SOCIETY OF ACTUARIES

Article from:

In The Public Interest

January 2014 – Issue 9

WHAT DO WE KNOW ABOUT THE OLDEST OLD?*

*By Jonathan Barry Forman****

Editor's Note: *This article by Jonathan Forman was based on a paper presented at the recent Living to 100 Symposium, Jan. 8–10, 2014, in Orlando, Fla. The fifth in the series, this symposium featured more speakers, panel discussions on the implications of aging, and networking opportunities than in the past. To view past monographs and more information on this Living to 100 international research symposium, see* http://livingto100.soa.org/.

Longevity risk—the risk of outliving one's retirement savings—is probably the greatest risk facing current and future retirees in the United States. As life expectancy increases, more and more Americans will live to ages 90 and even 100, and we will need to figure out how to ensure that they will have adequate retirement incomes. As a preliminary matter, this article focuses on what we know about today's oldest old, here defined as those aged 90 and over (90+).[1]

BASIC DEMOGRAPHICS OF THE OLDEST OLD (90+)

According to the National Center for Health Statistics, life expectancy at age 65 in the United States increased from 11.6 years in 1909 to 1911 to 18.8 years in 2008 (See Table 1).[2] People at

very old ages are also expected to live longer. For example, those age 80 can now expect to live, on average, another 8.9 years (versus 5.25 years in 1909 to 1911), those age 90 can now expect to live another 4.5 years (versus 3.03 years in 1909 to 1911), and those age 100 can now expect to live another 2.2 years (versus 1.85 years in 1909 to 1911).

Table 1. Life Expectancy by Age, 1909–1911, 1949–1951, and 2008

	Average Number of Years of Life Remaining		
Age	1909-1911	1949-1951	2008
0	51.49	68.07	78.1
65	11.60	13.83	18.8
70	9.11	10.92	15.2
75	6.99	8.40	11.8
80	5.25	6.34	8.9
85	4.00	4.69	6.4
90	3.03	3.44	4.5
95	2.35	2.54	3.1
100	1.85	1.92	2.2

Source: Elizabeth Arias, *United States Life Tables, 2008,* 61(3) NATIONAL VITAL STATISTICS REPORTS (Sept. 24, 2012), p. 52 tbl. 21.

Jonathan Barry Forman, is an Alfred P. Murrah Professor of Law at the University of Oklahoma College of Law. He can be contacted at *jforman@ou.edu.*

These prolonged life expectancies at older ages have led to the growing size of the oldest segments of the population. For example, out of a total U.S. population of 310 million in 2010, 40 million (12.9 percent) are aged 65 or older (65+), and as the total population is expected to grow to 439 million in 2050, the 65+ population will more than double, to 88.5 million (20.2 percent).[3] Pertinent here, the 90+ population increased from 720,000 in 1980 to 1.9 million in 2010[4] and is projected to quadruple by 2050, to more than 8.7 million.[5]

The oldest old also account for an increasing share of the older population. For example, those 90+ accounted for 2.8 percent of the older population (65+) in 1980, 4.7 percent of the older population in 2010, and they are projected to account for 9.9 percent of the older population in 2050.[6] All in all, in 2050, around 20 percent of the total U.S. population will be elderly (65+), and one-tenth of the elderly will be 90+ (that is, 2 percent of the total population).

The oldest old (1,761,770 in 2006 to 2008) are overwhelmingly white (88.1 percent) and female (74.1 percent).[7] Most are married (15.8 percent) or widowed (75.1 percent). Most are high school graduates or beyond (61.4 percent).[8] Also, almost all are covered by health insurance: for example, 99.5 percent of the oldest old were covered by health insurance in 2008, with 98.8 percent getting Medicare and 28 percent also receiving Medicaid.[9]

The oldest old had a median annual income of $14,760 in 2006 to 2008 (in 2008 inflation-adjusted dollars), although the men had a significantly higher median annual income ($20,133) than the women ($13,580).[10] Also, 14.5 percent (198,090) of the oldest old were poor in 2006 to 2008, 9.6 percent of the men and 16.5 percent of the women. Pertinent here, the poverty rate increases with age: for example, just 9.6 percent of people aged 65 to 89 were poor in 2006 to 2008.[11]

Disability and institutionalization generally increase with age. For example, just 1.5 million (3.6 percent) of the 65+ population were institutionalized in 2011, but that rate increases dramatically with age, ranging from 1 percent for persons aged 65 to 74, to 3 percent for persons aged 75 to 84, and to 11 percent for persons 85+.[12] As for the oldest old (90+), the vast majority (84.7 percent in 2006 to 2008) reported having at least one disability-type limitation (i.e., difficulties in hearing; seeing; concentrating, remembering, or making decisions; walking or climbing stairs; dressing or bathing; and doing errands alone).[13] And 22.7 percent of the oldest old were institutionalized in facilities such as nursing homes (about 14.5 percent of men and 25.5 percent of women).[14]

Pertinent here, the 2010 Census counted 53,364 centenarians (people age 100 and over, 100+),[15] and the number of these centenarians is projected to grow to 601,000 in 2050.[16] Over half (62.5 percent) of the 53,364 centenarians in the United States in 2010 were age 100 or 101, and 92 percent were 100 to 104.[17] There were also 330 supercentenarians (people age 110 and over) in the United States that year. As with the oldest old, centenarians are overwhelmingly white (82.5 percent)[18] and female (82.8 percent).[19] Also of note, 35.2 percent of centenarian females and 18.2 percent of centenarian males lived in nursing homes.[20]

Finally, residence patterns also tend to vary with age.[21] In particular, there is a tendency toward living in urban areas as one ages. For example, 85.7 percent of centenarians lived in urban areas in 2010, compared with 84.2 percent of those in their 90s (nonagenarians), 81.5 percent of those in their 80s, and 76.6 percent of those in their 70s.[22] Also, while the states with the largest total populations generally also have the highest number of oldest old, the Northeast and Midwest had greater concentrations of nonagenarians and centenarians than the South and West.[23] For example, while nonagenarians made up 0.59 percent of the national population in 2010 (59 per 10,000 population), nonagenarians made up 0.74 percent of the population in the Northeast and 0.67 percent of the population in the Midwest, compared to just 0.51 percent in the South and 0.53 percent in the

West. Not surprisingly, California, New York, and Florida had the most nonagenarians, while Alaska and Wyoming had the fewest; meanwhile, North Dakota had the largest concentration (0.93 percent) of nonagenarians and Alaska had the lowest (0.20 percent).

SOURCES OF INCOME OF THE OLDEST OLD (90+)

Social Security is the most common source of income for households aged 65 or older. For example, in 2010, 86.3 percent of households aged 65 or older received Social Security benefits.[24] Moreover, Social Security provided more than half of total income for 53.1 percent of aged beneficiary couples and 74.1 percent of aged single beneficiaries.[25] Just 39.7 percent of households received retirement benefits from sources other than Social Security, and 51.9 percent received income from other assets.[26]

In 2006 to 2008, 92.3 percent of the oldest old received income from the Social Security Administration, with 86.2 percent receiving only Social Security income, 3.0 percent collecting only Supplemental Security Income (SSI), and 3.1 percent receiving both.[27] All in all, Social Security provides almost half (47.9 percent in 2006 to 2008) of personal income for the oldest old (See Figure 1).[28] Pension and retirement income accounted for another 18.3 percent, earnings for 2.2 percent, SSI for 1.9 percent, and other income (e.g., interest, dividends, net rental or royalty income, welfare, and all other income) accounted for 29.8 percent.

Significantly, the sources of income tend to change as individuals age. In particular, labor income declines as more and more workers retire. For example, according to one recent analysis of data from the Health and Retirement Study (HRS), earnings provided 11.9 percent of the income of those aged 65 to 74 in 2009, but just 3.5 percent of the income of those aged 75 to 84 and just 0.5 percent of the income of those aged 85+.[29] Pension and annuity income initially increased from 17.1 percent of income for those

Figure 1. Income Sources of Population Aged 90 and Over: 2006-2008
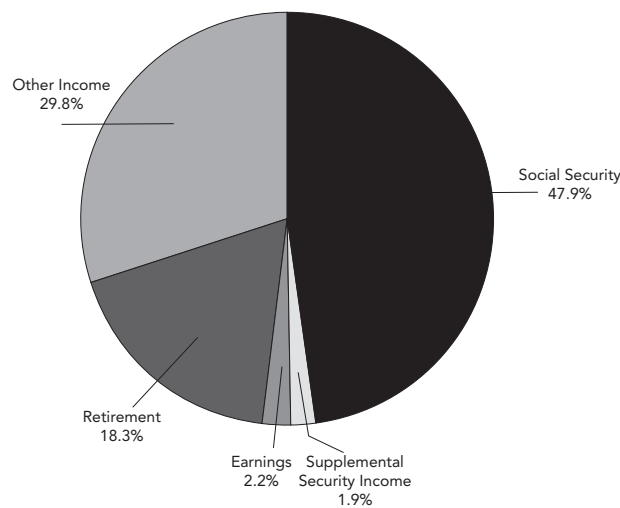
Source: Wan He & Mark N. Muenchrath, 90+ in the United States: 2006 to 2008 (U.S. Census Bureau Report No. ACS-1, 2011), p. 10 Fig 7.

aged 65 to 74 to 18.4 percent for those aged 75 to 84, before falling to just 15.3 percent for those aged 85+. On the other hand, Social Security benefits went from 53.9 percent of income for those aged 65 to 74, to 60.6 percent of income for those aged 75 to 84, and to 65.7 percent for those aged 85+.[30] That analysis of HRS data also considered the relationship between the income and expenditures of elderly households: in 2009, for example, 37.2 percent of those aged 65 to 74 had household incomes that were less than their expenditures, increasing to 43.9 percent for those aged 75 to 84 and to 46.3 percent for those aged 85+.[31]

SO WHO LIVES TO BE 90+?

A slightly different way of thinking about the oldest old is to ask which Americans live long enough to reach the oldest old (90+) age group. The answer to this question is especially important when it comes to deciding how to improve social insurance programs, pensions, and other financial products.

As already noted, the oldest old are overwhelmingly white (88.1 percent in 2006 to 2008) and female (74.1 percent in 2006 to 2008). On average, those who survive to 90 are more educated and had higher incomes than their deceased peers.[32] In that regard, it is well established that people with higher incomes tend to live longer than people with lower incomes.[33] The oldest old are also more likely to have been married than their peers,[34] and they also had more pension and non-pension savings and wealth.[35]

HOW WILL WE SUPPORT THE OLDEST OLD?

A variety of approaches will be needed to ensure that these oldest old have adequate incomes throughout their lives. As the years go by, social insurance programs like Social Security, Supplemental Security Income and Medicaid will undoubtedly need to be expanded. We also need to encourage workers to work longer and save more for their eventual retirements, and to annuitize more of their retirement savings.

While these kinds of solutions seem fairly obvious, the answers to two important policy questions have yet to be decided. First, how much will the government require the oldest old to save earlier in their lives? And second, how much will the government redistribute to benefit the oldest old? Unfortunately, if the history of the Social Security system is any indication, both government mandates and redistribution will be modest, and a significant portion of the oldest old will face their final years with inadequate economic resources.

ENDNOTES

* Copyright © 2013, Jonathan Barry Forman. This article is drawn from Jonathan Barry Forman, Supporting the Oldest Old: The Role of Social Insurance, Pensions, and Financial Products, prepared for the Society of Actuaries' International Symposium on Living to 100 (Orlando, Fla., January 8–10, 2014). This will be the fifth in the Living to 100 symposium series. Symposia are held every three years, and provide insights valuable to actuaries in several practice areas. For more details, see http://livingto100.soa.org/.

** Alfred P. Murrah Professor of Law, University of Oklahoma; B.A. 1973, Northwestern University; M.A. (Psychology) 1975, University of Iowa; J.D. 1978, University of Michigan; M.A. (Economics) 1983, George Washington University; member of the board of trustees of the Oklahoma Public Employees Retirement System, 2003–2011.

[1] The term "oldest old" is alternatively defined as people aged 85 and older (85+) or as people aged 90 and older (90+). See, e.g., Wan He & Mark N. Muenchrath, 90+ in the United States: 2006–2008 (U.S. Census Bureau Report No. ACS-17, 2011), p. 1 box. This article uses the 90+ definition, although sometimes 85+ data are all that is available.

[2] Elizabeth Arias, United States Life Tables, 2008, 61(3) National Vital Statistics Reports (Sept. 24, 2012), p. 52 tbl. 21.

[3] Grayson K. Vincent & Victoria A. Velkoff, The Next Four Decades: The Older Population in the United States: 2010 to 2050 (U.S. Census Bureau Report No. P25-1138, 2010), p. 10 tbl. A-1, and author's computations.

[4] He & Muenchrath, p. 2.

[5] Vincent & Velkoff, p. 10 tbl. A-1. Similarly, the number of Americans aged 85 and over (85+) is projected to increase from 5.7 million in 2011 to 14.1 million in 2040. Administration on Aging, U.S. Department of Health and Human Services, A Profile of Older Americans: 2012 (2013), p. 1.

[6] He & Muenchrath, p. 2.

[7] Ibid, p. 24 tbl. A-1, and author's computations.

[8] Ibid, pp. 8-9, 24 tbl. A-1, and author's computation.

[9] Ibid, p. 18.

[10] Ibid, p. 24 tbl. A-1.

[11] Ibid, p. 11.

[12] Administration on Aging, p. 5.

[13] He & Muenchrath, pp. 15-16.

14   Ibid, p. 14.

15   Julie Meyer, Centenarians: 2010 (U.S. Census Bureau Report No. C2010SR-03, 2012), p. 1. There were 1.73 cen-
     tenarians per 10,000 people in the United States in 2010, up from just 1.42 per 10,000 in 1980. Ibid, pp. 1 fig.1,
     13.

16   U.S. Census Bureau, Older Americans Month: May 2011 (U.S. Census Bureau, Profile America Facts for
     Features No. CB11-FF.08, March 23, 2011).

17   Meyer, p. 2.

18   Ibid, p. 3.

19   Ibid, p. 2.

20   Ibid, p. 5 fig. 4.

21   Ibid, p. 9. Pertinent here, life expectancy at age 65 also varies from state to state. Man-Huei Chang, Heba
     Athar, Paula W. Yoon, Michael T. Molla, Benedict I. Truman, & Ramal Moonesinghe, State-Specific Healthy
     Life Expectancy at Age 65 Years — United States, 2007–2009, 62(28) MORBIDITY AND MORTALITY WEEKLY REPORT
     (Centers for Disease Control and Prevention, July 19, 2013).

22   Meyer, p. 9

23   Ibid, pp. 8 tbl. 2, 9.

24   SOCIAL SECURITY ADMINISTRATION, INCOME OF THE AGED CHARTBOOK, 2010 (2012), p. 8; see also Sudipto Banerjee,
     Income Composition, Income Trends, and Income Shortfalls of Older Households (Employee Benefit
     Research Institute, Issue Brief No. 383, 2013); Barbara A. Butrica & Mikki D. Waid, What Are the Retirement
     Prospects of Middle-Class Americans? (AARP Public Policy Institute, Middle Class Security Project Paper No.
     2013-01, 2013).

25   SOCIAL SECURITY ADMINISTRATION, p. 9.

26   Ibid, p. 8.

27   He & Muenchrath, pp. 9-10.

28   Ibid, p. 10 fig. 7.

29   See, e.g., Banerjee, p. 6 fig. 1. Note that the labor, Social Security, and pension income data in the Health
     and Retirement Study can differ significantly from that reported in the Current Population Survey. Ibid, p. 7.

30   No doubt, it helps immeasurably that Social Security benefits are indexed for inflation.

31   Banerjee, p. 9.

32   See, e.g., CONGRESSIONAL BUDGET OFFICE, GROWING DISPARITIES IN LIFE EXPECTANCY (2008); Michael A. Fletcher,
     Research ties economic inequality to gap in life expectancy, WASHINGTON POST, MARCH 10, 2013; Ellen Meara,
     Seth Richards & David Cutler, The Gap Gets Bigger: Changes in Mortality and Life Expectancy by Education,
     1981–2000, 27(2) HEALTH AFFAIRS 350 (2008) (finding that virtually all gains in life expectancy occurred among
     highly educated groups).

33   See, e.g., Hilary Waldron, Mortality Differentials by Lifetime Earnings Decile: Implications for Evaluations of
     Proposed Social Security Law Changes 73(1) SOCIAL SECURITY BULLETIN 1 (2013); Gopal K Singh & Mohammad
     Siahpush, Widening socioeconomic inequalities in US life expectancy, 1980–2000, 35(4) INTERNATIONAL JOURNAL
     OF EPIDEMIOLOGY 969 (2006); Hilary Waldron, Trends in Mortality Differentials and Life Expectancy for Male
     Social Security–Covered Workers, by Average Relative Earnings (Social Security Administration, Office
     of Policy, Office of Research, Evaluation, and Statistics Working Paper No. 108, 2007); Gary Burtless, Life
     Expectancy and Rising Income Inequality: Why the Connection Matters for Fixing Entitlements (Brookings,
     Oct. 23, 2012).

34   See, e.g., U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning
     and Evaluation, Office of Human Services Policy, The Effects of Marriage on Health: A Synthesis of Recent
     Research Evidence 5-6 (2007).

35   See, e.g., Banerjee (discussing the income and assets of the elderly).