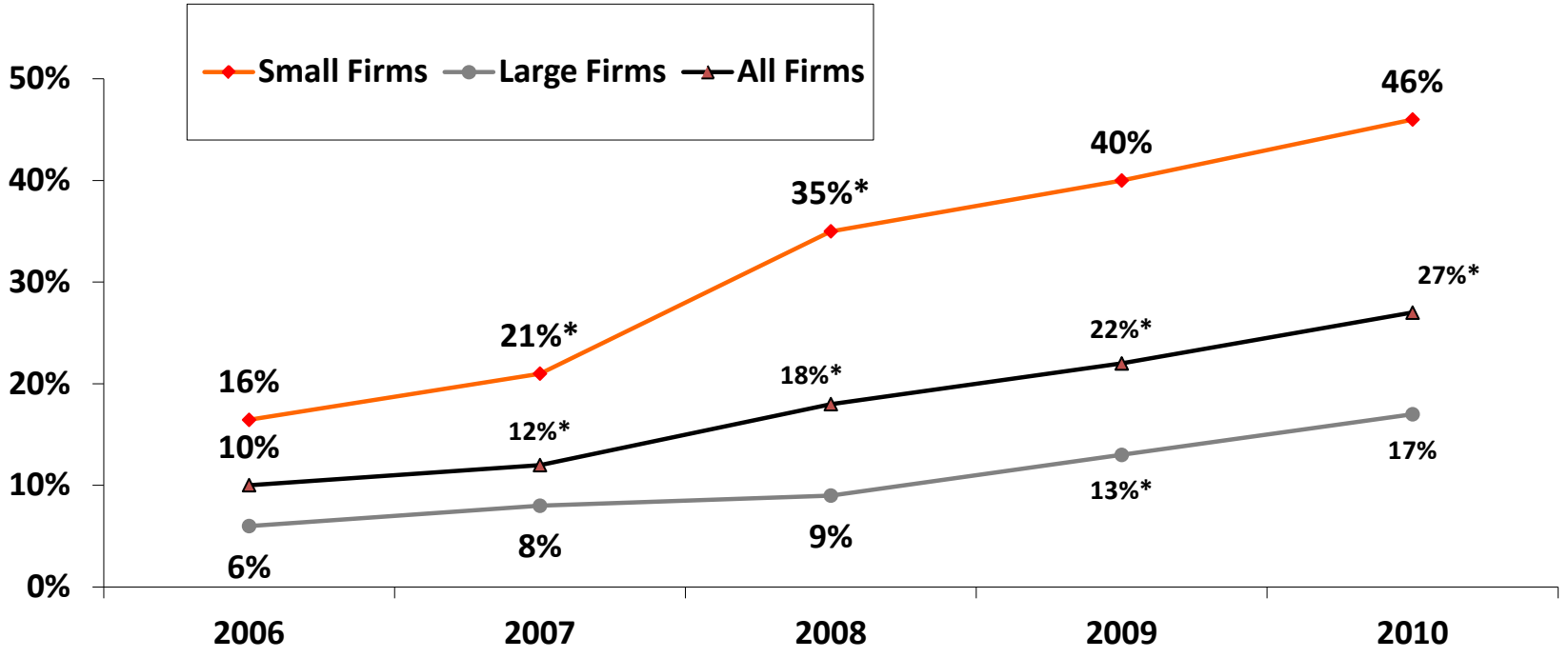
Percent of Covered Workers Enrolled in an HDHP/HRA or HSA-Qualified HDHP



* Estimate is statistically different from estimate for the previous year shown (p<.05).

Source: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 2006-2010.

Percent of Covered Workers in a Plan with a General Annual Deductible of $1,000 or More for Single Coverage, By Firm Size

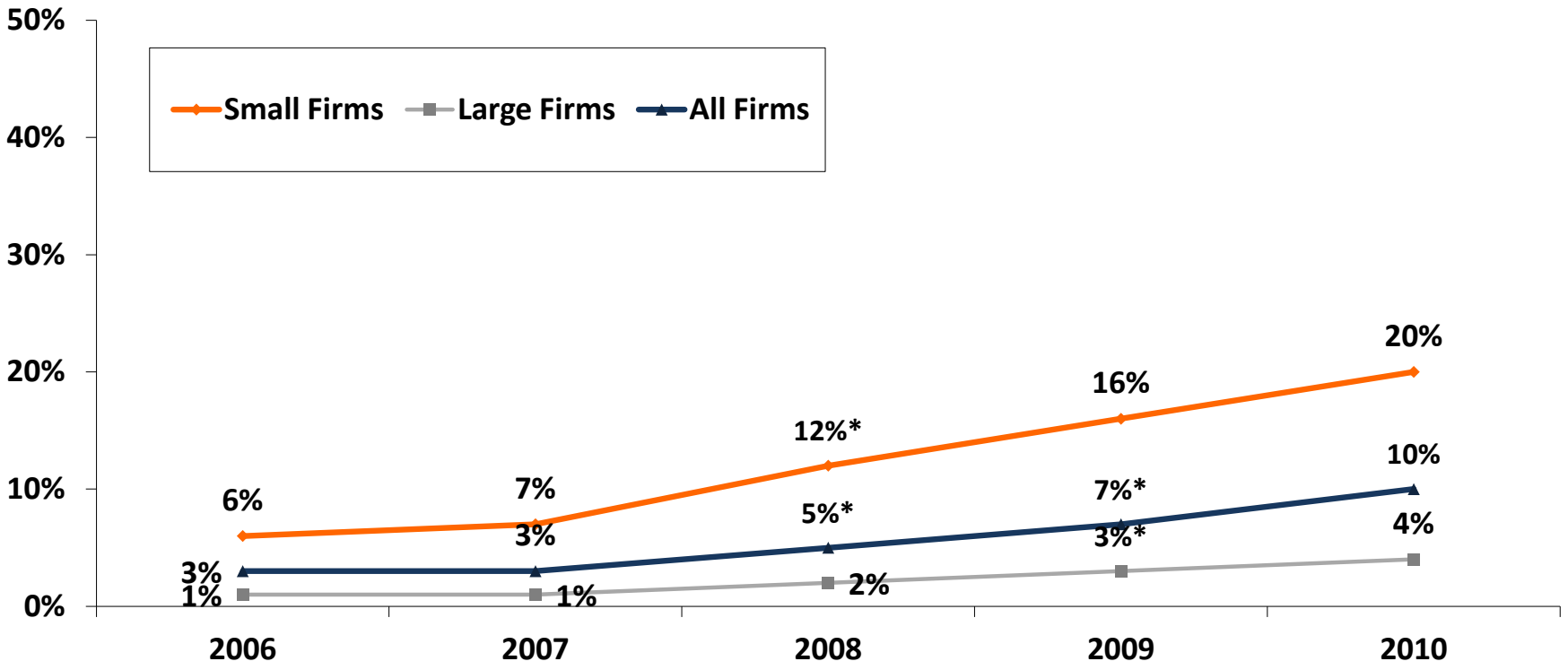


*Estimate is statistically different from estimate for the previous year shown (p<.05).

Note: These estimates include workers enrolled in HDHP/SO and other plan types. Because we do not collect information on the attributes of conventional plans, to be conservative, we assumed that workers in conventional plans do not have a deductible of $1,000 or more. Because of the low enrollment in conventional plans, the impact of this assumption is minimal. Average general annual health plan deductibles for PPOs, POS plans, and HDHP/SOs are for in-network services.

Source: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 2006-2011.

Percent of Covered Workers in a Plan with a General Annual Deductible of $2,000 or More for Single Coverage, By Firm Size

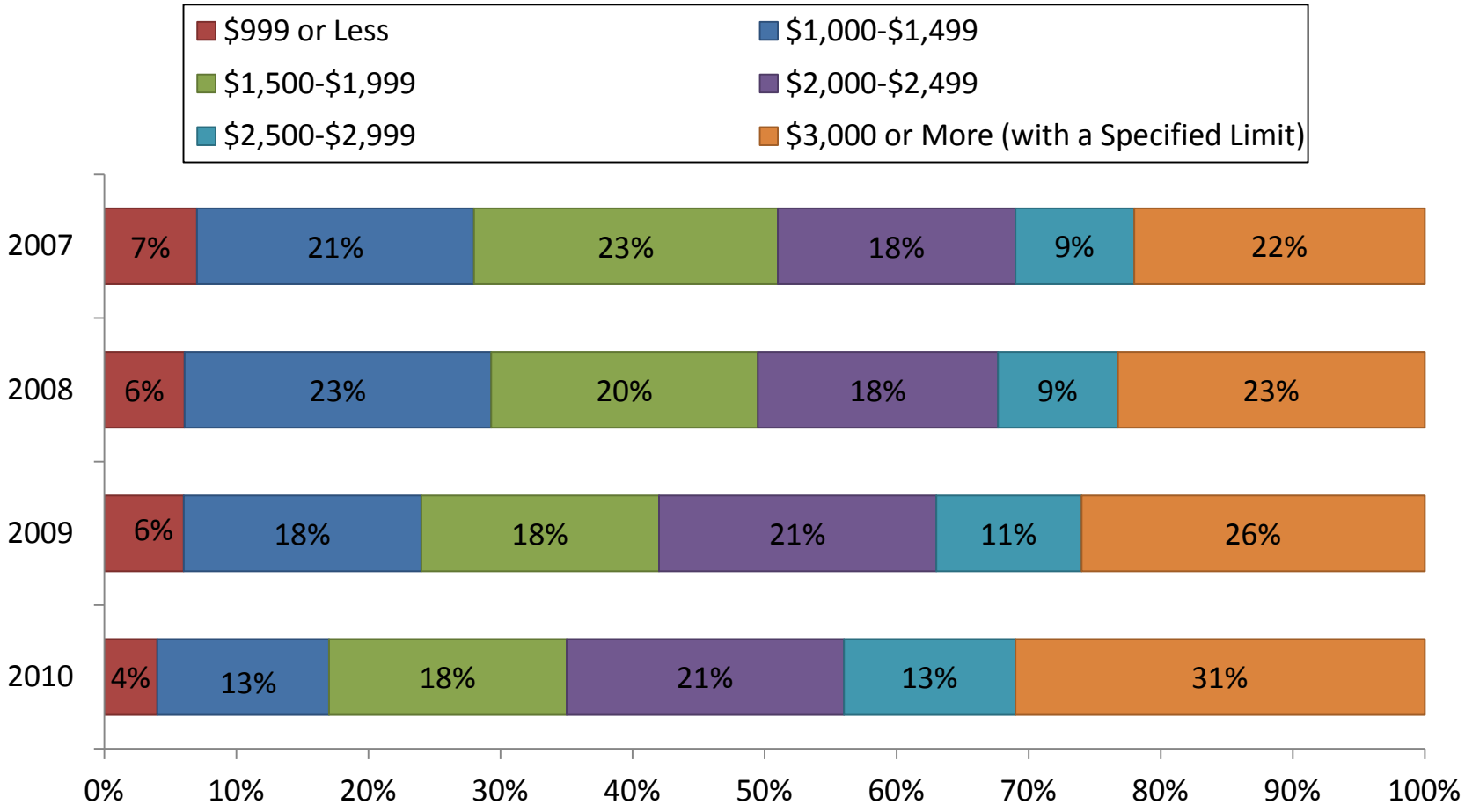


*Estimate is statistically different from estimate for the previous year shown (p<.05).

Note: These estimates include workers enrolled in HDHP/SO and other plan types. Because we do not collect information on the attributes of conventional plans, to be conservative, we assumed that workers in conventional plans do not have a deductible of $2,000 or more. Because of the low enrollment in conventional plans, the impact of this assumption is minimal.

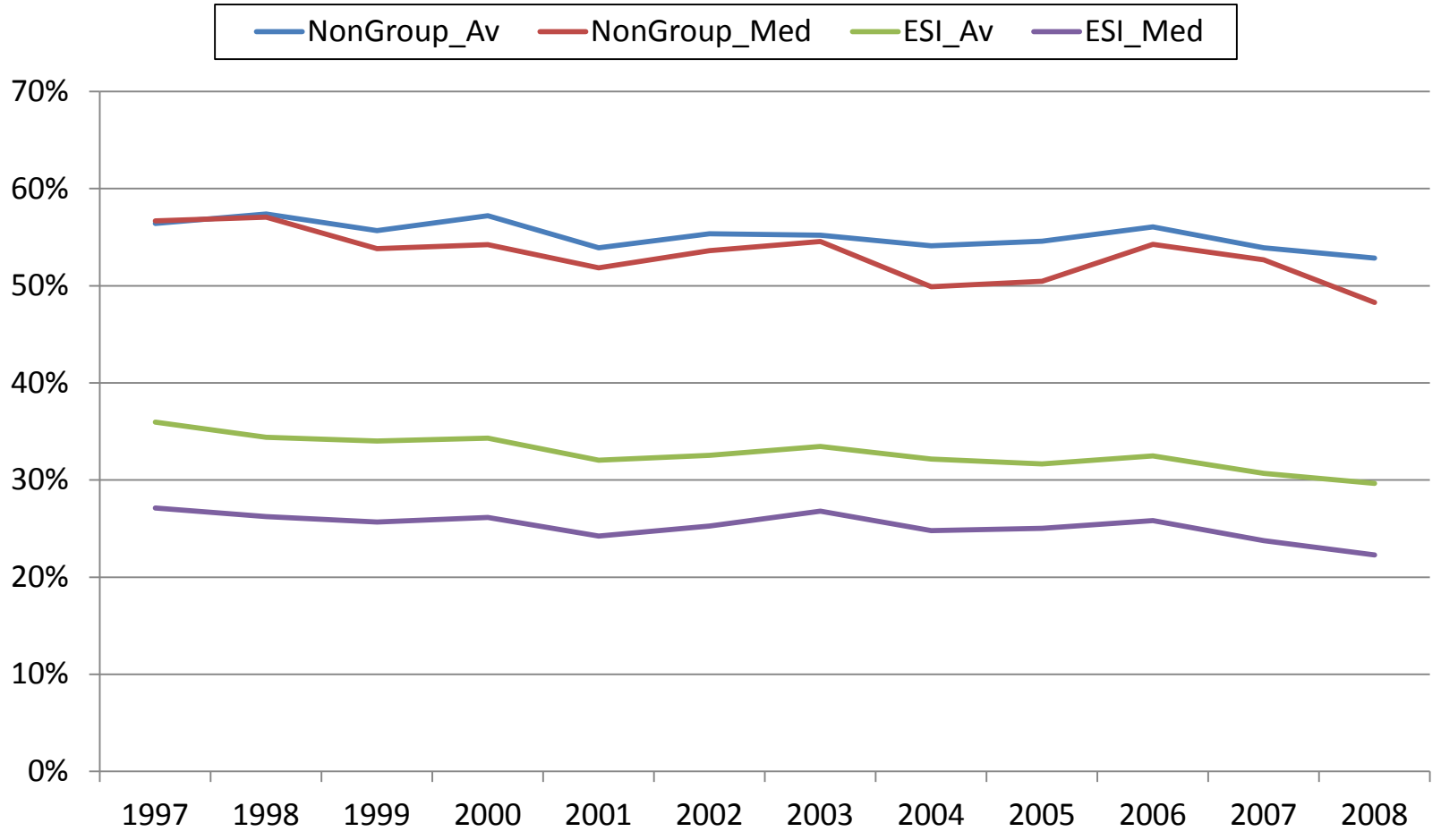
Source: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 2006-2011.

Among Covered Workers with an Out-of-Pocket Maximum for Single Coverage, Distribution of Out-of-Pocket Maximums, by Plan Type 2007-2010



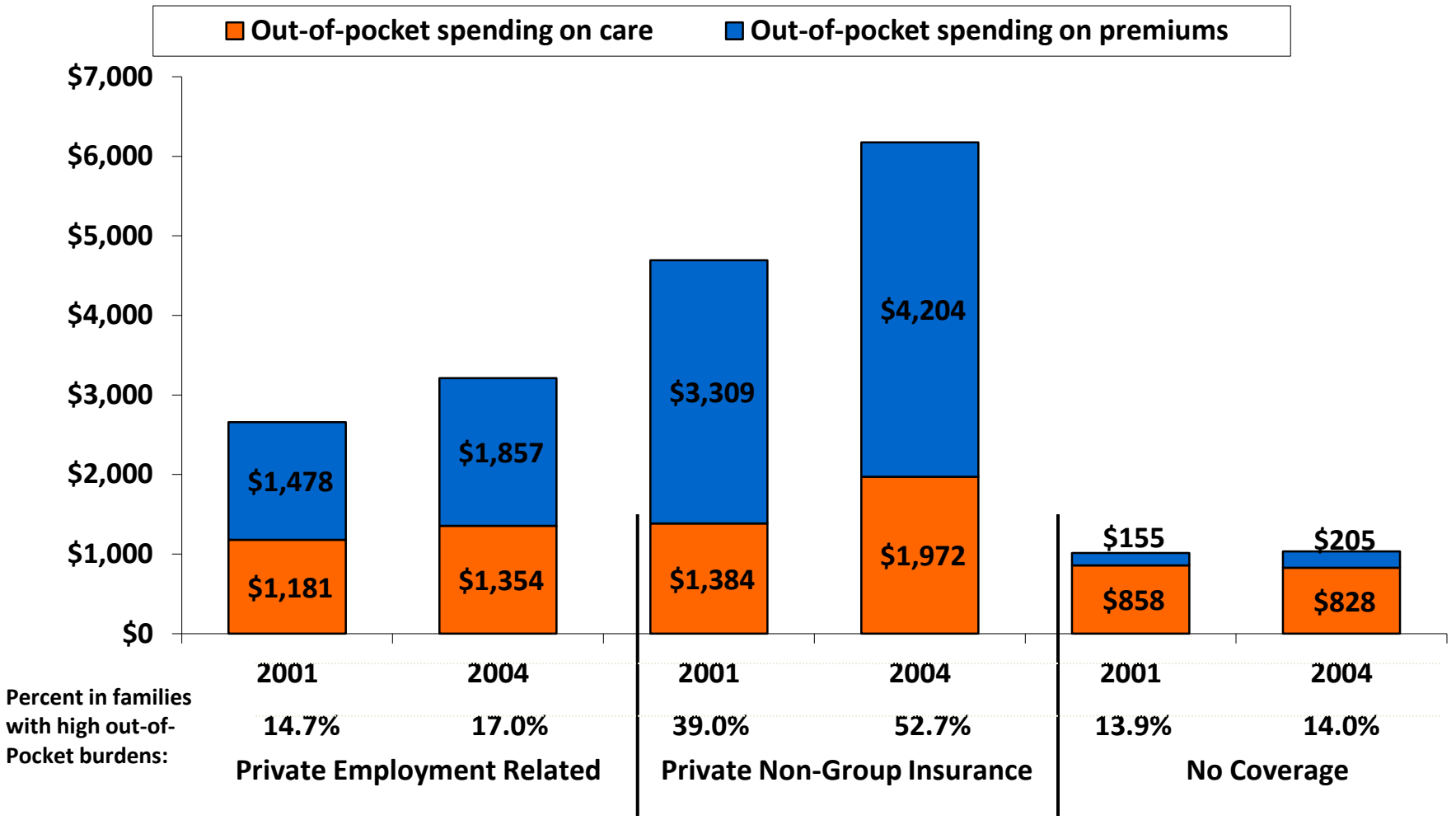
Note: Distributions are among covered workers facing a specified limit for out-of-pocket maximum amounts.
Source: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 2007-2011.

Mean and Median Percentages of Expenditures Paid Out-of-Pocket Non-Group and ESI Enrollees With Expenditures



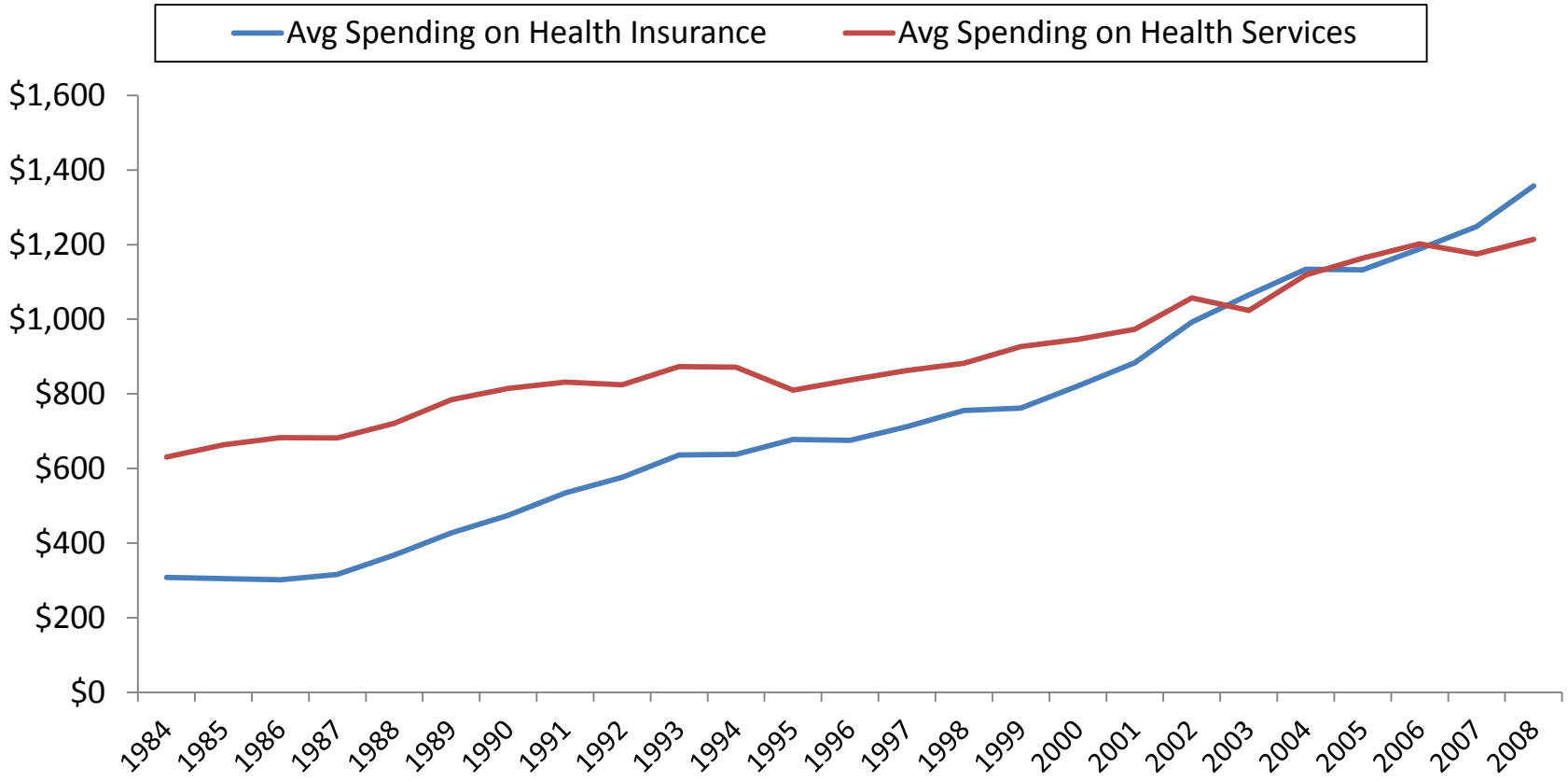
Source: Kaiser Family Foundation estimates from Medical Expenditure Panel Survey, 1997 to 2008.
See Kaiser Family Foundation, "Comparison of Expenditures in Nongroup and Employer-Sponsored Insurance, 2004-2007," (March 10, 2010), http://www.kff.org/insurance/snapshot/chcm111006oth.cfm

Components of Family Out-of-Pocket Burdens, Nonelderly by Insurance Status



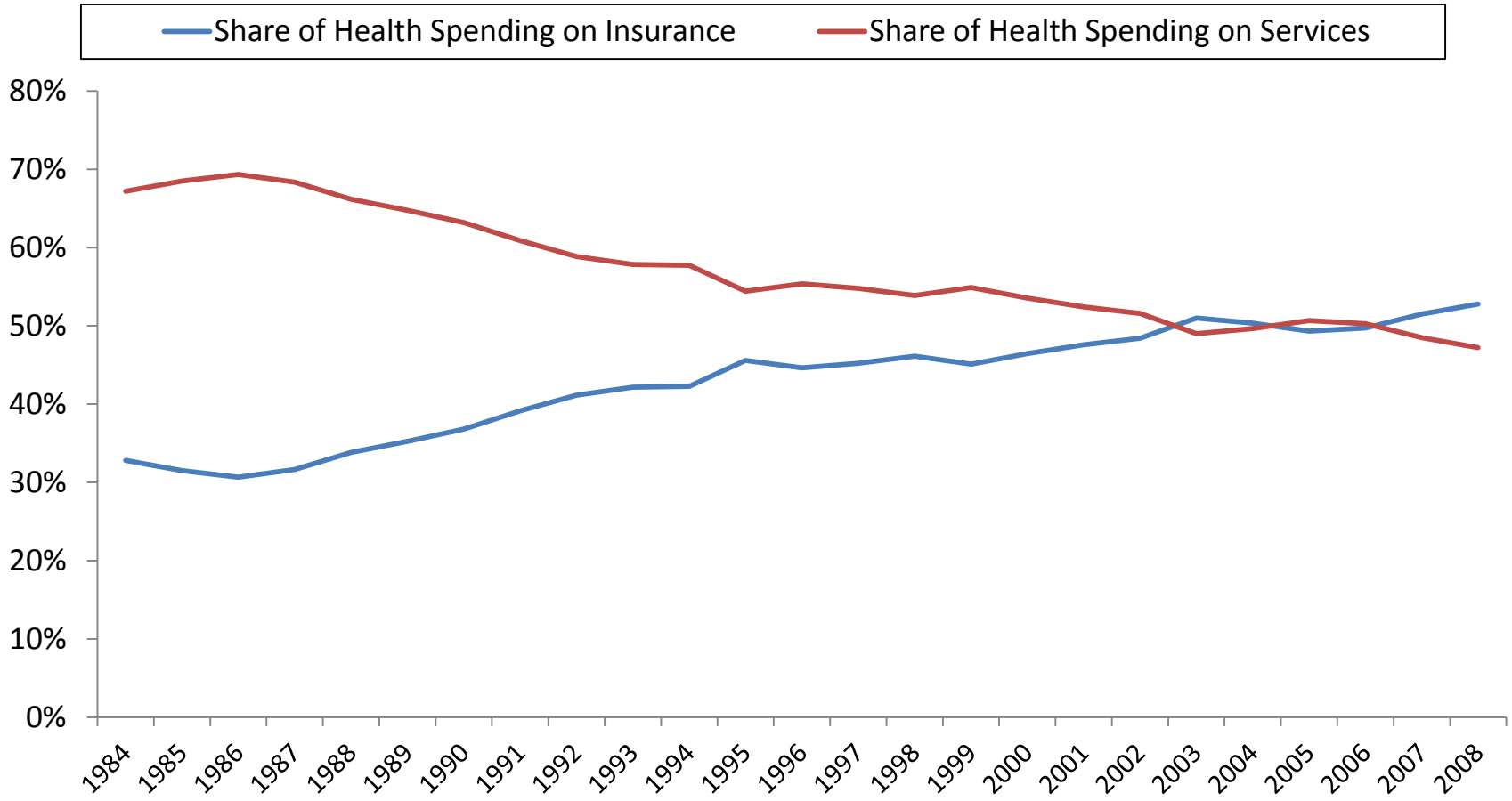
Source: Jessica S. Banthin, Peter Cunningham and Didem M. Bernard. Financial Burden Of Health Care, 2001-2004. *Health Affairs*, 27, no.1 (2008):188-195

Health Out-of-Pocket Spending by Households on Health Insurance and Health Services, Nonelderly



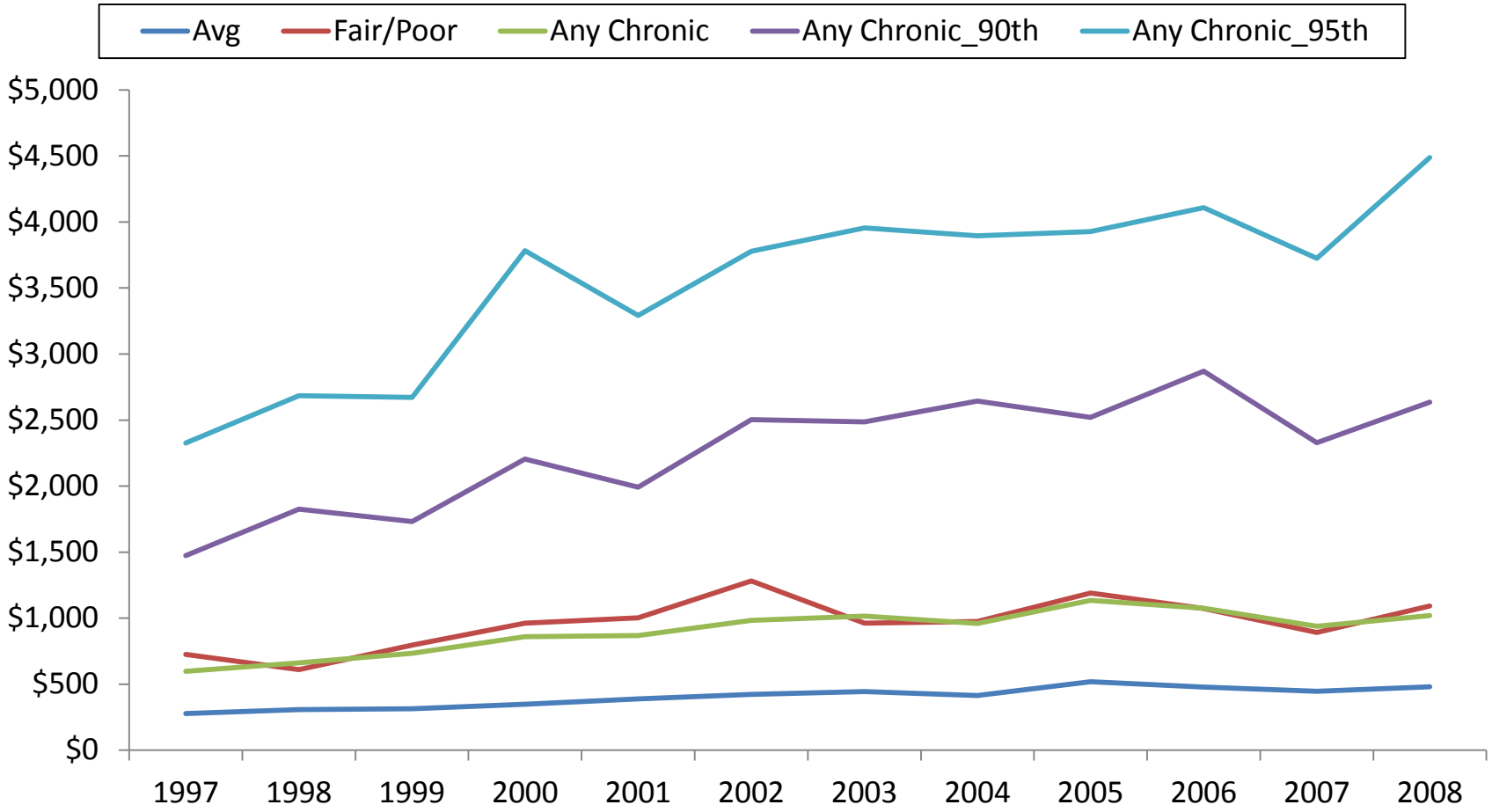
Source: Kaiser Family Foundation estimates from Consumer Expenditure Survey, 1984 to 2008.
Data accessed on-line at: http://www.bls.gov/cex/data.htm

Share of Out-of-Pocket Spending by Households on Health Insurance and Health Services, Nonelderly



Source: Kaiser Family Foundation estimates from Consumer Expenditure Survey, 1984 to 2008.
Data accessed on line at: http://www.bls.gov/cex/data.htm

Average Out-of-Pocket Spending for Medical Services, Nonelderly, Uninsured All Year



Source: Kaiser Family Foundation estimates from Medical Expenditure Panel Survey, 1997 to 2008

Incorporating Assets into Calculations of Financial Burdens for Health

Jessica Banthin

And

Didem Bernard

Views expressed in this presentation are those of the authors and no official endorsement by the CBO, AHRQ, or HHS is intended or should be inferred.

Previous estimates: elderly, non-elderly analyzed separately

Different thresholds applied

- Non-elderly population
  - 10% and 20% thresholds (Banthin, Bernard, *JAMA,* 2006)
  - 5%, 10% thresholds (Banthin, Cunningham, Bernard, *Health Affairs*, 2008)
- Elderly population
  - 20% and 40% thresholds (Selden, Banthin, *Medical Care*, 2003)

Why differentiate between elderly and non-elderly?

- Younger families have
  - Higher incomes
  - Higher expenses (work, children)
  - Expected to save for future retirement
  - Better health
- Older families have
  - Lower incomes (retired)
  - Fewer expenses (no work, children)
  - Worse health
  - Expected to draw down assets in later years

Two questions

- How is a reasonable threshold defined for both elderly and non-elderly populations that indicates high burden (or high medical risk)?
- How do we incorporate the accumulated savings of retired families into our measure of resources available for financing health care expenditures?

Self-employed

- Do the self-employed have such high levels of assets (including business assets) that they warrant a separate approach in measuring health care burdens?

Data and Methods

- Medical Expenditure Panel Survey
- Pooled Panels 10-12, 2005-2008
- Information on income, assets, out of pocket expenditures on health care services, out of pocket premium payments

Construction of OOP Burden

- Followed methods of previous papers
- Family level concept
- Numerator = sum of all family member OOP spending on services and premiums
- Denominator = family income
- Burden is the share of family income spent on medical care
- We do not truncate resulting values

Adding 5% of Net Asset Value to Income

- We add 5% of total net family assets to family income for elderly families only
- No adjustment for non-elderly
- Better measure of total resources available to elderly individuals for medical care

Table 1: Median and 75th percentile OOP burdens elderly vs non-elderly, 2008

	Elderly median	Elderly 75th pctl	Non-Elderly median	Non-Elderly 75th pctl
All	10.7	20.7	2.9	7.0
Poor	13.5	58.0	2.7	19.1
Low Income	16.5	28.0	2.6	9.0
Middle Income	13.2	20.3	3.7	8.1
High Income	6.4	10.5	2.6	5.0

Table 2. Distribution of Total Net Family Assets, Elderly vs Non-elderly, 2008$

Percentile	Elderly	Non-elderly
10	-8	-300
20	5,000	0
30	37,400	1,500
40	88,200	6,400
50	146,300	20,200
60	215,100	53,800
70	298,600	111,100
80	450,600	210,200
90	796,600	432,100
95	1,226,400	729,100

Table 2A: Median Total Net Assets by Poverty Group, Elderly v Non-elderly, 2008$

Poverty Group	Elderly	Non-Elderly
All groups	146,300	20,200
Poor	20,700	0
Low Income	77,300	2,300
Middle Income	136,500	15,500
High Income	355,400	133,800

Table 3A. Percent of individuals with high OOP burdens, elderly v non-elderly, 2008

Poverty Group		10% of family income	20% of family income
All	Elderly	52.5	26.1
	Non-elderly	17.0	7.7
Poor	Elderly	54.1	43.5
	Non-Elderly	33.2	24.5
Low Income	Elderly	70.8	40.7
	Non-Elderly	22.4	10.2
Middle Income	Elderly	63.5	26.0
	Non-elderly	18.8	5.9
High Income	Elderly	27.4	7.8
	Non-elderly	7.5	2.1

Table 3B. Family income before and after addition of 5% of assets, 2008

Poverty Group		Family Income	Adjusted Family Income
All	Elderly	41,600	57,600
	Non-elderly	53,800	
Poor	Elderly	6,600	12,000
	Non-Elderly	7,300	
Low Income	Elderly	15,400	22,600
	Non-Elderly	20,500	
Middle Income	Elderly	30,300	41,800
	Non-elderly	40,100	
High Income	Elderly	85,200	116,200
	Non-elderly	96,100	

Table 3C. Percent of individuals with high OOP burdens, elderly v non-elderly, 2008

Poverty Group		10% of adjusted family income	20% of adjusted family income
All	Elderly	40.0	16.5
	Non-elderly	17.0	7.7
Poor	Elderly	43.5	28.6
	Non-Elderly	33.2	24.5
Low Income	Elderly	57.4	26.6
	Non-Elderly	22.4	10.2
Middle Income	Elderly	48.5	15.4
	Non-elderly	18.8	5.9
High Income	Elderly	17.0	4.9
	Non-elderly	7.5	2.1

Table 3D. Percent of individuals with high OOP burdens, elderly v non-elderly, 2008

Poverty Group	Non-elderly 10% of family income	Elderly 20% of adjusted family income
All	17.0	16.5
Poor	33.2	28.6
Low Income	22.4	26.6
Middle Income	18.8	15.4
High Income	7.5	4.9

Self-employed vs non-self-employed

- Slightly higher burdens
- Higher levels of assets
- Higher average incomes

Table 4: Median and 75th percentile OOP burdens self-employed vs non, 2008

	Self-employed median	Self-employed 75th pctl	Non-S/E median	Non-S/E 75th pctl
All	3.3	8.1	2.9	6.8
Poor	2.4	22.6	2.7	19.0
Low Income	3.3	12.6	2.5	8.6
Middle Income	4.2	9.9	3.7	7.9
High Income	3.0	6.6	2.5	4.8

Table 5A. Distribution of Total Net Family Assets, Self-employed v Non-S/E, 2008$

Percentile	Self-employed	Non-S/E
10	-100	-600
20	5,300	0
30	29,100	800
40	71,500	4,800
50	131,800	13,800
60	211,100	39,500
70	333,700	86,900
80	543,700	173,400
90	985,400	357,900
95	1,702,500	581,300

Table 5B. Distribution of Net Family Business Assets, Self-employed v Non-S/E, 2008$

Percentile	Self-employed	Non-S/E
10	-1800	-
20	-1500	-
30	-1300	-
40	-1100	-
50	-800	-
60	-600	-
70	-300	-
80	-40	-
90	213,600	-
95	468,800	-

Table 6. Percent of individuals with high OOP burdens, self-employed v non-S/E, 2008

Poverty Group		10% of family income	20% of family income
All	Self-employed	20.1	7.6
	Non-S/E	16.6	7.7
Poor	Self-employed	33.2	27.3
	Non-S/E	33.2	24.3
Low Income	Self-employed	29.6	15.1
	Non-S/E	21.5	9.6
Middle Income	Self-employed	25.0	7.0
	Non-S/E	17.9	5.7
High Income	Self-employed	12.2	2.6
	Non-S/E	6.5	1.9

Conclusion

- Further work needed to refine method of incorporating assets into income for elderly families
- Defining different thresholds for elderly vs. non-elderly age groups is another approach worth consideration
- Self-employed do not warrant special methods for assessing their medical care risk

The Measurement of Health Care Spending Risk in the Health and Retirement Study

Michael D. Hurd
RAND, NBER, NETSPAR, MEA

Health and Retirement Study (HRS)

Interviews about 20,000 persons every two years in panel since 1992…10 waves on original sample

New cohorts added in 1998, 2004, 2010

Approximately age 51 or older plus spouses

Initial sample from community

- Follows respondents into nursing home
- After a few years represents nursing home population

Health and Retirement Study (HRS)

Considerable effort to measure income and wealth, including pensions.

Matches CPS income very well
Matches Survey of Consumer Finances pretty well expect at top.

Linked to Social Security records

HRS additional content

- labor market activity
- family linkages
- health conditions including cognition
- use of health care services
- out-of-pocket spending for health care services
- formal and informal help
  - who gives care: spouse, daughter etc or paid
  - out-of-pocket cost if paid
- linked at individual level to Medicare data
- etc…

Out-of-pocket spending from HRS core interview

"Did you have any nights in hospital?" (last two years)
If "yes" were all costs paid by insurance?

If "no" what were out-of-pocket costs?

- Hospital
- Nursing home
- Doctor
- Dentist
- Outpatient surgery
- Average monthly prescription drugs
- Home health care
- Special services/facilities (adult day care etc.)

HRS out-of-pocket spending compared with MEPS and MCBS

Standardize on age 75-79

Annual per person out-of-pocket spending by non-institutionalized population. Age 75-79. Year 2003 (HRS 2004)

	n	mean	p50	p90	p95	p99
HRS	*1982*	2387	880	4075	6015	21650
MCBS	*1934*	1658	923	3373	5038	11908
MEPS	*762*	1626	887	3553	5016	9826

HRS has higher mean due to large values above median. Due to prescription drug costs.

Measurement of prescription drug costs is difficult

Improved in HRS 2006 and later

Non-drug out-of-pocket spending for health care

Annual per person non-drug out-of-pocket spending by non-institutionalized population. Age 75-79. Year 2003.

	Mean	P90	P95	P99
HRS	661	1500	2424	6600
MEPS	695	1451	2936	4961
MCBS	1104	2390	4100	10999

HRS and MEPS comparable except at very top

But need institutionalized population also

Annual per person out-of-pocket spending by non-institutionalized and institutionalized population. Age 75-79. Year 2003

	N	mean	p50	p75	p90	p95	p99
HRS	*2024*	2566	892	2080	4200	6426	30050
MCBS	*2016*	2136	946	1924	3897	6189	29939

HRS and MCBS very close. But HRS has much higher prescriptions drug costs.

Annual per person non-drug out-of-pocket spending by non-institutionalized and institutionalized population. Age 75-79. Year 2003

	N	mean	p50	p75	p90	p95	p99
HRS	*2024*	828	150	542	1500	2500	12861
MCBS	*2016*	1599	393	1040	2935	5403	29058

Conclusion about measurement in HRS

Non-institutionalized population

HRS 2004 compared with 2003 MEPS and 2003 MCBS

Total in HRS higher due to much higher drug costs in right tail of distribution

Non-drug out-of-pocket spending

HRS and MEPS similar; MCBS considerably higher

Non-institutionalized and institutionalized population

HRS 2004 compared with 2003 MCBS

Total spending similar

Non-drug out-of-pocket spending considerably higher in MCBS

Persistence of spending over time

Percent distribution of out-of-pocket spending in wave t conditional on spending quartile in wave t-1, HRS waves 1998, 2000, 2002 and 2004. Single persons. Panel

	quartile in wave t				
quartile in wave t-1	lowest	2nd	3rd	highest	all
lowest	58.8	20.8	11.8	8.7	100.0
2nd	19.9	41.2	24.7	14.1	100.0
3rd	9.3	23.9	39.9	26.9	100.0
highest	8.6	12.3	24.7	54.5	100.0

Percent distribution of spending in wave t conditional on spending quartile in wave t-1, HRS waves 1998, 2000, 2002 and 2004. Married persons. Panel

quartile in wave t-1	quartile in wave t				
	lowest	2nd	3rd	highest	all
lowest	47.1	26.4	15.6	11.0	100.0
2nd	22.2	33.0	26.1	18.8	100.0
3rd	13.3	24.1	34.3	28.2	100.0
highest	10.9	17.4	26.5	45.1	100.0

Application: economic preparation for retirement with and without health care spending risk

Economic Preparation for Retirement

Michael D. Hurd

RAND, NBER, NETSPAR and MEA

Susann Rohwedder

RAND and NETSPAR

Initial population 66-69

Individuals and couples follow life-cycle spending paths estimated from panel spending data

- Paths differ by marital status
- Differ by education level
- Individual or couples life-cycle spending path anchored at observed initial spending

Can their economic resources support that path with high probability?

Account for

- Stochastic mortality: differs by sex, age, education and marital status
- Taxes
- Returns-to-scale in consumption
  - At death of one spouse surviving spouse reduces spending, follows spending path of single persons
- Level and risk of out-of-pocket spending for health care
  - Serial correlation that varies with sex, age, education and marital status (estimated from MCBS)

Simulation of consumption and out-of-pocket spending.

Individual or couple is adequately prepared if chances of dying with positive wealth are 95% or greater.

Allow for 10% reduction in initial spending.

Couples. 66-69. Rest-of-lifetime resources (thousands 2008$)

	N	initial wealth	PV future earnings	PV annuities	Total
< high-school	187	284.6	14.0	265.4	564
high-school	474	499.2	16.5	395.7	911.4
some college	223	1,024.5	22.7	477.6	1524.8
college +	208	1,406.7	56.7	651.0	2114.4
all	1,092	742.6	25.0	438.7	1206.3

Couples. 66-69. Rest-of-lifetime spending (thousands 2008$)				
	PV taxes	PV consumption	PV total spending	Excess resources
< high-school	27.9	321.2	349.1	214.9
high-school	75.7	441.9	517.6	393.8
some college	227.9	595.9	823.8	701.0
college +	319.2	880.4	1199.6	914.8
all	145	536.2	681.2	525.1

Economic preparation for retirement with and without health–care spending risk.

Mean spending for health care unchanged

Percent of single persons age 66-69 adequately prepared for retirement, with and without health care spending risk

	without	with
Less than high-school	43.3	36.0
High-school	66.9	62.1
Some college	63.6	53.8
College and above	74.2	68.5
All	61.1	54.5

Just 29% of single women lacking high school adequately prepared.

Percent of married persons age 66-69 adequately prepared for retirement, with and without health care spending risk

	without	with
Less than high-school	72.7	70.1
High-school	82.3	79.5
Some college	86.1	80.7
College and above	89.4	88.5
All	82.8	79.9

Conclusions

Health care spending risk has noticeable effects but possibly not as great as expected

First-order serial correlation may not allow enough life-time risk.

- Have enough data (almost) to estimate nonparametrically rest-of-lifetime risk
  - E.g. Age 61 in 1992 will be 81 in next HRS wave

Financial Burden of Medical Care Among the Elderly in Transitioning to Long-Term Care: Estimates from the National Long Term Care Survey

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Workshop on Developing a Measure of Medical Care Economic Risk
National Academies Keck Center, Washington, DC
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HIPAA Activity-of-Daily-Living Trigger

Requires that the individual is unable to perform without "substantial assistance" (hands-on or standby) from another individual at least 2 out of 6 Activities of Daily Living (ADLs):

bathing,	continence,
dressing,	eating,
toileting,	transferring

for at least 90 days due to a loss of functional capacity.

HIPAA Cognitive-Impairment Trigger

Requires that the individual requires "substantial supervision" to protect him/herself from threats to health and safety due to "severe cognitive impairment," defined as:

A loss or deterioration in intellectual capacity that is

(a) comparable to (and includes) Alzheimer's disease and similar forms of irreversible dementia, and

(b) measured by clinical evidence and standardized tests that reliably measure impairment in the individual's

(i) short-term or long-term memory,

(ii) orientation as to people, places, or time, and

(iii) deductive or abstract reasoning.

National Long Term Care Survey (NLTCS)

Purpose: To measure disability and use of LTC among the non-insured U.S. elderly (age 65+) at multiple points in time beginning in 1982, and every fifth year from 1984 to 2004.

Cumulative *n* = ~49,000.

- Total *n* = 15,993 in 2004,
- with 6,171 detailed in-person interviews for persons who met various screening criteria, and 9,822 “screen-outs.”

Disability included

- ADL and IADL limitations (3+ months)
- Cognitive impairment (CI)
- Institutionalization.

NLTCS IADLs

1. Doing laundry
2. Doing light housework
3. Getting around outdoors
4. Going places outside of walking distances
5. Making telephone calls
6. Managing money
7. Preparing meals
8. Shopping for groceries
9. Taking medications

NLTCS ADLs

1. Bathing
2. Continence
3. Dressing
4. Eating
5. Toileting
6. Transferring (in/out bed)
7. Inside mobility
   – *not included in the HIPAA ADL Trigger*

Mean and Standard Deviation of Current Age by HIPAA Disability Status -- Age 65 and Above, United States 2004, by Sex

Item & Sex	HIPAA Trigger*				Total Population
	Nondisabled	ADL Only	CI Only	ADL & CI	
Mean Age					
Males	75.2	79.5	82.5	81.7	75.7
Females	76.3	82.1	84.1	86.0	77.3
Standard Deviation					
Males	6.7	7.7	7.4	7.8	6.9
Females	7.1	8.6	7.9	7.3	7.7

*Note: The CI trigger was based on 3+ errors on the SPMSQ.

Source: Authors' calculations based on the 2004 NLTCS.

Number and Percent of Persons Meeting Either HIPAA Trigger, United States 2004, Unisex, Age 65 and Above, by Age

	Meets Either HIPAA Trigger				
Age	No	Yes	Total	Percent	Std Error (Pct)
65-69	8,249,343	239,296	8,488,639	2.8%	0.3%
70-74	8,353,574	383,573	8,737,147	4.4%	0.4%
75-79	7,023,298	600,636	7,623,934	7.9%	0.5%
80-84	5,230,199	798,648	6,028,847	13.2%	0.7%
85-89	2,602,925	849,078	3,452,003	24.6%	1.2%
90-94	951,734	530,500	1,482,233	35.8%	2.0%
95+	178,647	253,875	432,523	58.7%	3.9%
Total	32,589,719	3,655,606	36,245,325	10.1%	0.2%

Note: HIPAA Triggers are 2+ ADL Impariments or Severe Cognitive Impairment

Source: Authors' calculations based on the 2004 NLTCS.

Number and Percent of Persons Meeting HIPAA ADL Trigger, United States 2004, Unisex, Age 65 and Above, by Age

	Meets HIPAA ADL Trigger				
Age	No	Yes	Total	Percent	Std Error (Pct)
65-69	8,302,057	186,582	8,488,639	2.2%	0.3%
70-74	8,404,035	333,111	8,737,147	3.8%	0.3%
75-79	7,139,472	484,462	7,623,934	6.4%	0.5%
80-84	5,389,370	639,477	6,028,847	10.6%	0.7%
85-89	2,782,747	669,256	3,452,003	19.4%	1.1%
90-94	1,058,680	423,553	1,482,233	28.6%	1.9%
95+	211,606	220,917	432,523	51.1%	4.0%
Total	33,287,967	2,957,359	36,245,325	8.2%	0.2%

Note: HIPAA Triggers are 2+ ADL Impariments or Severe Cognitive Impairment

Source: Authors' calculations based on the 2004 NLTCS.

Number and Percent of Persons Meeting HIPAA CI Trigger, United States 2004, Unisex, Age 65 and Above, by Age

	Meets HIPAA CI Trigger				
Age	No	Yes	Total	Percent	Std Error (Pct)
65-69	8,384,960	103,679	8,488,639	1.2%	0.2%
70-74	8,539,577	197,570	8,737,147	2.3%	0.3%
75-79	7,247,763	376,171	7,623,934	4.9%	0.4%
80-84	5,482,051	546,796	6,028,847	9.1%	0.6%
85-89	2,840,985	611,018	3,452,003	17.7%	1.1%
90-94	1,086,664	395,569	1,482,233	26.7%	1.9%
95+	239,316	193,207	432,523	44.7%	3.9%
Total	33,821,316	2,424,010	36,245,325	6.7%	0.2%

Note: HIPAA Triggers are 2+ ADL Impariments or Severe Cognitive Impairment

Source: Authors' calculations based on the 2004 NLTCS.

Distribution of HIPAA Triggers by ADL/IADL Disability Level, United States 2004, Unisex, Age 65 and Above

ADL/IADL Disability Level**	HIPAA Trigger*					
	Neither	CI only	ADL only	ADL & CI	Total	s.e.(Tot. Pct.)
			Number of Persons			
Nondisabled	29,675,587	**64,014**			29,739,601	
IADL/Inside Mobility	2,215,298	**382,542**			2,597,840	
1 ADL	698,834	**251,692**			950,526	
2 ADLs			268,546	202,027	470,573	
3 ADLs			231,219	192,294	423,514	
4 ADLs			261,289	257,720	519,009	
5 ADLs			294,215	440,844	735,060	
6 ADLs			176,327	632,877	809,204	
Total	32,589,719	**698,247**	1,231,597	1,725,762	36,245,325	
			Percent Distribution			
Nondisabled	81.9%	**0.2%**			82.1%	0.3%
IADL/Inside Mobility	6.1%	**1.1%**			7.2%	0.2%
1 ADL	1.9%	**0.7%**			2.6%	0.1%
2 ADLs			0.7%	0.6%	1.3%	0.1%
3 ADLs			0.6%	0.5%	1.2%	0.1%
4 ADLs			0.7%	0.7%	1.4%	0.1%
5 ADLs			0.8%	1.2%	2.0%	0.1%
6 ADLs			0.5%	1.7%	2.2%	0.1%
Total	89.9%	**1.9%**	3.4%	4.8%	100.0%	
s.e.(Tot. Pct.)	0.3%	**0.1%**	0.2%	0.2%		

* Note: The CI trigger was based on 3+ errors on the SPMSQ.

** Note: Institutional residents were treated as IADL disabled if no ADL disabilities were reported.

Source: Authors' calculations based on the 2004 NLTCS.

Distribution of HIPAA Triggers by SPMSQ Score, United States 2004, Unisex, Age 65 and Above

	HIPAA Trigger*					
SPMSQ Score	Neither	CI only	ADL only	ADL & CI	Total	s.e.(Tot. Pct.)
			Number of Persons			
Missing	24,546,440	**149,057**	302,665	1,100,733	26,098,896	
0-2 Errors	7,875,225		928,932		8,804,156	
3+ Errors	168,054	**549,190**		625,029	1,342,273	
Total	32,589,719	**698,247**	1,231,597	1,725,762	36,245,325	
			Percent Distribution			
Missing	67.7%	**0.4%**	0.8%	3.0%	72.0%	0.4%
0-2 Errors	21.7%		2.6%		24.3%	0.4%
3+ Errors	0.5%	**1.5%**		1.7%	3.7%	0.2%
Total	89.9%	**1.9%**	3.4%	4.8%	100.0%	
s.e.(Tot. Pct.)	0.3%	**0.1%**	0.2%	0.2%		

* Note: The CI trigger was based on 3+ errors on the SPMSQ.

Source: Authors' calculations based on the 2004 NLTCS.

Unisex and Sex-Specific Disability Transition Rates (%)

Initial Disability Status	Disability Status 5 Years Later						Sample Size
	I. Non-disabled	II. Mild/ Moderate Disability	III. HIPAA ADL only	IV. HIPAA CI only	V. HIPAA ADL + CI	VI. Dead	
Unisex							
I. Nondisabled	**66.3**	9.5	3.6	1.3	2.5	16.7	18,683
II. Mild/moderate disability	7.0	**34.0**	10.9	3.5	8.4	36.2	5,551
III. HIPAA ADL only	1.1	7.7	**18.2**	0.8	8.5	63.8	2,931
IV. HIPAA CI only	3.4	10.2	5.8	**10.6**	24.9	45.1	783
V. HIPAA ADL + CI	---	1.2	3.6	1.0	**22.8**	71.1	1,953
Males							
I. Nondisabled	**65.2**	7.1	3.0	1.3	1.7	21.8	8,096
II. Mild/moderate disability	8.6	**27.0**	8.9	3.2	7.4	44.9	1,658
III. HIPAA ADL only	---	7.0	**14.0**	---	9.4	67.1	938
IV. HIPAA CI only	---	9.3	5.0	**6.4**	18.6	53.4	237
V. HIPAA ADL + CI	---	---	---	---	**16.1**	79.3	529
Females							
I. Nondisabled	**67.3**	11.3	4.1	1.3	3.1	12.9	10,587
II. Mild/moderate disability	6.3	**37.0**	11.7	3.6	8.9	32.5	3,893
III. HIPAA ADL only	0.9	8.0	**20.4**	0.6	7.9	62.2	1,993
IV. HIPAA CI only	---	10.7	6.2	**12.7**	27.9	41.0	546
V. HIPAA ADL + CI	---	1.2	4.3	1.1	**25.4**	67.9	1,424

Note: "---" denotes suppressed cell with fewer than 11 sample persons. Suppression was applied only to the printed tables; the actual values were used in subsequent analyses.

Source: Stallard (2011), based on 1984-1994 NLTCS.

LTC Intensity and Cost Parameters for Disabled Persons, by Disability Group, Unisex

Item	Disability Group			
	Mild/ Moderate Disability	HIPAA ADL only	HIPAA CI only	HIPAA ADL + CI
For Services Provided in a Nursing Home				
Percent Residing in Nursing Home	3.8%	39.3%	13.4%	64.0%
Annual Cost of Nursing Home Services Per Capita	**$1,482**	**$24,146**	**$4,842**	**$45,241**
For Services Provided in the Community				
Percent Residing in Community	96.2%	60.7%	86.6%	36.0%
Percent with One or More Community Helpers	78.9%	60.5%	74.7%	36.0%
Average Annual Hours of Community Care Per Capita	639	1703	805	1427
Percent with Paid Community Helpers	23.1%	26.1%	20.3%	15.2%
Average Annual Hours of Paid Community Care Per Capita	95	418	96	359
Average Annual Cost of Paid Community Care Per Capita	**$1,320**	**$5,754**	**$1,320**	**$5,050**
Percent with Out-Of-Pocket (OOP) Payments for Community Care	15.5%	13.7%	11.6%	8.2%
Average Annual Cost of OOP Payments for Community Care Per Capita	**$402**	**$1,643**	**$598**	**$1,360**
Average Annual Hours of Unpaid Community Care Per Capita	544	1286	709	1068

Note: All costs were converted from nominal 1994 dollars to constant 2010 dollars using an inflation factor of 1.290 based on the CPI-U *Hospital and Related Services* Index (inflation factor = 1.103 for Sept. 1994 to Dec. 1996) and the CPI-U *Nursing Homes and Adult Day Services* Index (inflation factor = 1.770 for Dec. 1996 to CY 2010).
Source: Based on Stallard (2011).

LTC Intensity and Cost Parameters for Disabled Persons, by Disability Group, Males

Item	Disability Group			
	Mild/ Moderate Disability	HIPAA ADL only	HIPAA CI only	HIPAA ADL + CI
For Services Provided in a Nursing Home				
Percent Residing in Nursing Home	4.1%	30.4%	11.9%	55.9%
Annual Cost of Nursing Home Services Per Capita	**$1,496**	**$18,747**	**$4,564**	**$34,021**
For Services Provided in the Community				
Percent Residing in Community	95.9%	69.6%	88.1%	44.1%
Percent with One or More Community Helpers	80.8%	69.1%	73.3%	44.1%
Average Annual Hours of Community Care Per Capita	828	2001	912	1689
Percent with Paid Community Helpers	15.3%	25.0%	18.8%	14.8%
Average Annual Hours of Paid Community Care Per Capita	69	349	89	267
Average Annual Cost of Paid Community Care Per Capita	**$1,051**	**$4,945**	**$1,265**	**$3,875**
Percent with Out-Of-Pocket (OOP) Payments for Community Care	10.1%	12.4%	11.0%	8.5%
Average Annual Cost of OOP Payments for Community Care Per Capita	**$235**	**$772**	**$405**	**$1,254**
Average Annual Hours of Unpaid Community Care Per Capita	759	1652	823	1422

Note: All costs were converted from nominal 1994 dollars to constant 2010 dollars using an inflation factor of 1.290 based on the CPI-U *Hospital and Related Services* Index (inflation factor = 1.103 for Sept. 1994 to Dec. 1996) and the CPI-U *Nursing Homes and Adult Day Services* Index (inflation factor = 1.770 for Dec. 1996 to CY 2010).
Source: Based on Stallard (2011).

LTC Intensity and Cost Parameters for Disabled Persons, by Disability Group, Females

Item	Disability Group			
	Mild/ Moderate Disability	HIPAA ADL only	HIPAA CI only	HIPAA ADL + CI
For Services Provided in a Nursing Home				
Percent Residing in Nursing Home	3.7%	43.5%	14.2%	67.0%
Annual Cost of Nursing Home Services Per Capita	**$1,468**	**$26,727**	**$5,049**	**$49,296**
For Services Provided in the Community				
Percent Residing in Community	96.3%	56.5%	85.8%	33.0%
Percent with One or More Community Helpers	78.2%	56.4%	75.4%	33.0%
Average Annual Hours of Community Care Per Capita	558	1562	743	1329
Percent with Paid Community Helpers	26.5%	26.6%	21.0%	15.3%
Average Annual Hours of Paid Community Care Per Capita	107	451	99	393
Average Annual Cost of Paid Community Care Per Capita	**$1,440**	**$6,137**	**$1,347**	**$5,487**
Percent with Out-Of-Pocket (OOP) Payments for Community Care	17.8%	14.3%	11.9%	8.1%
Average Annual Cost of OOP Payments for Community Care Per Capita	**$474**	**$2,069**	**$697**	**$1,403**
Average Annual Hours of Unpaid Community Care Per Capita	452	1111	643	937

Note: All costs were converted from nominal 1994 dollars to constant 2010 dollars using an inflation factor of 1.290 based on the CPI-U *Hospital and Related Services* Index (inflation factor = 1.103 for Sept. 1994 to Dec. 1996) and the CPI-U *Nursing Homes and Adult Day Services* Index (inflation factor = 1.770 for Dec. 1996 to CY 2010).
Source: Based on Stallard (2011).

Lifetime LTC Costs – Age 65+

Expected lifetime costs (constant 2010 $s) of LTC services at age 65 and above:

Unisex $89K; males $44K; females $124K.

Overwhelming majority (92%, both sexes) of LTC costs incurred during episodes of severe disability that meet HIPAA ADL/CI triggers.

Remaining costs (8%) incurred during episodes of mild/moderate disability.

Source: Stallard (*North American Actuarial Journal* 15(1):32–58, 2011).

Estimated Number of FFS Community Residents and Average Annual Medicare HCC Payments (excluding ESRD, LTI, and Hospice), by Type of Enrollment and HIPAA Triggers, United States 2004, Unisex, Age 65 and Above

	HIPAA Trigger*				
Type of Enrollment	Neither	CI only	ADL only	ADL & CI	Total
			Number of Persons		
Medicare Only	23,887,016	413,391	682,294	642,054	25,624,756
Dual Eligibles	2,275,308	117,867	212,469	257,867	2,863,511
Total	26,162,324	531,257	894,763	899,922	28,488,267
			Average Annual Medicare Program Payments (2010 $'s)		
Medicare Only	8,174	14,090	20,039	19,267	8,761
Dual Eligibles	10,175	11,270	19,558	23,831	11,954
Total	8,344	13,500	19,919	20,625	9,071

* Note: The CI trigger was based on 3+ errors on the SPMSQ.

Source: Authors' calculations based on the 2004 NLTCS.

Estimated Number of FFS Community Residents and Average Annual Medicare HCC Payments (excluding ESRD, LTI, and Hospice), by Type of Enrollment and HIPAA Triggers, United States 2004, Males, Age 65 and Above

	HIPAA Trigger*				
Type of Enrollment	Neither	CI only	ADL only	ADL & CI	Total
			Number of Persons		
Medicare Only	10,566,538	146,408	277,627	217,877	11,208,450
Dual Eligibles	688,241	45,361	44,135	68,101	845,838
Total	11,254,779	191,769	321,763	285,977	12,054,289
			Average Annual Medicare Program Payments (2010 $'s)		
Medicare Only	8,996	17,062	20,043	24,783	9,559
Dual Eligibles	10,957	14,815	24,882	27,024	12,981
Total	9,110	16,551	20,739	25,357	9,787

* Note: The CI trigger was based on 3+ errors on the SPMSQ.

Source: Authors' calculations based on the 2004 NLTCS.

Estimated Number of FFS Community Residents and Average Annual Medicare HCC Payments (excluding ESRD, LTI, and Hospice), by Type of Enrollment and HIPAA Triggers, United States 2004, Females, Age 65 and Above

	HIPAA Trigger*				
Type of Enrollment	Neither	CI only	ADL only	ADL & CI	Total
			Number of Persons		
Medicare Only	13,320,478	266,983	404,667	424,178	14,416,305
Dual Eligibles	1,587,067	72,505	168,334	189,766	2,017,673
Total	14,907,545	339,488	573,000	613,944	16,433,978
			Average Annual Medicare Program Payments (2010 $'s)		
Medicare Only	7,529	12,495	20,036	16,651	8,145
Dual Eligibles	9,849	9,013	18,230	22,700	11,537
Total	7,772	11,802	19,487	18,559	8,550

* Note: The CI trigger was based on 3+ errors on the SPMSQ.

Source: Authors' calculations based on the 2004 NLTCS.

Estimated Number of FFS Community Residents and Average Annual Medicare HCC Payments (excluding ESRD, LTI, and Hospice), by Type of Enrollment and HIPAA Triggers, United States 2004, Unisex, Age 65–74

	HIPAA Trigger*				
Type of Enrollment	Neither	CI only	ADL only	ADL & CI	Total
			Number of Persons		
Medicare Only	11,833,668	40,682	194,340	78,006	12,146,696
Dual Eligibles	1,232,575	38,684	82,867	54,929	1,409,055
Total	13,066,243	79,367	277,207	132,935	13,555,752
			Average Annual Medicare Program Payments (2010 $'s)		
Medicare Only	7,028	12,101	19,051	17,357	7,270
Dual Eligibles	8,933	11,348	23,973	18,208	10,174
Total	7,204	11,758	20,597	17,710	7,564

* Note: The CI trigger was based on 3+ errors on the SPMSQ.

Source: Authors' calculations based on the 2004 NLTCS.

Estimated Number of FFS Community Residents and Average Annual Medicare HCC Payments (excluding ESRD, LTI, and Hospice), by Type of Enrollment and HIPAA Triggers, United States 2004, Unisex, Age 75–84

	HIPAA Trigger*				
Type of Enrollment	Neither	CI only	ADL only	ADL & CI	Total
			Number of Persons		
Medicare Only	9,224,448	174,787	260,715	260,724	9,920,674
Dual Eligibles	800,037	37,979	64,911	102,736	1,005,664
Total	10,024,485	212,766	325,627	363,460	10,926,338
			Average Annual Medicare Program Payments (2010 $'s)		
Medicare Only	8,805	12,949	19,648	24,118	9,452
Dual Eligibles	10,429	10,737	19,020	31,940	12,994
Total	8,931	12,607	19,520	26,485	9,765

* Note: The CI trigger was based on 3+ errors on the SPMSQ.

Source: Authors' calculations based on the 2004 NLTCS.

Estimated Number of FFS Community Residents and Average Annual Medicare HCC Payments (excluding ESRD, LTI, and Hospice), by Type of Enrollment and HIPAA Triggers, United States 2004, Unisex, Age 85 and Above

	HIPAA Trigger*				
Type of Enrollment	Neither	CI only	ADL only	ADL & CI	Total
			Number of Persons		
Medicare Only	2,828,901	197,922	227,238	303,324	3,557,385
Dual Eligibles	242,695	41,203	64,691	100,203	448,792
Total	3,071,596	239,125	291,929	403,527	4,006,177
			Average Annual Medicare Program Payments (2010 $'s)		
Medicare Only	11,010	15,614	21,457	15,518	12,142
Dual Eligibles	15,780	11,630	13,808	17,855	15,513
Total	11,381	14,906	19,682	16,105	12,505

* Note: The CI trigger was based on 3+ errors on the SPMSQ.

Source: Authors' calculations based on the 2004 NLTCS.

Thank You!

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Measuring Medical Care Economic Risk: An Assessment of Data Sources

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Background paper prepared for the Workshop on Developing a Measure of Medical Care Economic Risk

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MATHEMATICA
Policy Research, Inc.

Considerations in This Review

- **While the design of a medical care risk index (MCRI) need not be constrained by currently available data, any such measure produced in the next few years must be based almost exclusively on data collected currently**
  - **Adding a modest number of new items to an existing survey is possible**
  - **Funding to support significant additions is not available**
- **The panel sponsor, ASPE, has indicated:**
  - **MCRI should be constructed from variables available in the Current Population Survey Annual Social and Economic Supplement (CPS ASEC) to allow direct comparison to the new supplemental poverty measure (SPM)**
  - **Medical Expenditure Panel Survey (MEPS) should serve as the data source for modeling medical care risk, with results transported to the CPS ASEC through common variables**

Factors Affecting Data Requirements

- **Alternative design choices**
  - Retrospective versus prospective measurement of risk
  - Whether resources include assets or only income
- **Development versus production of the MCRI**
  - Development requires data that, ideally, will support alternative measures and enable evaluation
  - Longitudinal data would be valuable for evaluation and validation—especially with a prospective measure
  - Production requires data to support one, not multiple measures; but timeliness, representativeness, and statistical precision become more important

Measures of Resources

- **CPS ASEC is the official source for estimates of income and poverty for the U.S. population and will also be used to construct the SPM**
  - **Includes official measure of *money* income—used to estimate poverty**
  - **Also provides the measure of *disposable* income that will be used in the SPM**
    - Some components imputed or modeled
    - Medical out-of-pocket expenditures and certain other components were added in 2010
- **CPS ASEC collects no asset data of any kind**
  - **Adding questions to collect, at a minimum, financial assets would be preferable to imputation, but quality of data cannot be assured without careful testing**
  - **Good asset data are most important for people with low income relative to their medical needs/risk**

Measures of Resources cont'd

- MEPS collects sources of income that correspond reasonably closely to CPS concept of money income
  - MEPS income questions follow the federal tax form and include capital gains and state tax refunds, which are not counted in CPS money income
  - Respondents who refer to their tax returns would omit earnings and possibly social security benefits excluded from taxation
- MEPS collects fewer of the expenses that differentiate money income from disposable income; like the CPS, however, MEPS does not capture taxes paid (or EITC received)
- Unlike the CPS, MEPS collects data on assets
  - Assets are divided into six broad types; amounts are collected for all six

Measures of Medical Care Risk

- **CPS ASEC added medical out-of-pocket expenditures in 2010; data compare favorably to MEPS and SIPP despite the more detailed measurement in these other surveys**
- **CPS ASEC collects sources of health insurance coverage in "past year" but no additional information on what expenditures are covered**
- **CPS ASEC also collects basic work and activity limitations and general health status—potentially useful in defining risk groups and matching to MEPS**

Measures of Medical Care Risk cont'd

- **MEPS collects extensive data on:**
  - Health conditions
  - Health status
  - Use of medical services
  - Charges and payments
  - Access to care
  - Health insurance coverage over time
  - Detailed information on what types of care are covered in private health insurance plans
- **MEPS can support retrospective or prospective measures of medical care risk**

Data Quality

- **Limited information on data quality suggests some areas where improvement would be desirable**
- **Despite its overall strength, CPS ASEC income data have notable weaknesses**
  - **Reporting of retirement income other than Social Security is well below SIPP**
  - **SNAP (formerly food stamp) benefits—received by 15 percent of population—may be understated by nearly one-half**
  - **Nonresponse to income questions is high; 30 percent of total income is imputed**
    - If imputation procedures do not account for covariates of medical risk, the MCRI is weakened
- **Limitations of CPS ASEC health insurance measures are well known**

Data Quality cont'd

- Measures of private health plan content, medical service use, and medical out-of-pocket expenditures in MEPS are unique in their detail; MEPS data set the standard, but there is little out there to compare to MEPS
- Because of MEPS' panel design, attrition may be the principal concern; are persons with high medical risk overrepresented among attriters?
- After tracking the estimates from the National Health Interview Survey and CPS ASEC for most of the last decade, MEPS uninsured rates for adults and children rose sharply in 2007 and 2008 while the other surveys showed stable or declining rates

Other Surveys--SIPP

- **Panel on Poverty and Family Assistance viewed SIPP as survey of choice for a new poverty measure**
  - **SIPP had been designed expressly to support policy analysis**
  - **SIPP collected more detailed income data than any other federal survey; quality of these data was almost uniformly high**
  - **SIPP design, with collection of substantial core data in every wave and supplemental topical modules with varying content was ideally suited to a new poverty measure that would require new data but not in every wave**
- **A decade later the view was different**
  - **1996 redesign replaced overlapping panels, critical to consistent cross-sectional representativeness**
  - **Evidence of deterioration in income and asset data emerged**
  - **Timeliness issues and repeated budget/sample cuts detracted from the stability needed to support a key national indicator**

Other Surveys—SIPP cont'd

- **SIPP was terminated in 2007 but then restored in response to objections from users**
  - **2004 panel extended but with sample cut of one-half and without topical modules**
  - **New panel started in 2008; will continue until replaced by a re-engineered SIPP to be fielded in early 2014**
- **Design of re-engineered SIPP**
  - **Annual interviews will replace the three-time yearly interviews**
  - **Event history calendar methods will be used to collect monthly data with 12-month recall**
  - **Most of SIPP core content retained; key items from annual topical modules—such as assets and medical and work-related expenditures—will be added to annual interviews**

Other Surveys—SIPP cont'd

- **Issues in using SIPP for development or initial production of MCRI**
  - **To monitor implementation of health care reform, MCRI must be in production before we see first new SIPP data**
  - **Initial, small sample tests of new design are encouraging, but we cannot fully assess the survey as yet**
  - **Nonoverlapping panels, if maintained, do not address declining representativeness over time with current design**
  - **SIPP's funding history and current budget climate raise concerns about sustained funding**
  - **Current SIPP, with panels longer than MEPS, could play role in evaluation of retrospective but not prospective MCRI**

American Community Survey (ACS)

- Attractive because of large sample size: 2 million households interviewed each year would offer unmatched geographic detail
- Captures similar kinds of content to CPS ASEC but more limited in depth
- Areas where ACS data are richer than CPS ASEC are not relevant to MCRI
- ACS questionnaire will not be open to new items for several years, and contents are restricted by law
- Bottom line: ACS is not a viable option for developing or producing an MCRI

National Health Interview Survey (NHIS)

- NHIS provides sampling frame for MEPS; is larger, and most content released on a more timely basis
- NHIS collects detailed information on health status, which could enrich a prospective measure of risk
- On most other possible components of an MCRI, NHIS data are more limited than MEPS or nonexistent
- Because NHIS provides the frame for MEPS, NHIS data can be linked to MEPS sample records; thus NHIS would add no new content
- Bottom line: NHIS is not a resource for developing or producing an MCRI

Conclusion

- Questions about data sources reduce to what is collected in two surveys: CPS ASEC and MEPS
- MEPS collects essentially all data elements needed to construct alternative versions of MCRI where CPS ASEC is missing critical variables for certain variants
- Yet CPS ASEC will be used to produce the new SPM, to which the MCRI is intended as a companion measure
- Having both measures in the same survey will allow researchers to compare and contrast how families and individuals are classified by the two measures
- Such comparisons may be helpful in establishing the value added by an MCRI

Conclusion cont'd

- **Other advantages of CPS ASEC**
  - **A CPS-based MCRI could be released concurrently or shortly after SPM or 10 to 11 months after end of survey reference period (prior calendar year); MEPS would require an additional year**
  - **CPS ASEC sample size is five times the largest recent MEPS sample**
  - **CPS ASEC sample combines independent, representative samples of the 50 states and DC; state estimates, while lacking in precision, could be important in monitoring implementation of Affordable Care Act**
- **A prospective MCRI would depend on data collected in MEPS; these data would have to lag a year or release of MCRI delayed a year**
- **Data and methodology should be reassessed within a few years of implementation**

For More Information

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