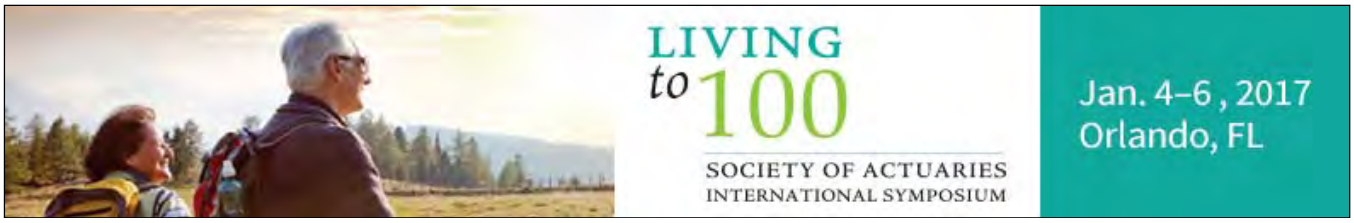

Session 4A, Longevity in the Public Eye

Moderator:

Andrew J. Peterson, FSA, EA, FCA, MAAA

Presenters:

Sam Gutterman, FSA, CERA, FCA, FCAS, HONFIA, MAAA
David Sinclair
Daniel W. Bailey, FSA, MAAA
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Health Technology, Health Care Cost, Longevity, and Retirement Security— A DYNAMIC UPWARD SPIRAL

SOA LIVING TO 100 SYMPOSIUM

January 2017

Daniel Bailey, FSA, MAAA

ACUMEN ACTUARIAL

Dedication

For our children's children's … children's children
and their better future world

Agenda

- Summary
- The Forces and the Upward Spiral
  - Longevity
  - Technology
  - Health Care Cost and Its Relentless Increase
- Implications and Challenges
- Stakeholders
- International Perspective and Comparison
- Conclusion

Summary of Paper

- A confluence of forces has driven per capita health cost and national health expenditure (NHE) to heights unimaginable several decades ago
- Has benefits to mankind & economy. Comes at increasing cost to individuals; strains the public & private sectors
- Meanwhile, as a consequence of improvements in health technology and increased health care spending, people live longer with more non-working years later in life
- Financial, retirement, and health security are at risk; planning is key
- Creates challenges in the present that need to be addressed before future options are more limited

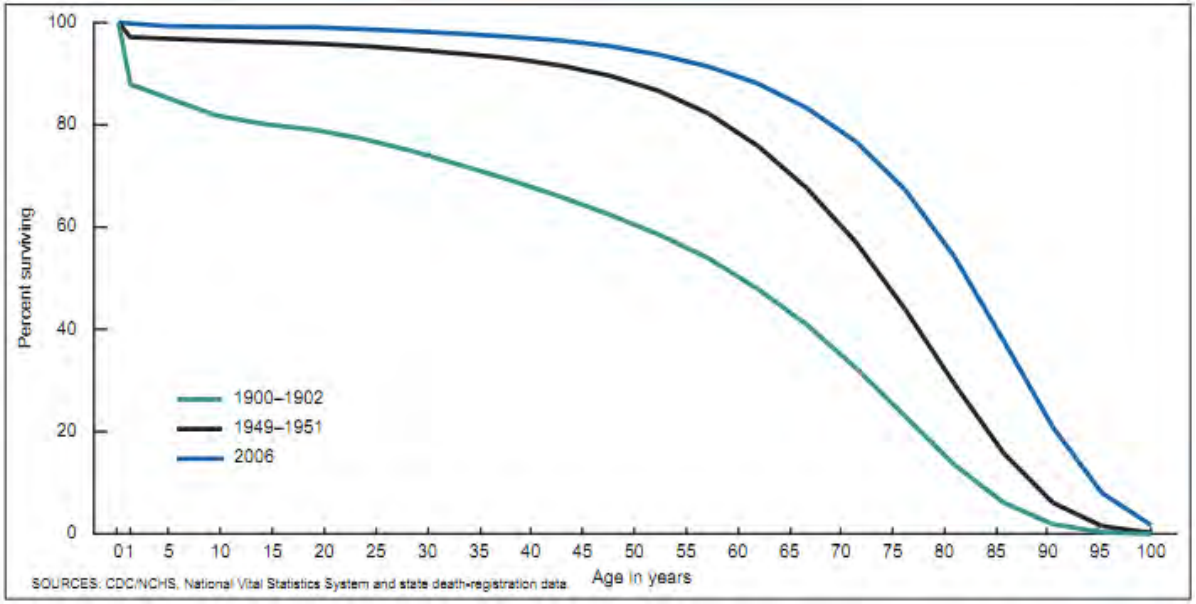
The Forces and the Upward Spiral

- Cost of Living Rises and Health Technology Evolves Simultaneously →
- Per Capita Health Cost Increases Faster than Per Capita GDP →
- People Receive More & Better Medical Care and Live Longer →
- Generally, On Average, Health Cost Increases With Age (with exception of additional cost for childbirth), and More Is Spent in Older Years →
- **NHE Increases and Consumes an Increasing Portion of GDP** →
- On Average, Individuals Enjoy More (non-working) Retirement Years, which Necessitates Yet More Planning & Saving … and onward & upward

Longevity

- Overall Average Life Expectancy at Birth in the US–
  - Increased from 47 years in 1900 to 70 years in 1965, and to 77 years in 2000
- Remaining Life Expectancy at 65 in US—
  - Increased from 12 years in 1900 to 15 years in 1965 and 18 years in 2000
- Implications for Social Ins. Programs—Medicare, Soc. Sec., Medicaid LTSS

Longevity—The Squaring of the Life Curve

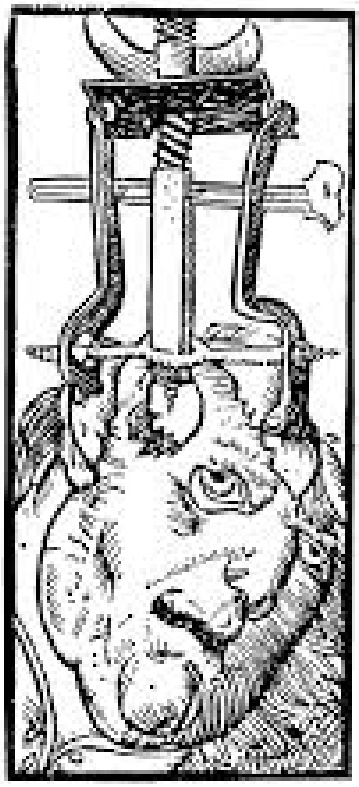


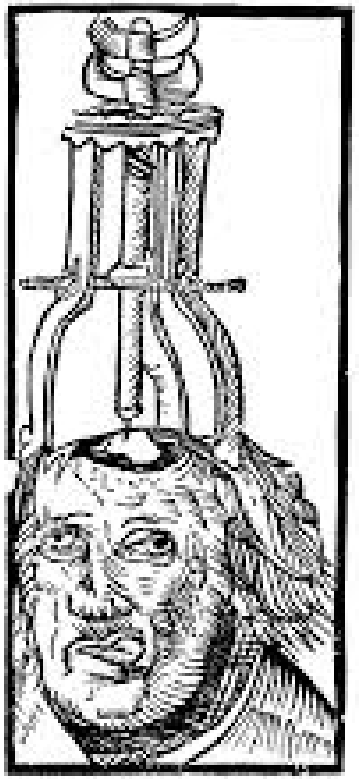
- What Does "Living Longer" Mean? **Fewer people die young.**
- When square, ultimately, everyone lives to "Omega" and then expires.

Health Technology

- In earlier centuries, the microscopic and macroscopic worlds were unknown. Religious barriers to scientific exploration—such as Giordano Bruno's "reward" for his post-Copernican theory/world view
- Evil spirits explained some mediaeval illness—for above-the-neck medical problems, trepanation was more of a go-to procedure back then than today
- Since end of WW II, however, scientific progress surpasses all prior human history
- More and better medical goods & services come into being; many superseded technologies are abandoned by the wayside

Trepanation





Giordano Bruno

Health Technology

- Fast-forward to 2017 in a world with vaccines and anti-biotics in which many infectious diseases have been conquered—we're curing some ailments and diseases that formerly killed us
- New tools for diagnosis, such as complex imaging, endoscopy, …
- New treatments, such as cardiac therapies, oncological, organ transplants, dialysis, targeted gene therapy, stem cell therapy, …
- Remarkable development of drugs that reduce symptoms, control, and or cure sickness and disease, often orally by pill

Health Technology

- Advancement in our understanding of the human body
- Advancement in molecular biology and chemistry
- Recognition of new conditions, sickness, or disease, such as autism spectrum disorders, HIV, Lyme Disease, Zika virus, …

Health Cost

- Distinguish between per capita and NHE
- Per capita cost increase and population growth drive NHE increase
- Per capita cost increase is the object of this study
- It seems to be increasing about twice as fast as the cost of living over the past 50 years
- On average, individuals use more services and the cost of these services is increasing. Many new goods and services are additive; others replace (supersede) existing ones. Still looking for examples of “subtractive”

Health Cost *

PER CAPITA ANNUAL HEALTH CARE COST GROWTH

NHE OACT DATA Jan 2016

		Annual Trend, Last X Yrs			
	Annual	Last 10 Years	Last 20 Yrs	Last 50 Years	
Year	Per Capita				US Pop (10^6)
1960	$146				186
1970	$355	9.3%			210
1980	$1,110	12.1%	10.7%		230
1990	$2,840	9.9%	11.0%		254
2000	$4,857	5.5%	7.7%		282
2010	$8,400	5.6%	5.6%	**8.4%**	309

* U.S. Bureau of the Census

- Annual increase in per capita health cost was more than 8% over past 50 years. Some slow-down in rate of increase over past 25 years, especially more recently.

Health Cost—Cost of Living *

COST OF LIVING in US

From Dept of Labor statistics

YEAR	INDEX	Annual Trend, Last X Yrs		
		Last 10 Years	**Last 20 Yrs**	**Last 50 Years**
1913	$31.03			
1960	$100.00			
1970	$131.03	2.7%		
1980	$282.76	8.0%	5.3%	
1990	$448.28	4.7%	6.3%	
2000	$593.10	2.8%	3.8%	
2010	$751.72	2.4%	2.6%	**4.1%**

* From Department of Labor statistics

- About half of the 8%+ growth in per capita health cost over past 50 years is explained by cost of living.

Health Cost—What's Left After COL Removed

RESIDUAL HEALTH COST GROWTH

Per Capita Cost Growth/ Cost of Living Increase

YEAR	Annual Trend, Last X Yrs		
1913	**Last 10 Years**	**Last 20 Yrs**	**Last 50 Years**
1960			
1970	6.4%		
1980	3.8%	5.1%	
1990	4.9%	4.3%	
2000	2.6%	3.7%	
2010	3.2%	2.9%	4.2%

- The portion of the increase in per capita health cost that is not unexplained by cost of living is approximately as large as cost of living.

What Is Covered In Health Coverage?

- Over time, more medical goods and services are covered—some are required ("mandated") by state insurance law; varies by state
- State mandates can have downstream implications for utilization and unit cost, as well as provider practice, treatment, and billing patterns
- When we ask a group of people to decide which medical goods and services are essential for themselves or others, they have difficulty leaving any out.

Health Cost—More "Drivers"

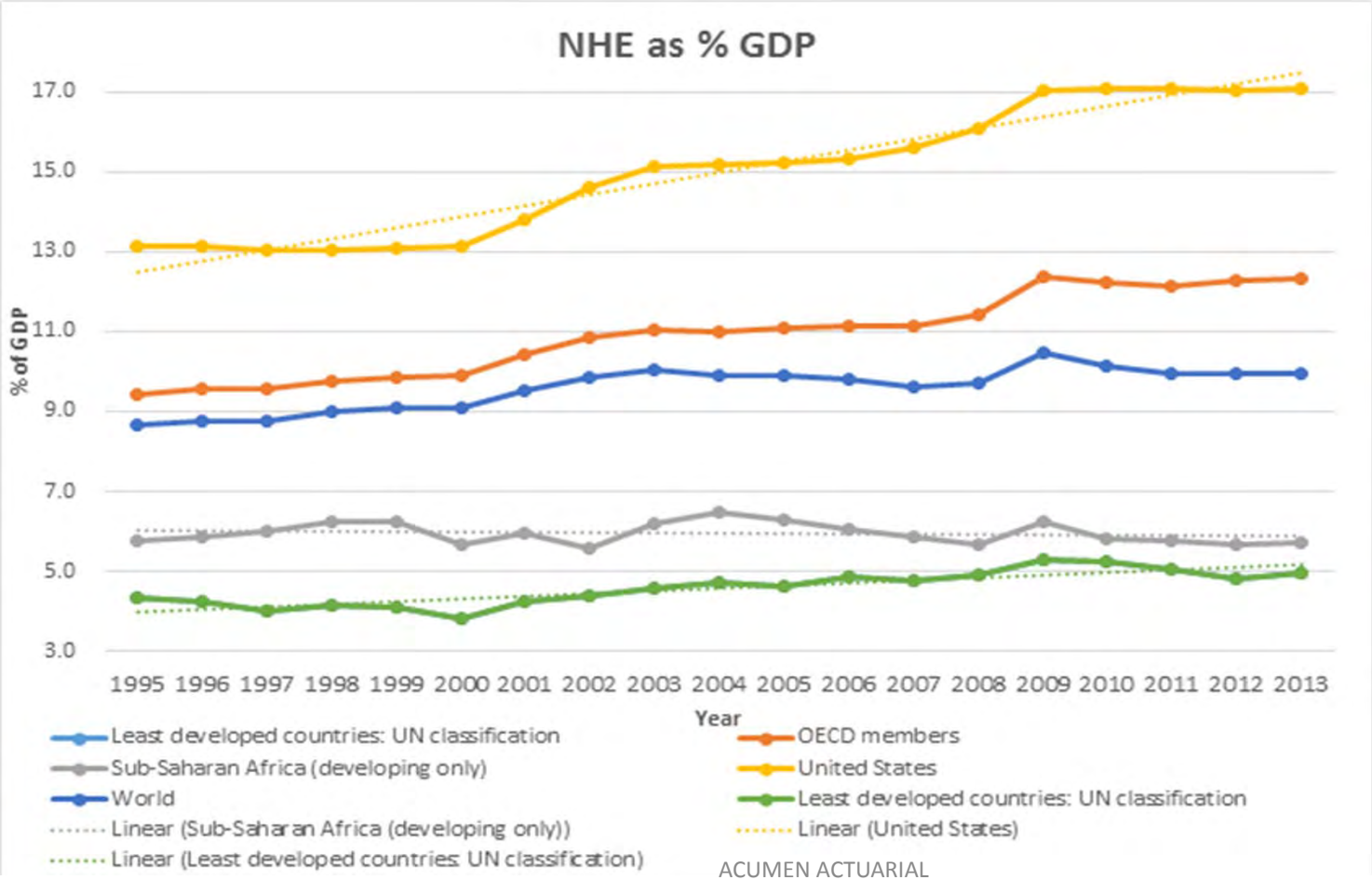
- Pharmacy cost has increased more than any other service type over past 25 years. The development cost for new highly complex molecules and biologicals is far higher than the cost for the much simpler chemicals of early times
- Cost of specialty drugs is driving overall cost of pharmacy and contributing to increase in overall health care cost
- For example, new Hepatitis C cures are much more efficacious than earlier PEG interferon treatments, but at $84,000 (or thereabouts) for a seven week course of daily treatment, this begs the question:
  - Who Pays, How Much, and for What Benefits?!?

Different Stakeholders' Differing Perspectives

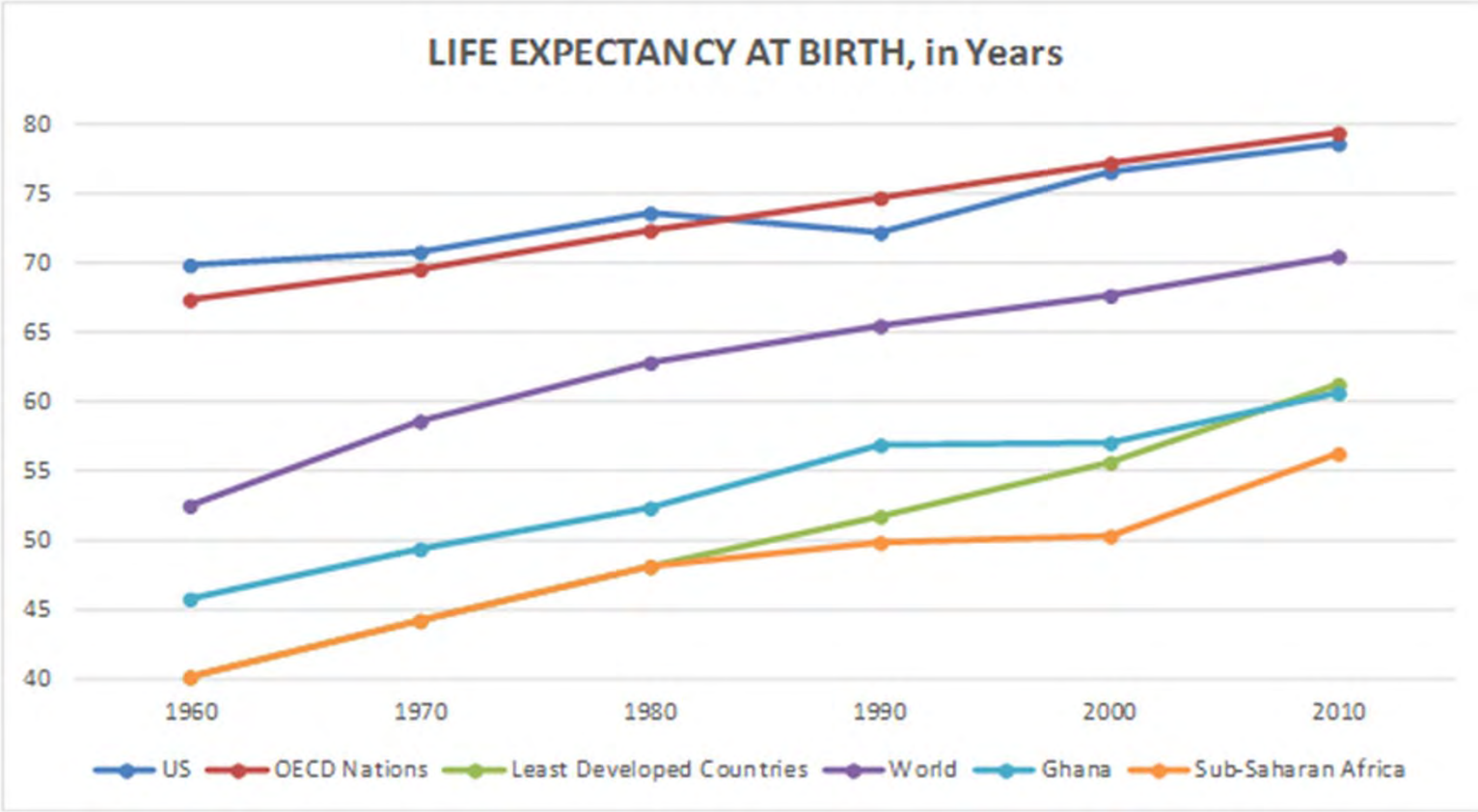
- Individuals (Patients, Consumers)—ideally want it all, now, the best, for free. Depends on how sick we are.
- Providers—want what's best for their patients and themselves:
  - Hospitals—Want to have the latest, best, and most equipment and physicians… and profitable growth
  - Physicians—Want to be able to practice quality care and receive appropriate compensation, especially after many years of expensive medical education
  - Both—Need to cover high cost of professional liability insurance to protect against high litigation & settlement costs in an age of jackpot justice
- Federal and state governments—want to control cost; (they pay ~ ½ US cost.) Political promises…
- Employers—want to hire & retain work-force; keep them productive & maintain healthy tax deduction for employees' health benefits

International Perspective—

Michael Ankrah, an actuary practicing in the US & Ghana, assisted with this international comparison:



International Comparison



Some Findings from International Comparison

- NHE as % of GDP is highest in US; lower in developing nations
- Longevity greater in OECD* nations than in developing nations
- NHE as % of GDP is spiraling upward faster in US and other OECD nations than in developing nations. US is worst but other OECD nations are in similar situation
- Developing nations obtain greater improvement in public health & longevity from each per dollar spent

* Organization for Economic Co-operation and Development

Findings from International Comparison

- Developed nations must spend more to address their remaining health problems
- It is extremely difficult to effectively compare nations and the measures believed to reflect the quality of their health

CONCLUSION

- Health care spending and longevity drive one another to greater heights
- Increase in NHE as percentage of GDP has been relentless
- Ever-increasing challenges to financial, health, and retirement security
- Intent of this paper is to draw attention to the dynamic upward spiral of health technology, health cost, and longevity as it consumes an increasing portion of gross domestic product and thereby affects financial and retirement security

CONCLUSION

- Goal of this paper is to articulate the problem of the upward spiral and the challenges it presents. Want to stimulate thinking about solutions
- Solutions need to come from the public and private sector—all US residents will be affected and numerous stakeholder groups. Everyone has skin in this game at least once. Health care employs about 16 million people--more than any other single industry; involves $3 trillion + in US spending annually—one person's expense is another's revenue
- Status quo is unsustainable, but change creates more winners & losers

CONCLUSION

- Comparison of OECD and developing nations shows health systems mature over time and each additional dollar of spending by OECD nations seems to buy less gain in health outcomes
- Variations around spending and quality by nation--US is an outlier spending much more on health care per capita without significantly better morbidity and mortality as a result. Nonetheless all OECD nations face this dilemma of diminishing returns

CONCLUSION

- Backslide to defined contribution approaches (rather than defined benefit) puts more pressure on individuals to provide for their own financial, retirement, and health security. Isn't that what pooling and insurance mechanisms are for?
- **Improvement in economic productivity is essential to offset the rate at which NHE/GDP ratio is increasing**. Otherwise, nation will incur increased indebtedness and more constraints on domestic spending other than health care, such as education, infrastructure
- Intergenerational equity issues will result if health care spending in the present becomes the responsibility of future generations

Thank You and Enjoy Your Stay in Orlando

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Financial Shocks, Unexpected Expenses and Financial Experiences of Older Americans

PRESENTER

Anna M. Rappaport, FSA, MAAA

Session 4A:
2017 Living to 100 Meeting

SOCIETY OF ACTUARIES

Agenda

- Background
- Results
  - SOA Risk Research: Shocks and Unexpected Expenses
  - SOA Risk Research: Caregiving
  - Other Research:
- Conclusions

Background: Context

- As population ages, needs of the very old become more important to the nation and economic stability of government
- Paper brings together multiple sources of information
- More older persons and longer periods of retirement
- Personal responsibility for and complexity of retirement security increasing
  - Several sources of information on shocks, unexpected expenses and how people do at higher ages
- Uncertainty about future changes in tax policy, Social Security and Medicare

Big Issues for Very Old

- Are things working out? Who does well and who does not?
- What is unexpected and how did it affect people?
- What about long-term care?
- What happens to assets?
- How much does income level matter?
- What strategies could make things better?

Paper looks at a variety of research

SOA is continuing research into the over 80 group

2015 SOA Research on Public Knowledge about Retirement

- Three part approach: 8th risk survey; 3rd set of focus groups; 1st set of in-depth interviews
  - Focus groups – long-term retirees (15 years or more) (3rd set of Focus Groups)
  - Interviews – caregivers of long-term retirees who have had major problems and would not be represented in survey pool or focus groups
- First time for: specific look at long-term retirees and attempt to look back at how retirees are doing vs. looking at what they plan to do

Caution: in interpreting results, particularly in area of shocks: remember that people who have experienced major health declines generally are not part of survey or focus groups – consider interview results

SOA also partnered with SSA/USC on
How Americans Manage Their Finances Study

Shocks and Unexpected Expenses in Retirement

SOCIETY OF ACTUARIES

Shocks and Unexpected Expenses

- New area of focus in 2015 for SOA
- Rationale:
  - Retirees often plan to deal with things as they happen
  - Asset amounts are often constrained
- Big questions for CPRNR
  - What are people experiencing?
  - How do they deal with shocks and unexpected expenses?
  - What types of shocks are creating huge problems?
  - Are there strategies to deal with them more effectively?

Shocks and Unexpected Expenses in Retirement

- There are a number of unexpected expenses in retirement including:
  - Health care cost (in US, if no Medicare supplement insurance)
  - Cost of long-term care
  - Dental care
  - Inflation
  - Interest rates and market returns
  - Fraud/theft
  - Home repair
  - Family support
  - Widowhood
  - Divorce
- Most unexpected expenses are manageable, though they can occasionally be significant

Shocks and Unexpected Expenses in Retirement

- The most devastating expenses in retirement are long-term care and divorce
- Most retirees absorb and adapt to unexpected costs
- Some reduce spending to try to restore asset levels
- Loss of health and significant problems of children tend to have a much greater impact on retirees than the loss of asset level caused by unexpected expenses
- Many unexpected expenses can be planned for, but people often don't plan for predictable large expenses

FG Shocks and Unexpected Expenses in Retirement

I've had – our house upkeep, furnace, driveway. In the last month, I have spent $2,500 on one expense, $3,600 on another expense. That's in one month. A couple of years ago, my roof went and my furnace went. Everything.

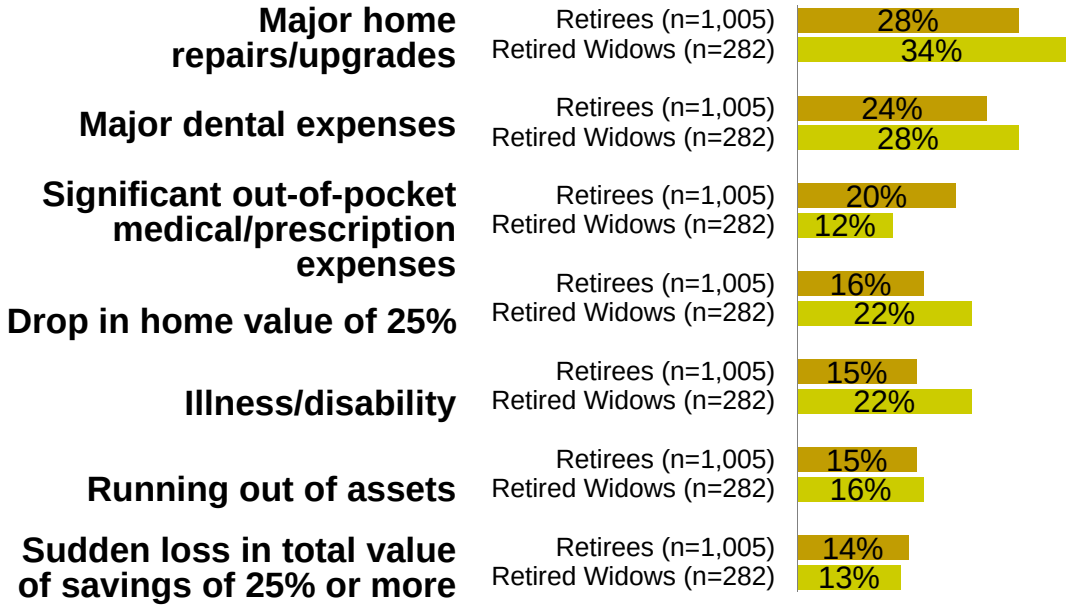
Female, Marital Change Group in Chicago

I had a very expensive dental bill that I had not planned. I've paid already $3,000 and I've just begun.

Female, Health Decline Group in Baltimore

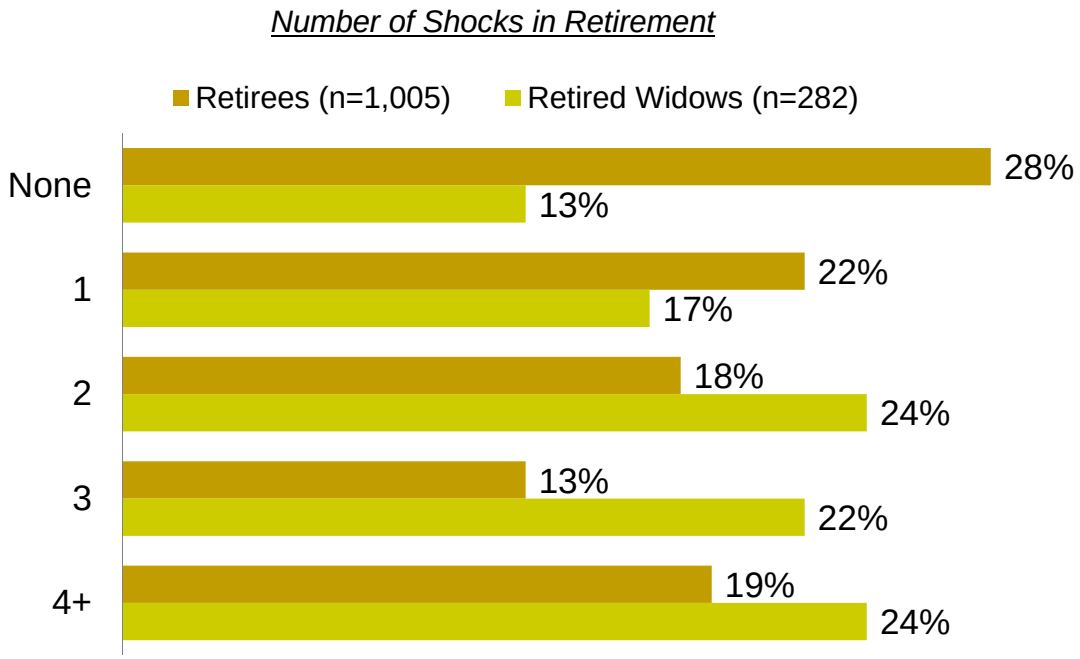
The most common shocks in retirement are major home repairs/upgrades, major dental expenses, and out-of-pocket medical expenses.

Shocks in Retirement



And have you (or your spouse/partner) experienced any of the following during retirement?

Around one in five retirees and one in four retired widows have experienced four or more shocks during retirement.



And have you (or your spouse/partner) experienced any of the following during retirement?

Results: What Happened to Retirees who Experienced Shocks

- More than 1 in 3 had assets reduced by 25% or more
- More than 1 in 10 had to reduce spending by 50% or more
- About 3 in 4 could manage at least somewhat well
- Adjustments were feasible – but did not work for major long-term care events or divorce after retirement
- Multiple shocks were a much bigger problem
- Lower income retirees had bigger problems
  - 29% of retirees with income below $35,000 had 4+ shocks
  - 10% of retirees with income above $75,000 had 4+ shocks
- 3 in 5 felt that they could not have done anything in advance to lessen impact

Observations

- Retirees in survey are doing better than some of us expected, but three in ten have been severely impacted by shocks
- 2015 vs. 2013 focus groups – long-term retirees seemed more confident and less anxious than short-term retirees
- Some areas of “unexpected expense” are quite predictable – but timing is not and 60% of those experiencing shocks think nothing could have been done to lessen the financial impact
- Two very difficult areas – divorce and major long-term care events
- Health coverage protects retirees from health shocks – but only if they have Medicare supplement. Canadians are protected.
- Retirees are often very resilient, with 75% reporting they have managed the impact of shocks well or very well

Caregiving

SOCIETY OF ACTUARIES

Needing a large amount of paid long-term care is a financial disaster for most families.

- New area of SOA study for 2015
- Those who step in to manage finances are often involved in other aspects of care
- The need for long-term care arose primarily because of cognitive issues caused by dementia, a stroke, or other neurological event
- Very few have long-term care insurance
- Many care for someone who lived at home until the burden of care became too high
- Care costs can run in the hundreds of thousands of dollars

IDI Caregiving

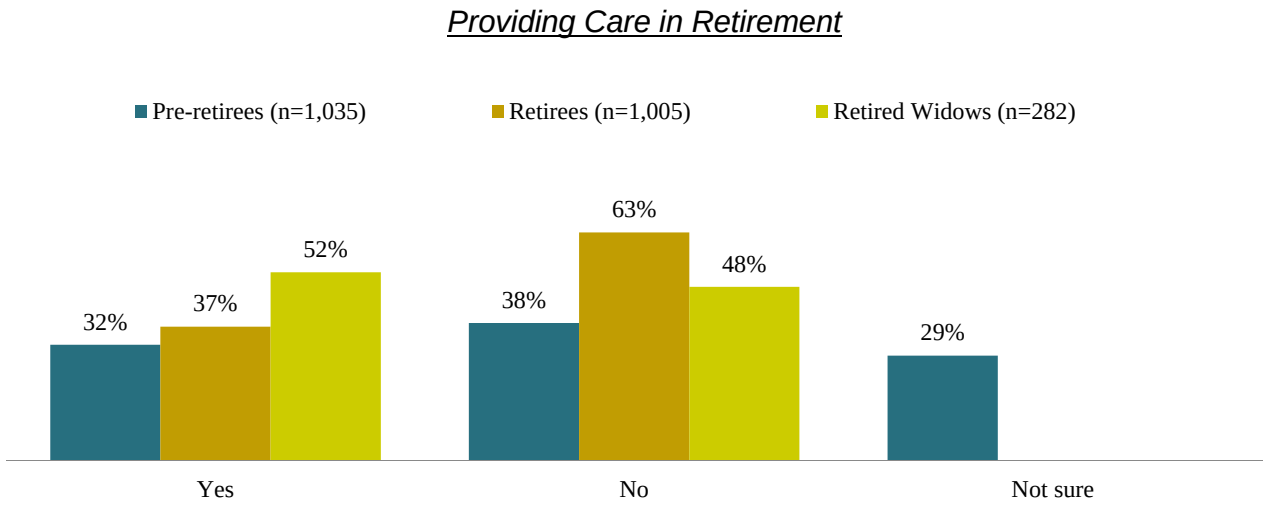
They don't have massive amounts of savings. I bet I spent three years researching assisted living and the places that were closer to us, where we could get back and forth to them. At first, my mom seemed open to it, until she decided to do it, and then she got the actual cost of it… Then she backed out, because she knew it wasn't going to last that long, and she was afraid of running out of money.

Female Assisting Father

[Asked about how much her mother had left after her father needed long-term care] None. That's why she's doing a reverse mortgage.

Female Assisting Father

More than half of retired widows have provided care for others during their retirement.



[WORKER:] *Do you think you will spend any time caring* ***(IF MARRIED:*** *for someone other than your spouse/partner/****IF NOT MARRIED:*** *for others****)*** *during your retirement? (The recipient for your care could be a family member* ***(IF MARRIED:*** *other than your spouse/partner****)****, friend, or neighbor.)*
[RETIREE:] *Have you spent any time caring for others during your retirement? (The recipient for your care could be a family member* ***(IF MARRIED:*** *other than your spouse/partner****)****, friend, or neighbor.)*

Observations about caregiving

- Interviews with caregivers added a great deal of insight
- Don’t forget that support is needed for caregiver as well as for person needing care
- Families are important
- People needing a lot of help disappear from the sample for surveys, focus groups
- Big question – how can we improve long-term care financing?
    - National Issue – combines public and private issues

Note: Land This Plane: A Delphi Research Study of Long-Term Care Financing Solutions (Delphi Study) and SOA Monograph Managing the Impact of Long-Term Care Needs on and Expense on Retirement Security offer further insights

Other Research Results

SOCIETY OF ACTUARIES

Handling Unexpected Expenses: Ability to pay expense at age 70 and over

	$500	$1,000	$5,000	$10,000
I could easily pay this expense	85%	49%	25%	23%
I could pay this expense but it would involve sacrifices	8%	38%	30%	14%
I would have to do something drastic	2%	5%	37%	17%
I do not think I could pay	4%	8%	9%	46%

Source: Exhibit IV of paper; How Americans Manage Their Finances
Numbers may not add to 100% due to rounding

Measures of Benefit Adequacy Study (stochastic modeling of retirement)

- Shock events can easily derail a retirement plan
- Shocks biggest driver of asset depletion at middle incomes
- Long-term care particularly challenging
- Averages as basis for planning are misleading because they disguise shocks
- Retirement planning should be “holistic”
- Many scenarios/strategies were modeled

Other Issues Discussed

- Change in household assets and income based on various life events – from GAO staff
- Factors impacting end of life assets – starting assets is biggest factor
- Fraud
- Debt

Conclusions

SOCIETY OF ACTUARIES

Conclusions

- Conclusions consolidate findings from surveys, focus groups and interviews (including prior years)
  - Top risks – inflation, health and long-term care
  - Pre-retirees more concerned than retirees
- Lot of consistency with prior years, but longer term retirees (2015 focus groups) seem more self-assured and less anxious than shorter term retirees (2013 focus groups)
- Shocks and unexpected expenses
  - Many do not plan for expenses that can be expected but are not routine and when the timing is not predictable: examples are home repairs and dental
  - Shocks with big consequences are divorce and major long-term care events
  - Retirees adapt well to illness and widowhood
    - Widowhood cuts down on income but most absorb and adjust their spending. There is a need for life insurance as a replacement stream of income.
  - Medicare plus supplement pays most medical costs – with exceptions
  - Need for better emergency funds

Conclusions (continued)

- Caregiving
  - Families are important
  - 13% of retirees provide financial support to someone other than their spouse/partner
  - More than half of retired widows have provided care to someone other than their spouse/partner

Insights about planning and decisions

- Not enough focus on long term care risk
- Planning tends to be short-term and cash flow focused
- Not much planning for change, unexpected events, shocks
- Many people do not want to spend down assets
- Common view on shocks: “I will deal with it when it happens”
- Think about last two statements together

Insights about retirement

- Importance of housing wealth
- Many voluntary retirees were pushed into retirement
- More people expect to work in retirement than do
- Lot of gaps of knowledge
- Not enough risk management
- Need more research on the very old – that is underway now
- Paper includes more areas for future research

Questions

SOCIETY OF ACTUARIES

Appendix

SOCIETY OF ACTUARIES

Methodology

SY

Online Survey

- Sample size: 2,233 total (1,035 pre-retirees, 1,005 retirees, 193 oversample of retired widows)
- Ages 45 to 80; U.S. only
- Conducted online for first time in 2013

Focus Groups

FG

- 12 focus groups with people retired 15+ years
- Chicago, IL; Baltimore, MD; Dallas, TX; Kitchener, ON; Edmonton, AB
- Half of groups were male; half were female
- Participants had assets between $50,000 and $350,000[1]
- No participant had household defined benefit guaranteed lifetime income exceeding $2,000 per month

[1]U.S. and Canadian dollar figures are treated as equal

Note: Additional information can be found in the Appendix

Methodology

IDI In-depth Interviews

- The in-depth interviews were conducted to better understand the impact long-term care has on finances of long-term retirees
- 15 in-depth interviews: 10 American and 5 Canadian participants
- All participants served in financial management role for a parent or spouse in need of long-term care
- 5 men and 10 women interviewed

Additional Information on Focus Group Methodology

- 12 groups
  - Chicago
    - Females - Widowed or Divorced since Retirement ($50,000 to $500,000 in Assets)
    - Females - Significant Health Decline since Retirement ($50,000 to $250,000 in Assets)
  - Baltimore
    - Females - Significant Health Decline since Retirement ($50,000 to $150,000 in Assets)
    - Males - No Significant Health Decline or Marital Change since Retirement ($50,000 to $150,000 in Assets)
  - Dallas
    - Males - Significant Health Decline since Retirement ($50,000 to $250,000 in Assets)
    - Females - No Significant Health Decline or Marital Change since Retirement ($50,000 to $250,000 in Assets)
    - Males - No Significant Health Decline or Marital Change since Retirement ($150,000 to $350,000 in Assets)
  - Kitchener
    - Females - Widowed or Divorced since Retirement ($1,000 to $250,000 in Assets)
    - Males - At least half Widowed or Divorced since Retirement ($50,000 to $350,000 in Assets)
    - Males - Health Decline since Retirement ($50,000 to $350,000 in Assets)
  - Edmonton
    - Males - No Significant Health Decline or Marital Change since Retirement ($50,000 to $350,000 in Assets)
    - Females - Health Decline since Retirement ($50,000 to $250,000 in Assets)

Discussion of:

"Health technology, health care cost, longevity, and retirement security", by Daniel Bailey

"Financial shocks, unexpected expenses and financial experience of older Americans", by Anna Rappaport

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Sam Gutterman, FSA, FCAS, MAAA, CERA, HonFIA

2017 LIVING TO 100 SYMPOSIUM

Health technology, health care cost, longevity, and retirement security, by Daniel Bailey

- Indicated scope of paper is daunting
  - U.S. health care costs now more than 1/6th of GDP and will be more than 1/5th within a decade (author projects to be more than 1/4th)
  - Increased longevity is inter-connected with increased health care costs
- Commonly raised point – most health care costs spent in last year of life
  - But with age of death deferred, period of intensive acute care tends to decrease
  - Increased longevity tends to defer the timing of this care
  - However, as pointed out, could increase cost of long-term services and supports (LTC)
    - Will increase prevalence, but at least utilization rate of nursing homes has decreased
    - Insufficient societal attention has addressed this issue

Health technology, health care cost, longevity, and retirement security, by Daniel Bailey

- Health care costs are described as:
  - General cost of living inflation + excess health inflation
  - New and more sophisticated health care goods and services are being delivered more frequently (referred to as the effect of medical technology)
  - Components of technology that increase costs
    - Growth in population
    - Aging
    - Effect of mandates
    - Increased and possibly over-use of costly diagnostics
    - Increase in available pharmaceuticals
    - Increase in chronic diseases
    - Medical waste and corruption
    - Limited improvement in prevention
      - Less emphasis than other countries
    - Increase in entitlement to care

Health technology, health care cost, longevity, and retirement security, by Daniel Bailey

- Offseting factors and possibly improved care from
  - Use of primary physician as gatekeeper to more specialized care
  - Improved diagnostics
  - Gradual increased emphasis on prevention
  - End-of life care: increased use of less expensive palliative and hospice care
- Properly notes that many factors involved are complicated – can both increase and decrease cost of different aspects of care
  - Preventive care
  - Computerized records
    - May require additional staff who have insufficient medical training
- Key international issue is that the U.S. has a higher cost of health care and shorter longevity than other OECD countries – many contributing factors to this differential
- Net result is and will be an increase in percentage of GDP devoted to health care

Health technology, health care cost, longevity, and retirement security, by Daniel Bailey

- My personal formulation, affecting traditional categories of: utilization, intensity and price
  - General inflation
  - Demographic factors
    - Increase in population, aging
  - Demand factors
    - Increase in mandates (more care provided, data coding), changes in behavior, reduced mortality from certain medical conditions that result in multiple simultaneous adverse health conditions, fewer uninsureds, behavioral factors such as reaction to cost-reimbursement (cost-sharing), relative access
  - Supply factors
    - High-tech discoveries, fewer oligopolistic providers, spending/investment/pricing of pharmaceuticals
  - Quality factors
    - Increase in use of specialists, defensive medicine, personalized medicine
  - Efficiency factors
    - Administrative factors -- more reporting, red tape, box-ticking for rules-sake, excess productivity

Health technology, health care cost, longevity, and retirement security, by Daniel Bailey

- As author points out, the health care system of any "advanced" country is a significant, costly and complicated system – this paper, although it covers many factors, only touches the surface of the cost issues involved
  - Also it is fragile and subject to political whims
- Net excess results in increase in percentage of GDP – recent history of CMS approach to long-term costs involves grading from current level to ultimate (25-75 years)
  - 2000 Tech Panel – GDP + 1%
  - 2006 Trustees – decreasing excess to 0% in 75 years, with long-term equivalent of GDP + 1%
  - 2010 Tech Panel – 2006 approach, modified for Part A to reflect ACA productivity improvements
  - 2012 Trustees – Factors contributing to growth model: decomposes health spending growth into its major drivers—income growth, relative medical price inflation, insurance coverage, a residual factor that primarily reflects the impact of technological development and limits to growth, or GDP – 0.2%

Financial shocks, unexpected expenses and financial experience of older Americans, by Anna Rappaport

- Overall, excellent presentation of financial issues and risks of pre-retirees and retirees
- It reviews results of recent surveys and focus groups
  - Sample focus group observations included in appendix are especially worthwhile
  - Household income data indicates to me that replacement rates and needs analysis should be conducted by income or wealth category (or a surrogate) wherever possible
    - As pointed out, averages can be deceiving
  - Evaluates risks to individuals, especially unexpected costs (I especially like the examples of home repairs and dental needs)

Financial shocks, unexpected expenses and financial experience of older Americans, by Anna Rappaport

- Particularly interesting points
  - 52% have no investments
    - Begs the question of what options will these people have
  - As indicated in Exhibit IV of the paper, about half of those age 70 and older indicated that they could easily pay for $1,000 unexpected expense
    - But as shown in Exhibit III, 70% of all ages, suggesting that "older" people may be in a better financial situation than those who are working
    - Retirees are financially resilient – possibly we should upgrade our attention those younger than retirement age
  - Due to longer longevity
    - Estimated that (only) 29% probability a median household will have positive wealth at death
      - This probability is likely to increase with increasing longevity
    - LTC will be an even greater issue in the future (2030s + when baby boomers begin to reach 85)

Financial shocks, unexpected expenses and financial experience of older Americans, by Anna Rappaport

- Points out the importance of management of housing asset
  - 63.5% overall home-ownership rate in 3rd quarter 2016, down from a peak of 69.2% in 2005
  - 79.0% ages 65+, 74.9% ages 55-64, 69.1% ages 45-54, 58.4% ages 35-44
  - 71.9% whites, 47.0% Hispanic, 41.3% blacks
  - 77.8% of households with greater than median income, 49.2% with less than median income
  - Suggest further research – possibly homes of the elderly may have less market value and more repairs because of older homes, with those with higher income with less relative debt

source: U.S. Census

Financial shocks, unexpected expenses and financial experience of older Americans, by Anna Rappaport

- Would have liked to have seen more information regarding single versus married
- Paper notes that there is a spread between actual and expected incidence of working to older ages
  - Speculatively, a significant percentage is due to health deterioration, but useful to confirm
  - Include as separate categories those who work full-time or part-time or volunteer