# NASI Roundtable:

## Managing Life & Spending Changes During Retirement
### February 1, 2008

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# Needs and Spending in Retirement: Unraveling the Mystery

- 2006 Call for Papers: What (if any) is the appropriate retirement income replacement ratio or range?
- 2007 Roundtable on Lifecycle model perspectives on retirement needs and spending
- Six papers, lifecycle roundtable summary presented in SOA symposium  in Fall 2007 that address topics such as:
  - Variations in essential, discretionary & unpredictable needs
  - Impact of various sources of retirement income
  - Key factors in changing consumption patterns in retirement
  - Utility of replacement ratio, lifecycle model and other planning approaches
- Today's session goal: Present symposium key findings, open issues

# Hatcher: Retirement (the event) and widowhood impact consumption more than age.

**Figure 2**
**Simulating Consumption over Time**
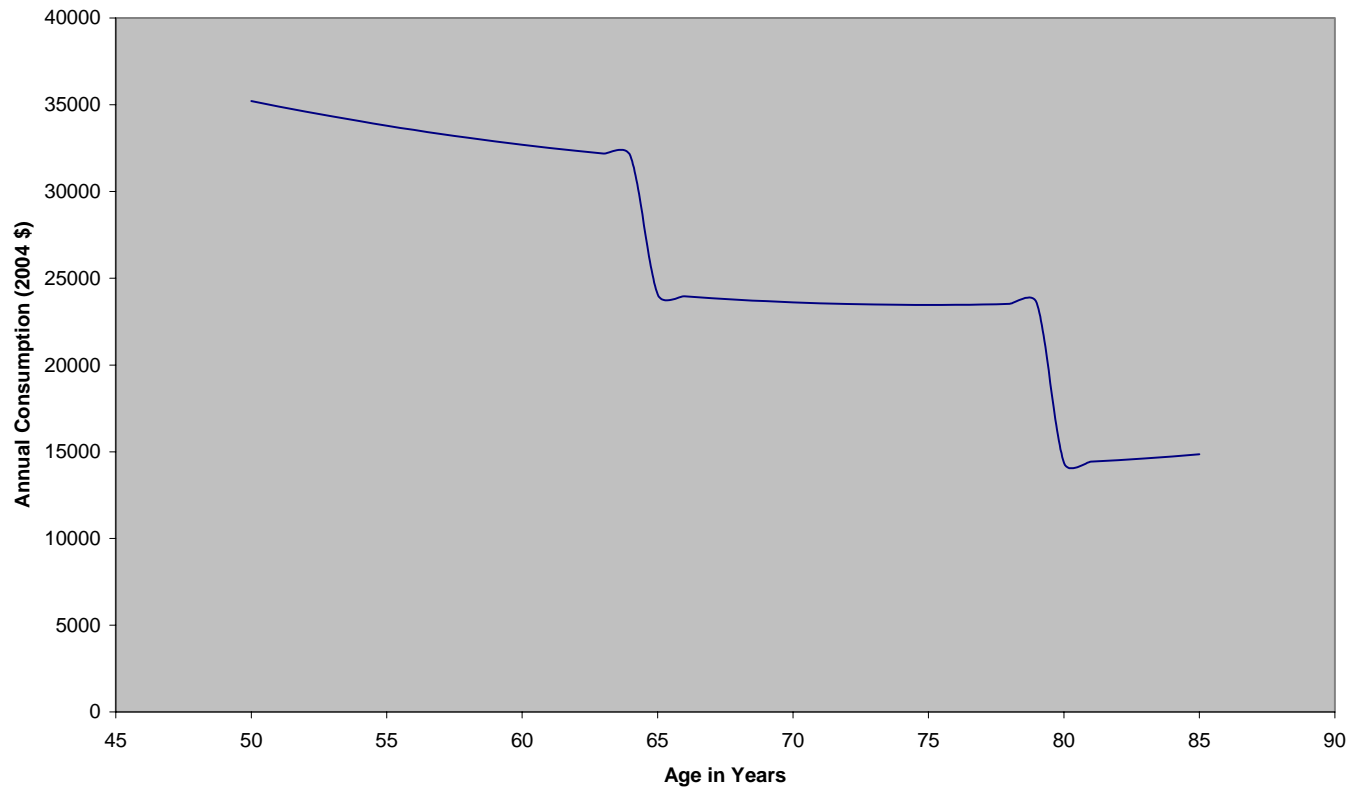
Hatcher: A multivariate regression model is used to test effect of age & retirement status on expenditures (2004 Consumer Expenditure Survey).

- Control variables are household size, and number of dummy variables (urban location, own home, married, dependents under 18, black, HS/college.

- Savings balances are used to test for liquidity constraint.

- A squared term for age and family size is used to test on nonlinear effects on consumption.

# Hatcher: Regression results show retirement effect is negative. The age effect seems positive at younger ages; positive squared term shows effect decreasing with age (net positive).

|  | Model 1 | Model 2 | Model 3 |
|---|---|---|---|
| Retirement Dummy (1 = Retired) | -1958 (412) | -4130 (1517) | -2115 (413) |
| Savings Balances ($) |  |  | -250 (.06) |
| Age of Reference Person (Yrs) | -238.1 (77.5) | -37.8 (14.4) | -18.1 (18.6) |
| Age of Ref. Person Squared (Interactions) | 1.59 (1.31) |  |  |
| Retirement Dummy x Age |  | 31.9 (16.6) |  |
| Retirement Dummy x Savings |  |  | .080 (.024) |
| Age x Savings |  |  | -.0037 (.001) |
| R-squared | .0146 | .0147 | 0.155 |

# Rappaport: Both income & spending decline at retirement, but spending rises as a % income.

**Average Annual Spending per Household**

|  | Annual Income | Annual Spending | Percentage |
|---|---|---|---|
| Younger Boomers (Born 1956-64) | $56,500 | $45,149 | 79.9% |
| Older Boomers (Born 1946-55) | $58,889 | $46,160 | 78.4% |
| Americans Aged 65-74 | $35,118 | $32,243 | 91.8% |
| Americans Aged 75+ | $23,890 | $23,759 | 99.5% |

Sources: Mature Market Institute Demographic Profiles, Americans 65+, 2006 and American Baby Boomers 2006

# Rappaport: Average annual expenditures show housing and health care categories are significant.

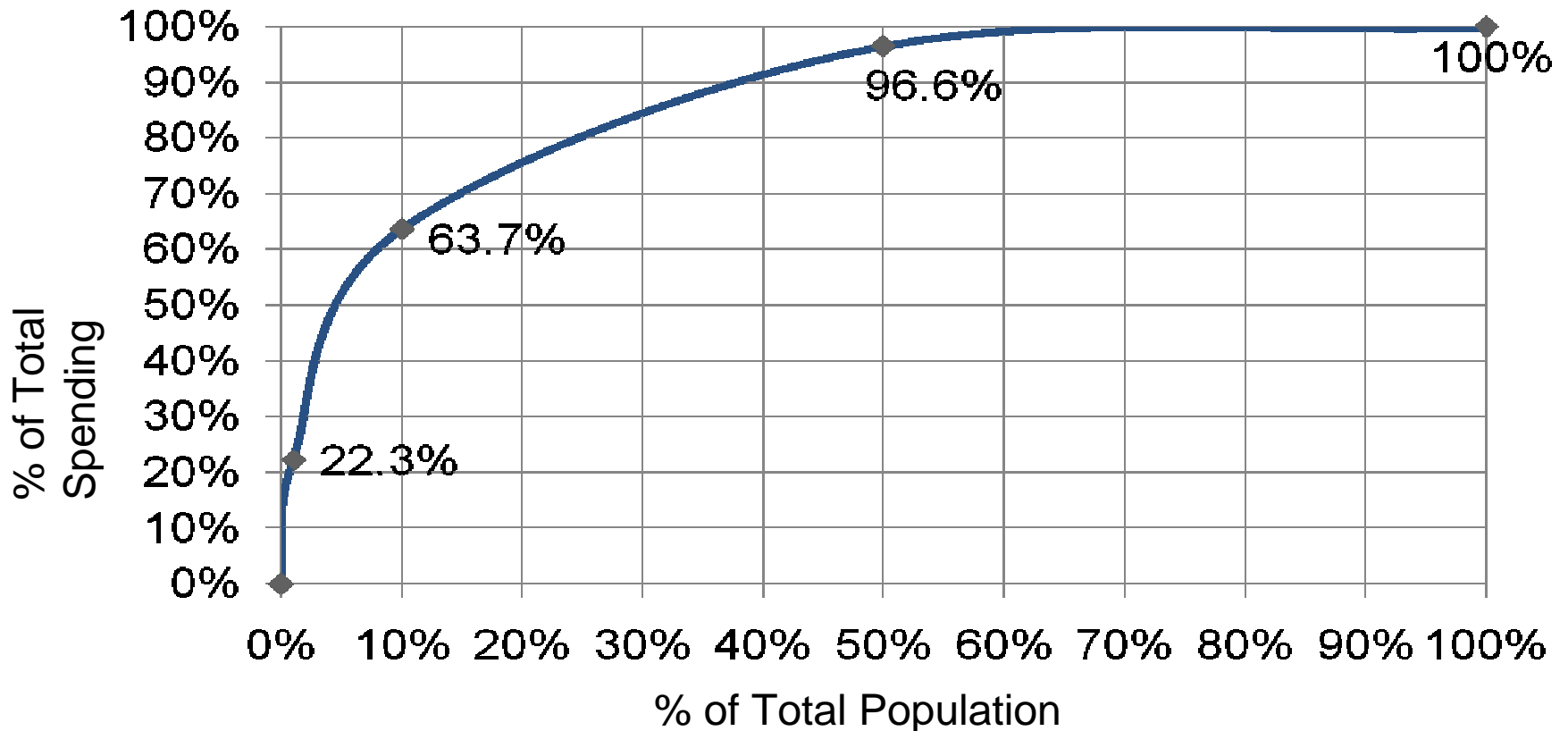| | Annual Amount Spent | | Percentage of Total | |
|---|---|---|---|---|
| | Age 65-74 | Age 75+ | Age 65-74 | Age 75+ |
| Food & Alcohol | $4,803 | $3,446 | 14.9% | 14.5% |
| Housing | $10,052 | $8,257 | 31.2% | 34.8% |
| Apparel and Services | $1,252 | $674 | 3.9% | 2.8% |
| Transportation | $5,731 | $3,178 | 17.8% | 13.4% |
| Health Care | $3,588 | $3,584 | 11.1% | 15.1% |
| Entertainment | $1,371 | $896 | 4.3% | 3.8% |
| Miscellaneous | $1,973 | $1,288 | 6.1% | 5.4% |
| Cash Contributions | $1,620 | $1,740 | 5.0% | 7.3% |
| Personal Insurance | $1,853 | $696 | 5.7% | 2.9% |
| Average Annual Total | $32,243 | $23,759 | 100.0% | 100.0% |

Source: Mature Market Institute Demographic Profile, Americans 65+, 2006

# Rappaport: Needs change over time, and people must make decisions when situations change.

- Five categories for planning: Health, work & leisure, financial, housing, relationship
- Longer term
  - Housing—biggest decision, more than 30% of average spending
  - Financial management—should I buy an annuity
  - Spending down assets vs. working for more income vs. borrowing or reducing spending
- Intermediate term
  - Health care–spending increases by age, huge variation by individual need (see chart)

# Rappaport: Only 10% of population accounts for over 63% of spending in health care.

**Concentration of Health Spending in the United States—2003**



Chart: X-axis "% of Total Population" (0% to 100%), Y-axis "% of Total Spending" (0% to 100%). Data points labeled: 22.3%, 63.7%, 96.6%, 100%.

Chen, et al: Regression analysis is performed on three waves of data (2001, 2003, 2005 Consumption & Activities Mail Survey supplement to Health & Retirement Survey).

- Dependent variables are the spending categories.

- Explanatory variables include time period (from 2001 to 2003, and 2005), age (65-69 to 70+), black, disabled, single male, single female, health insurance,  health status, income, non-housing wealth, housing wealth.

- Results are obtained separately for retired household & non-retired (similar to retired), and expenditures by amount & as % total.

# Chen, et.al: Key regression results

- Time period: Spending on food, housing and total increase, while clothing expenditures decline.
- Age: All spending declines, except for medical care which increases.
- Blacks: Higher spending on housing, less on medical care, than whites.
- Disabled: generally lower spending, except for housing & medical, than non-disabled
- Health insurance: Generally lower spending for insured than those without coverage
- Income, non-housing and housing wealth: Food & clothing spending positively associated with income & housing wealth, but negatively with non-housing wealth.

# Bajtelsmit, et al: Increases in future health costs are a big unknown in pre-retirement saving to fund retirement needs.



Exhibit 2: Percentage of elderly with household out-of-pocket health-related expenditures greater than $2,000, $5,000, $10,000, total population and by insurance status, 2003
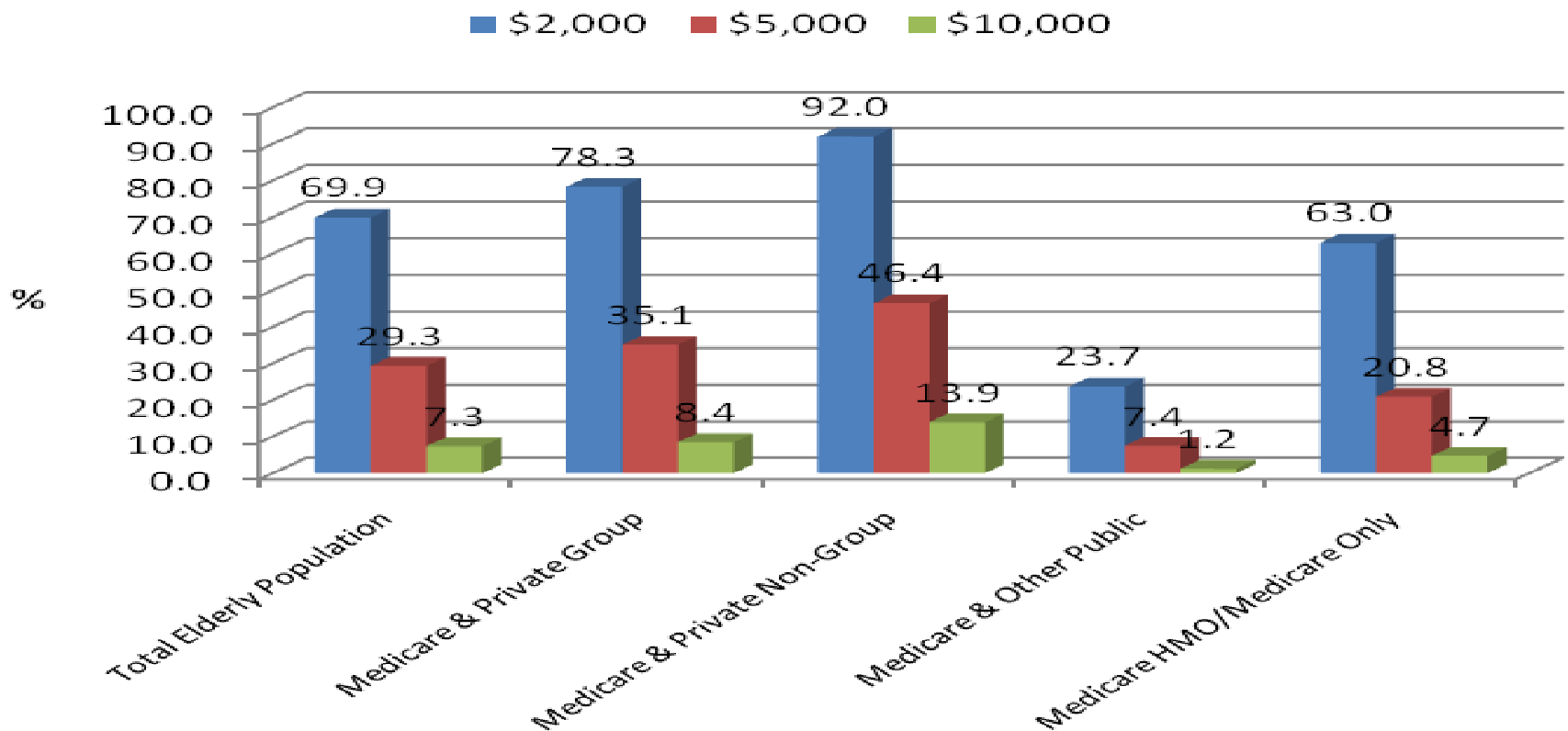
# Bajtelsmit, et al: In addition to rising health costs, households face risk of health shocks.



Exhibit 7: Percentage of Households Experiencing Health Shocks, by Age, HRS Waves 1-6
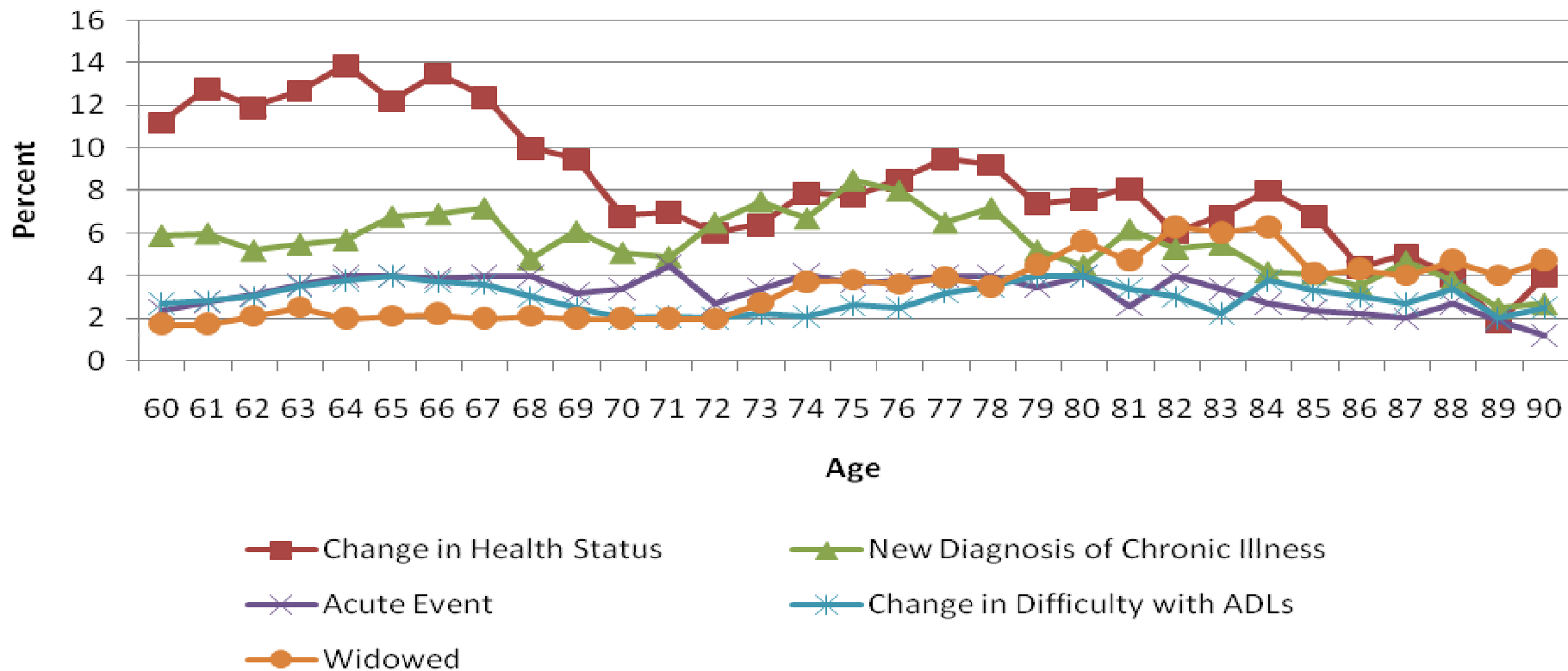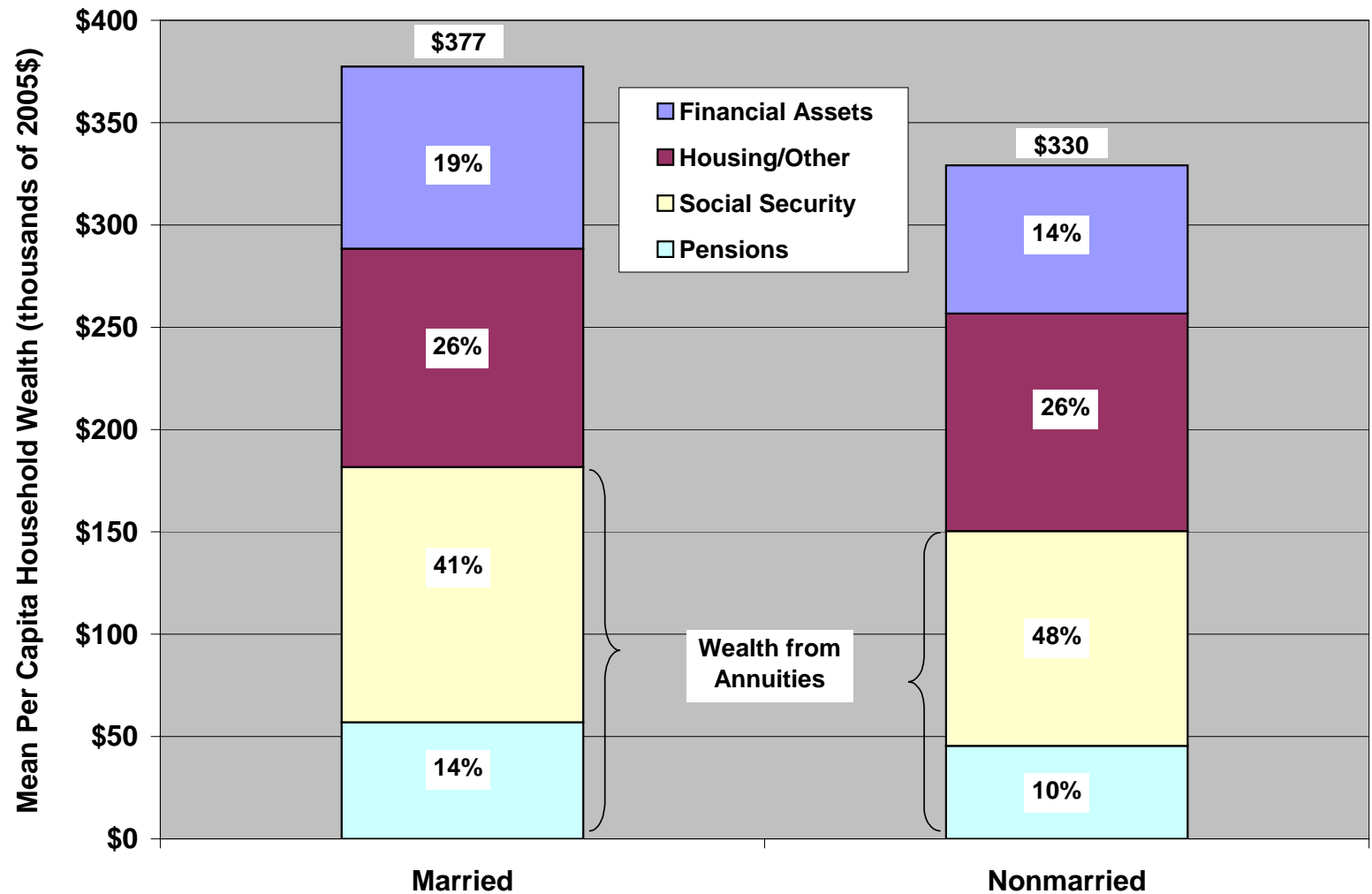
# Bajtelsmit, et al: Unexpected health costs/shocks impact retirement dates, household income, consumption, wealth, asset allocation -- underscore need for saving, coverage.

## 2004 HRS

| Age | N | Long-Term Care Coverage by Couples | | | |
| | | Neither Has LTC | Both Have LTC | Respondent Only | Spouse Only |
|---|---|---|---|---|---|
| <50 | 742 | 648 (87%) | 19 | 36 | 39 |
| 50-54 | 1717 | 1504 (88%) | 74 | 69 | 70 |
| 55-59 | 1744 | 1481 (85%) | 126 | 73 | 64 |
| 60-64 | 2185 | 1684 (77%) | 200 | 61 | 60 |
| 65-69 | 2301 | 1916 (83%) | 239 | 77 | 69 |
| 70-74 | 1681 | 1357 (81%) | 241 | 41 | 42 |
| 75-70 | 1248 | 1016 (81%) | 169 | 33 | 30 |
| 80+ | 672 | 544 (81%) | 82 | 22 | 24 |
| Total | 12290 | | | | |

# Butrica, et al: Most older adults have other sources of wealth than just financial assets.



Mean Per Capita Household Wealth (thousands of 2005$)

**Married** — $377
- Financial Assets: 19%
- Housing/Other: 26%
- Social Security: 41%
- Pensions: 14%

**Nonmarried** — $330
- Financial Assets: 14%
- Housing/Other: 26%
- Social Security: 48%
- Pensions: 10%

Legend:
- Financial Assets
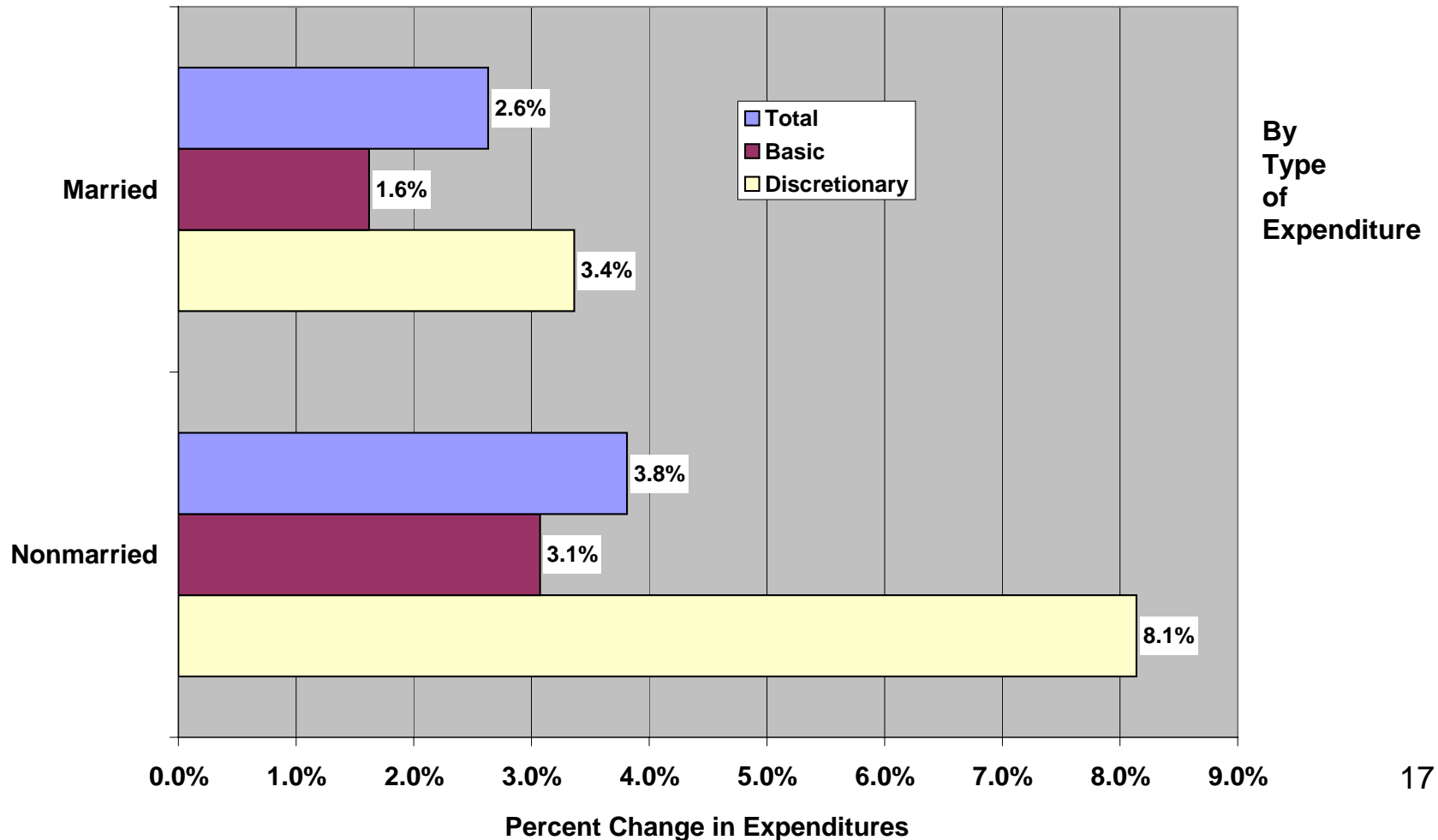- Housing/Other
- Social Security
- Pensions

Wealth from Annuities

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# Butrica, et al: For married adults (similarly for non-married), expenditures decline as the share of wealth annuitized increases.



Median Per Capita Household Expenditures (thousands 2005$)

Legend: Basic, Discretionary

- All: $16.8 (Basic 63%, Discretionary 37%)
- < 25: $26.8 (Basic 51%, Discretionary 49%)
- 25 - 50: $17.2 (Basic 62%, Discretionary 38%)
- 50 - 75: $16.8 (Basic 63%, Discretionary 37%)
- 75 - 100: $13.3 (Basic 70%, Discretionary 30%)

Percent of Wealth Annuitized
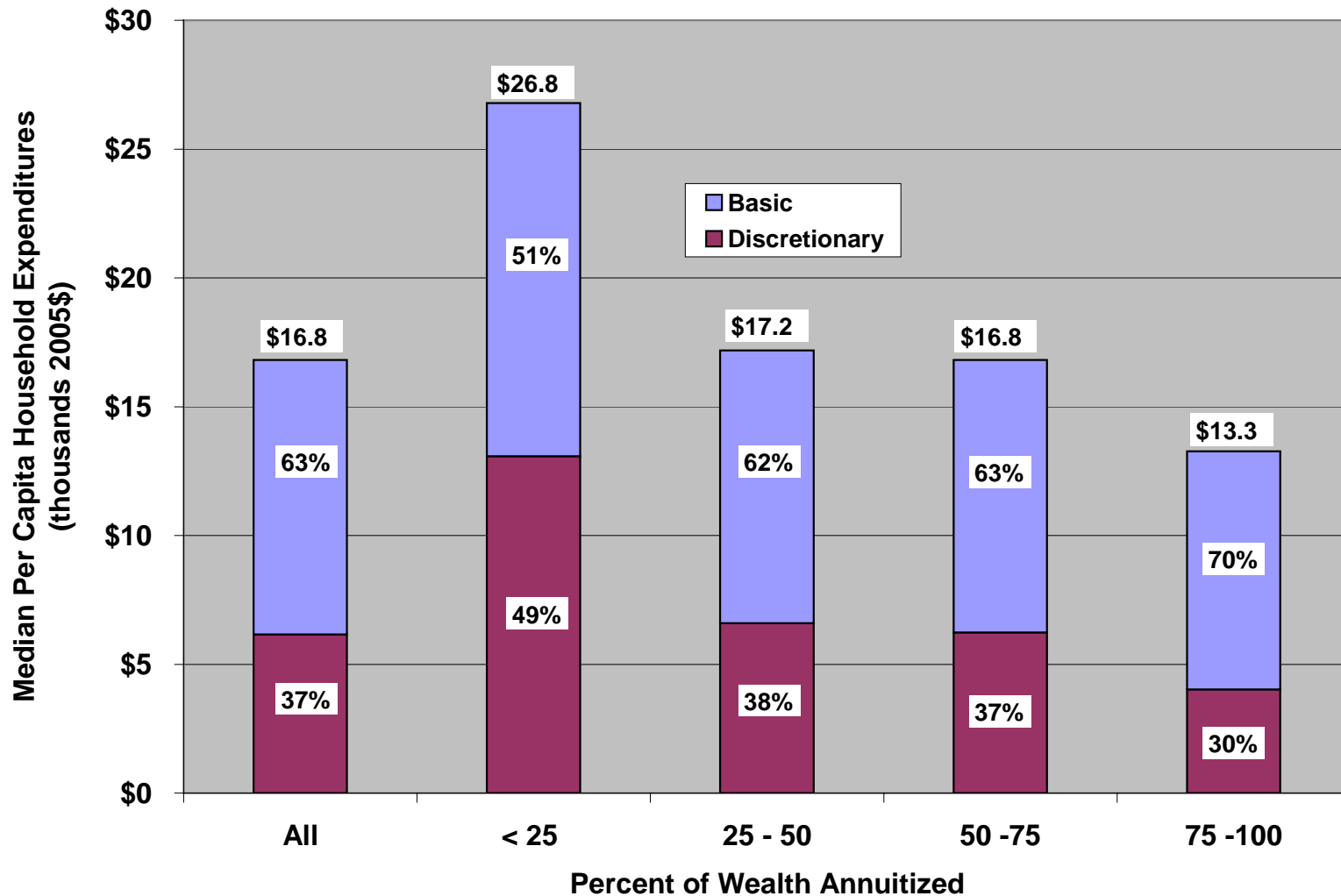
# Butrica, et al: Even after controlling for income & wealth, adults with little annuitized wealth have higher spending (more in discretionary than basic).

**The Impact of Decreasing the Share of Wealth Annuitized by 10 Percentage Points**



By Type of Expenditure

Legend:
- Total
- Basic
- Discretionary

**Married**
- Total: 2.6%
- Basic: 1.6%
- Discretionary: 3.4%

**Nonmarried**
- Total: 3.8%
- Basic: 3.1%
- Discretionary: 8.1%

X-axis: 0.0%, 1.0%, 2.0%, 3.0%, 4.0%, 5.0%, 6.0%, 7.0%, 8.0%, 9.0%

**Percent Change in Expenditures**

# Laibson, et al: Financial "performance" rises then declines in the cross-section – possible explanation in change patterns in experience v. analytic ability with aging.



Hypothesized link between Performance and Age
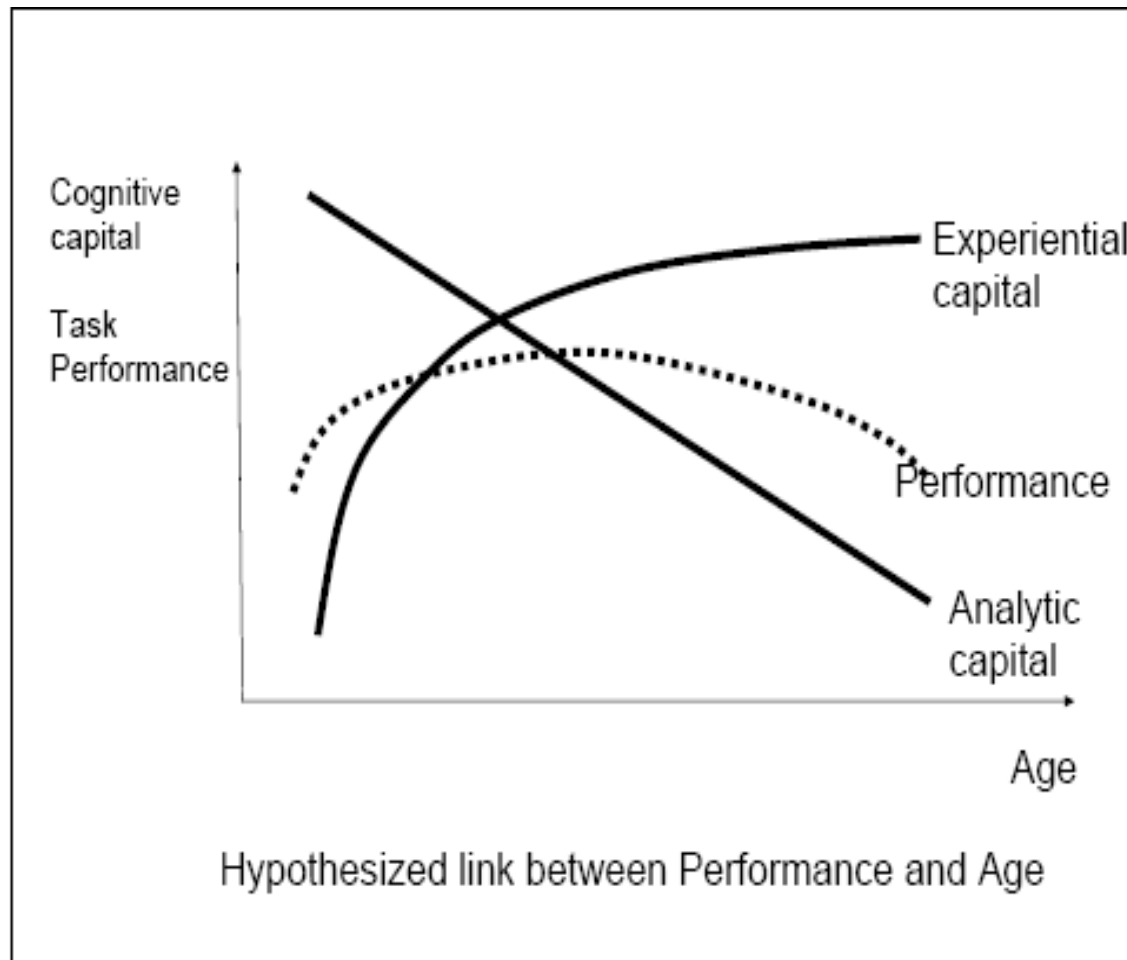
# Laibson, et al: Personal financial decision making "peaks" at around age 53, as confirmed in 10 separate studies

| | Age of Peak Performance | Standard Error |
|---|---|---|
| Home Equity Loans–APR | 55.85 | 4.24 |
| Home Equity Lines–APR | 53.30 | 5.23 |
| Credit Card–APR | 50.31 | 6.02 |
| Auto Loans–APR | 49.63 | 5.03 |
| Mortgage–APR | 56.04 | 8.01 |
| Small Business Credit Card–APR | 61.75 | 7.92 |
| Credit Card Late Fee | 51.94 | 4.87 |
| Credit Card Over Limit Fee | 53.97 | 5.02 |
| Credit Card Cash Advance Fee | 54.82 | 4.89 |
| Eureka Moment | 45.81 | 7.99 |
| Average of the 10 Studies | 53.34 | |

Table 9: Age at which financial mistakes are minimized, for each case study

# Rappaport, et al (lifecycle roundtable):
## 1. Consumption smoothing
## 2. Replacement ratio modeling

- Key features of consumption smoothing
  - Optimizing consumption not wealth is primary focus
  - Risk free asset (annuity) consistent with lifecycle planning
  - Varying time horizons—your life, you/your spouse, or longer (legacy)
  - Discontinuities and life cycle changes
- Replacement ratio modeling approach
  - Fit traditional employer plan design
  - Balanced consumption over time is better fit to decision making today
  - Challenge – unknown expenses, changing patterns of retirement

# Rappaport, et al (lifecycle roundtable):
## 3. Risk management
## 4. Borrowing

- Personal risk management
  - No consensus among investment planners and advisors on best planning approaches, or standard agreement on methods for comparison
  - No common language, inadequate understanding of derivatives and structured products, and potential use
  - Potential for new ideas—combining risks (e.g. long-term care/annuities)
- Borrowing
  - Theory: borrow earlier when income is low
  - Reverse mortgages potentially important retirement financing tool

# Rappaport, et al (lifecycle roundtable):
## 5.Phases of retirement
## 6. Personal preferences and situations

- 2007 risk study focuses on several phases of retirement
  - People view retirement very differently and have different views about how to leave the workforce
  - Consideration of retirement different over life cycle
  - Desirable to have products/services that support different patterns
- Different personal preferences and situations
  - Some are willing to downsize significantly
  - Differences in measurement and consideration of resource transfers
  - Different needs for health, long-term care
  - Calculators: lot of variation, mask investment variability, differences in life span

# Some open issues

1. Housing remains a big item in lifetime spending, while home equity is always an important resource. What is impact on spending of retiring with significant debt load (e.g. mortgage)?

2. Health shocks and unpredictable events have a significant impact on income, wealth and consumption patterns. How can retirees better prepare and plan for these shocks?

3. Retirement income from annuitized wealth has an impact on retirement spending. To what extent are Social Security benefits, which are regarded as annuitized wealth, influencing the degree of private annuitization?

BIG question: SO do people spend less because they have less money or because they need less?