Retirement Insecurity

The Financial Status of NH's Older Women and the Implications for Public Policy

May 2009

The New Hampshire
WOMEN'S POLICY
Institute

Retirement Insecurity
The Financial Status of NH's Older Women and the Implications for Public Policy

Authors:

Peter Antal, Ph.D., Antal Consulting LLC

Katherine Merrow

Peter Francese, The New England Economic Partnership

About the NH Women's Policy Institute
The NH Women's Policy Institute is a non-partisan, non-profit research organization dedicated to informing policies and decision-making related to women in New Hampshire. The Institute was founded in 2002 on a belief that credible, unbiased data on issues affecting women can inform meaningful policy change, enable the public and private sectors to work together more effectively, and advance the well-being of women in this state.

CONTENTS

Executive Summary

Nationally, one-half of middle class working families will run out of money during retirement (Munnell, Webb & Golub-Sass, 2007), and, as documented in this report, women will represent the majority of those who will be financially insecure during their retirement years. Older women's economic vulnerability has implications for them as individuals, their families, communities, and the public at large. As women live longer, they will continue to experience health challenges as they age, face rising fuel costs as well as cost of living increases - all while living on a fixed income that is expected to be substantially lower than what is available for men. In light of this, the New Hampshire Women's Policy Institute has observed that state-level policy changes that could increase savings for current and future generations and help stave off financial crisis have not received sufficient public debate or study.

This report provides the first-ever in-depth analysis of the financial status of New Hampshire's women ages 65 and over, defining what it takes to be economically secure and estimating who and how many of the state's older women are at risk both now and in the future. It projects some of the public costs of retirement insecurity among future women retirees in New Hampshire, and recommends policies that could increase personal savings and continued independence. Among the Institute's major findings:

- Women's lower income during retirement years is driven by a disparity in lifetime earnings between women and men. Much of this disparity has been due to differences in: pay rates, labor force participation in full-time and part-time work, as well as women's primary role as caregivers for family and others in their communities. **The estimated lifetime cost of caregiving is $659,139.**

- New Hampshire women 65 and over who live alone have the lowest incomes among the state's older population. They are at the greatest risk of not being able to pay housing or health care costs, and of increasing their dependency on public tax dollars for a range of state programs. **Sixty-two percent of older women living alone have incomes below what is needed to cover basic costs of living.**

- Based on New Hampshire's 2006 Livable Wage Study, the Institute estimates an older women living alone needs approximately $20,000 per year to cover the basic costs of living, just over twice the federal poverty level. **Approximately 28,000 women 65 and over in New Hampshire had household incomes below that level in 2007; if income distributions remain the same, that figure is expected to grow to 49,000 by 2020.**

- The lack of financial security is a major driver for public benefit programs as New Hampshire residents age. Taking Medicaid spending as an example, it is estimated that **spending on women aged 65 and over in 2020 is expected to cost New Hampshire taxpayers $330 million.**[1]

Not only do women represent the majority of those in New Hampshire needing public care in their old age; they also represent the majority of those who are *providing* care to New Hampshire's aging population. ***This puts women at the center of one of the most significant challenges facing the public sector today—how to fund and provide care for New Hampshire's aging population.***

In light of the current economic climate, women are struggling even more to ensure adequate resources for their retirement. With spousal or personal pension losses, income loss from wages or investments and increasing health care costs, the crisis of today's economic downturn leads to losses many women will never recover.   One significant factor that exacerbates the negatives in a downturn is that many women are risk-adverse. Often, when a woman loses 40% to 50% of her resources, she takes what remaining funds she has out of stocks and changes investment tools to more secure, low-yield money market funds for example. Upon doing this she loses the opportunity to regain her losses when the market improves, putting her further behind in her saving strategy for her retirement years. Improving financial literacy among women would be one way to help women make more informed decisions and lead to better outcomes. In addition to financial literacy, there are a number of other actions that can be taken to improve the retirement outcomes for women.

Recommendations:

There are a range of policies and activities which can be implemented now, many with no or minimal immediate cost that will help to ensure that the women of New Hampshire are able to live out their lives in the homes of their choosing and as a continued social, economic and political force in their communities. A full description of these options is provided at the end of the report.

- **State-Sponsored Voluntary Retirement Program**
  A number of states are working on state-sponsored voluntary retirement savings plans. Much like the current 529 college savings plans, these plans have the state set up a program to provide the vehicle for individual savings accounts, but do *not* entail state funding of contributions or matching funds for the account.

---

[1] Based on medical care inflation for 2020 of 4.3%, an anticipated population growth of 78% and federal match of 50%. In FY 2006, New Hampshire spent 29% of general fund expenditures on Medicaid.

- **Automatic Enrollment into Private Retirement Plans**
  Having employees automatically enrolled in a retirement plan unless they choose to opt out has been shown to increase participation rates in employers' retirement plans. In one study automatic enrollment increased women's participation rates from 35% to 86%.

- **Targeted Educational Seminars on Retirement Savings**
  Private employer educational seminars that are targeted to the particular needs of the audience are associated with higher participation rates and contribution levels.

- **Encourage Local Ordinances That Support Older Women Living with Family**
  The data show that older women who are living with others (often their children) have significantly higher household incomes than those who are married or living alone. Community leaders could ensure that local ordinances do not restrict the development or use of 'mother-in-law' apartments, or could go farther to encourage these arrangements.

- **Education for Women to Advance Their Careers and Earnings**
  Scholarships for adult learners could increase the number of women and men who would further their education, and go on to get a degree during their career, thus increasing their opportunities for higher wages.   Scholarships for nontraditional occupations for women could increase options for higher wages as well.

A Note about the Data

This report is based on an analysis of the public use microdata sample (PUMS) for New Hampshire from the U.S. Census Bureau's American Community Survey (ACS).   The Institute combined four years of PUMS data (2003-2006) to create a database of sufficient size to support analysis using methodology reviewed and approved by staff at the U.S. Census Bureau.   In cases where sampling size for the 2007 ACS PUMS was sufficient and appropriate, these data were used instead. Our findings, therefore, represent the most recent detailed analysis of socio-economic data on women's retirement in New Hampshire. Because many of the findings represent activity over a four year period, they are estimates presented with a broad brush, useful for identifying some of the major issues facing New Hampshire's population of older women today. Complete description of the Institute's methodology as well as estimated margins of error for analysis involving multiple years of PUMS data are provided in the last section of the report.
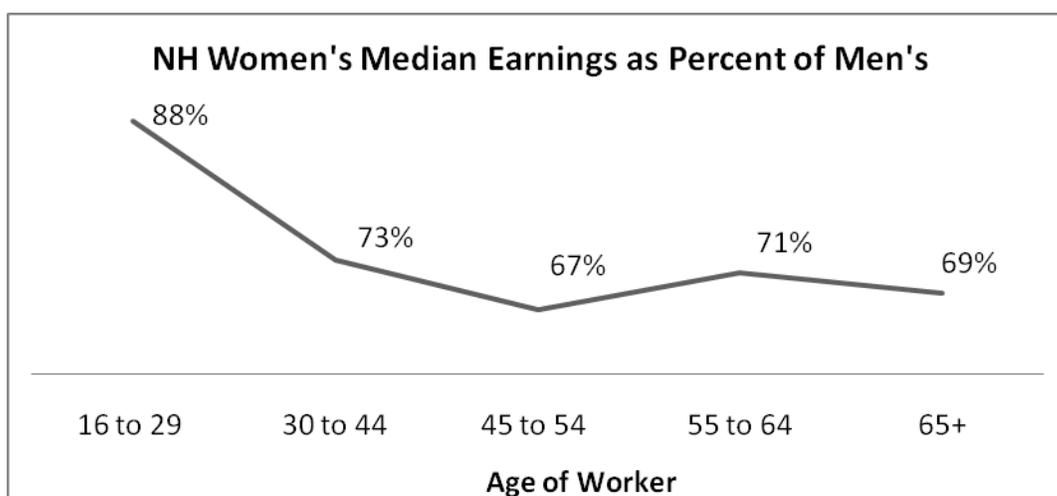
What are the major drivers of women's retirement insecurity?

Retirement security is important to everyone, both women and men. As a nation we are living longer, spending more, and saving less than prior generations. With skyrocketing health care costs that impact spending in later years of life, many older Americans are not financially prepared for their retirement years. As discussed below, there are four main reasons why women have a particular challenge in preparing for retirement: they earn less over the course of their lives, they are less likely to have retirement plans, and they live longer. In addition, studies have shown they tend to have lower levels of financial literacy. Below is a discussion of each of these major drivers of retirement insecurity.

Women have lower lifetime earnings

In New Hampshire, the median personal income for full-time working women is 70% of men's. This ratio is among the lowest in the country; the national average is 77%.[2] Although women's median earnings are closer to men's in their younger years (working women aged 16 to 29 earn 88% of what men earn on average), women's earnings relative to men's decreases with each age cohort, as shown below. The difference in earnings, particularly among older generations, is due to a number of factors, including differences in wages, occupational concentrations, entry and exit from the job market, part time work, and lifestyle choices (Venable, 2002). The cumulative effect of these factors over a woman's lifetime severely limits her financial security during her later years.

Figure 1: Women's Median Personal Income Compared to Men's, By Age of Full-Time Worker

NH Women's Median Earnings as Percent of Men's

88%

73%

67%

71%

69%

16 to 29   30 to 44   45 to 54   55 to 64   65+

Age of Worker

Source: 2003 - 2006 ACS NH PUMS Data

[2] Analysis of 2007 ACS Data. Note that women's median earnings is comparable between NH and the rest of the nation. The primary difference is that NH men's median income is substantially higher than the rest of the U.S.

4

Women are much more likely to work part-time.[3] In New Hampshire, approximately 35% of working women work part time, compared to 15% of working men, as shown in Figure 2.

Figure 2: NH Part-time and Full-time Workers by Gender
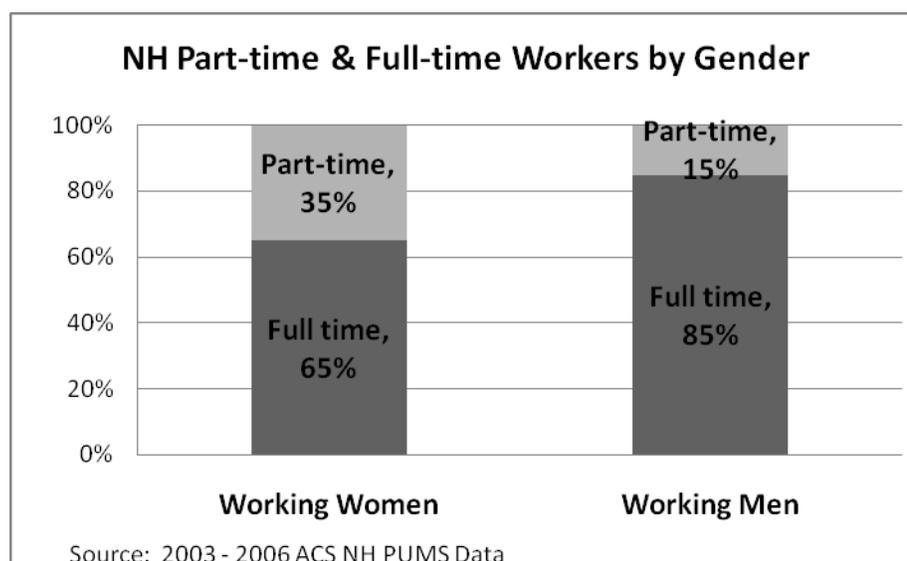
Women's role in family caregiving has a negative impact on savings

While both men and women stop working as they get older, labor force participation among those aged 45-74 is 9 percentage points lower for women when compared to men.[4] Similarly, the Social Security Administration reports that women spend about 12 years out of the workforce in their lifetimes, compared to one year for men (Social Security Administration, 2002). Much of this time is spent caring for family. Surveys of family caregivers have found that many women reduce their work hours as a direct result of their care-giving responsibilities, including taking leave, reducing hours, moving from full-time to part-time, and retiring early (Metlife Mature Market Institute, 1999). In addition, some caregivers reported that caregiving responsibilities interfered with their ability to advance in the workplace, also impacting their earnings. Caregiving was estimated to cost the average caregiver $25,494 in Social Security benefits, $67,202 in pension benefits and $566,433 in wage wealth. Combined, the result is a loss of $659,139 over a lifetime. In a review of the National Health and Retirement Survey, Wakabayashi and Donato (2006) noted that **women who had assumed caregiver roles during working years were 2.5 times more likely to live in poverty when they became older compared to women who had not been caregivers**.

---

[3] Venable, 2002
[4] 2007 New Hampshire ACS

Women live longer than men

According to the CDC's review of national 2003 data, women live over five years longer than men (80.1 yrs vs. 74.8 yrs). Women's longer life expectancy means there are more women in the elderly population, as illustrated in Figure 3.   In 2007, there were 724 more women than men in the 55-59 year age group; by 2020 women in this age group are expected to outnumber men by over 4,000. According to projections by the NH Office of Energy and Planning, the number of women in 2020 is expected to grow overall by 78%, exceeding the number of men over 65 by close to 27,000 people.

Figure 3: The Number of Women Compared to Men Increases with Aging Due to Longer Life Expectancy
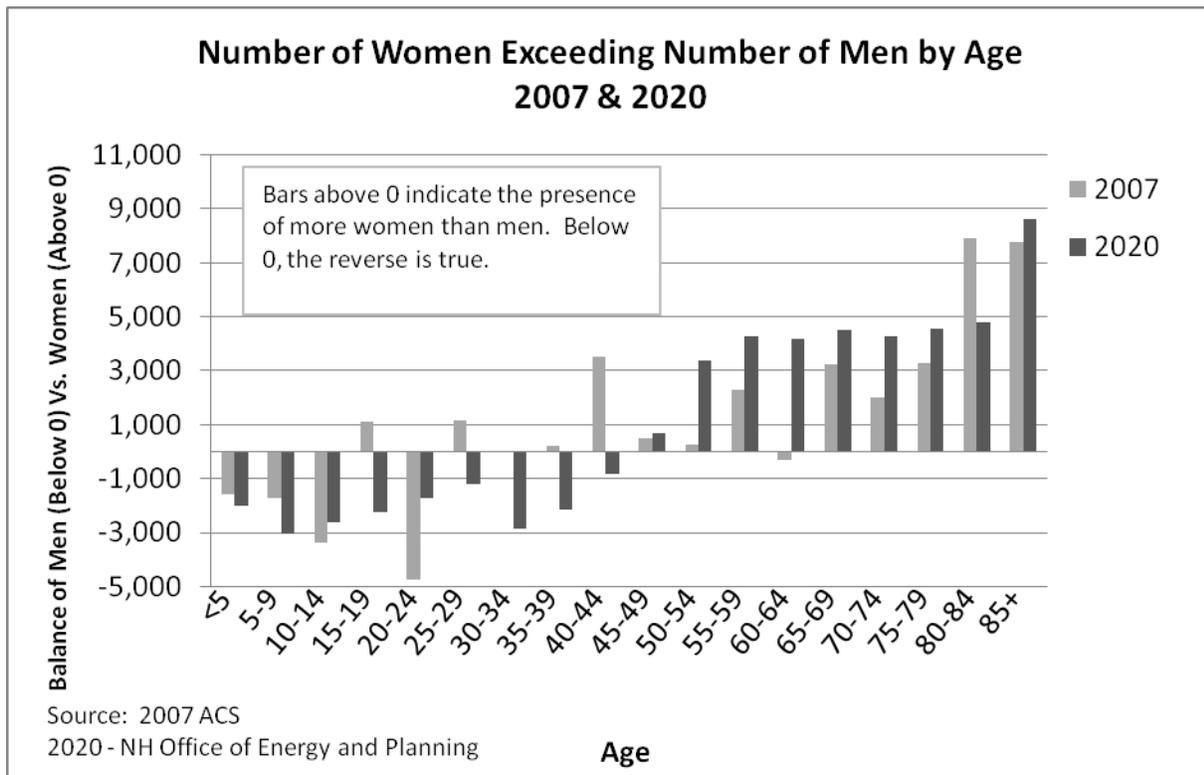
With women living longer, they will need more savings to last through their later years, years which are likely to be complicated by additional health problems. According to research cited in HRSA's 2007 report on the health status of women, approximately a quarter of women over 65 rate their health as fair or poor. As they aged, women were increasingly likely to report experiencing conditions of arthritis, diabetes, heart disease and stroke, hypertension, and osteoporosis. The report also provides statistics on the five leading causes of death among women: heart disease, cancer, stroke, respiratory diseases, and alzheimer's. In managing these and other illnesses, women are therefore more likely to develop some form of disability and/or become reliant on a host of expensive prescription-based medications.

Women tend to have lower financial literacy

Studies have shown women have lower levels of financial literacy in general than men (Lusardi and Mitchell, 2005) and many of them recognize that. In one survey, two out of three women said they did not have the financial education they needed.   Even a woman with substantial assets may not be secure if she does not have the financial education to manage her resources.

This lack of financial literacy is critical because a large percentage of women are, or will become, the sole financial decision-makers in their households—women are increasingly likely to live alone as they age. An estimated 38% of New Hampshire women 65 and over live alone, an increase of 20 percentage points over the 55 to 64 year-old age group, as shown in Figure 4.

Figure 4: The Percentage of Women Living Alone Increases With Age
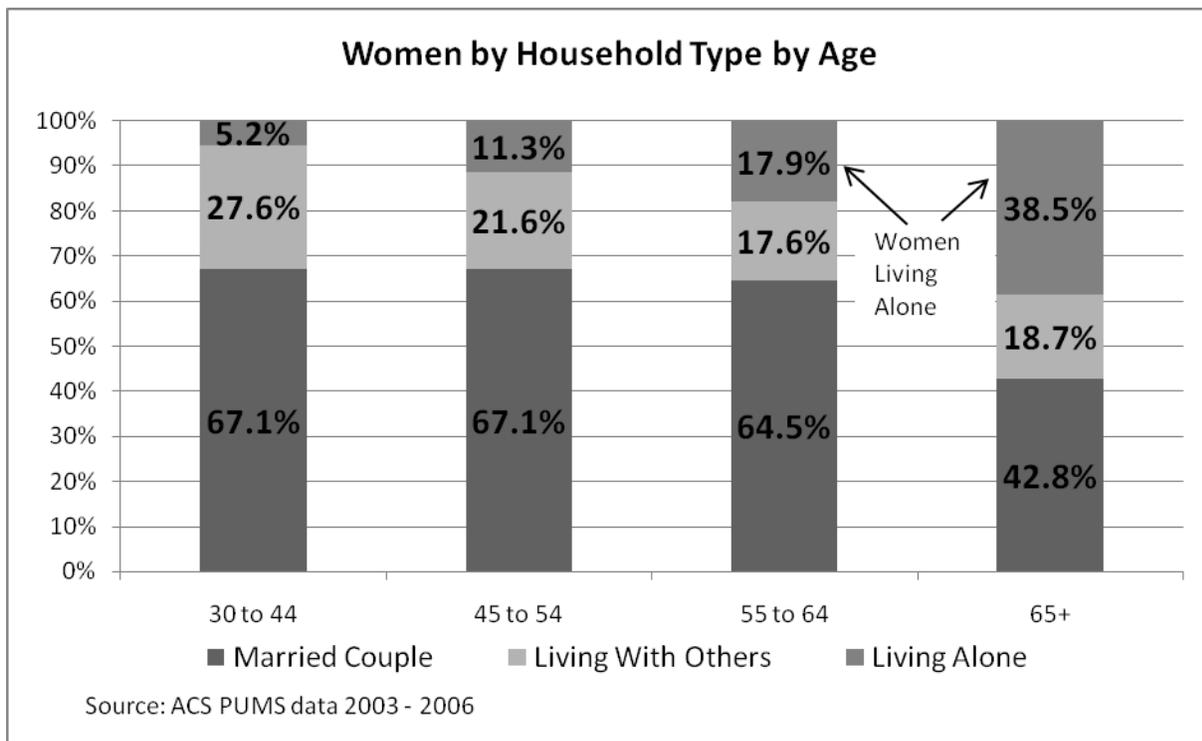
What does it take to be economically secure?

An older woman living alone in New Hampshire needs approximately $20,000 annually to cover her basic costs of living. This estimate is based on New Hampshire's 'Livable Wage" study (Kenyon, 2006), adjusted for inflation and to reflect elder spending patterns by decreasing spending for transportation and taxes and increasing spending for health care, as detailed below. In a related Massachusetts study of elder economic security, the basic costs of living for an

elderly couple ranged from $21,400 to $39,100 depending on housing, health and geography (Russell, Bruce, and Conahan, 2006).

Table 1: Estimated Basic Annual Costs of Living for Elders, Adjusted from 2005 NH Livable Wage Study

Spending Category	'Livable Wage' '05 costs	Adjusted For Elder	Explanation of adjustment
Food	$2,064	$2,064	
Health Care	$1,500	$3,480	Based on Mass. Elder Economic Security Standard[5]
Household and clothing	$1,920	$1,920	
Personal	$552	$552	
Rent and Utilities	$8,856	$8,856	
Telephone	$396	$396	
Transportation	$3,084	$2,035	Reduced by 33% for fewer miles driven.
Total Expenses	$18,372	$19,303	
Personal Taxes	$3,316	$0	Most seniors at this income level wouldn't pay taxes.
Annual Income needed 2005	**$21,683**	**$19,303**	
Inflation adjustment		$618	Added 3.2% inflation for 2005 - 2006
Annual Income Needed 2006		**$19,921**	

The Institute's total estimate of the basic costs of living is $19,921, which we round to $20,000 for the purposes of this analysis. This amount is based on costs for a renter; women who own their own home with no mortgage would pay less (approximately $15,000 according to the Massachusetts study of elder economic security). The estimates do not include any spending for long-term care or for serious health problems, so the Institute considers this a conservative estimate. This amount is over twice the federal poverty level of $9,800 for an individual in 2006.

It should be noted that these figures refer to household *income*, not assets. The Institute assumes a relatively low level of assets in households with income below $20,000. National research indicates a wealth to income ratio of 0.2 for households in the 'bottom third' in terms of income, that is, their assets average 20% of annual income. [6] In contrast, in households in the top third, assets averaged *twice* annual income. Based on these findings, households with $20,000 in income would have average assets of $4,000, which the Institute considers insufficient to offset spending on a regular basis, so the full $20,000 in income is needed.

---

[5] This estimate for health care includes premiums for supplemental health & drug coverage to Medicare and out-of-pocket costs for a person in 'good health.'

[6] Munnell, Golub-Sass, Perun, & Webb, 2007, based on men and women 62 years old in 2004.

Who's at risk for retirement insecurity?

Older Women

Figure 5 shows the estimated numbers of "baby boomers" and older women (age 65 and over) by household income level. Using 2007 ACS population estimates, there were 8,166 older women earning less than $10,000/yr in New Hampshire, making up 8.6% of the elderly women in the state. Another 19,655 or 20.7% have household incomes below $20,000, and so are at risk of financial hardship, for **a total estimate of 27,821 women who may be unable to afford basic goods and services**.[7]

Figure 5: Women in NH by Age and Household Income
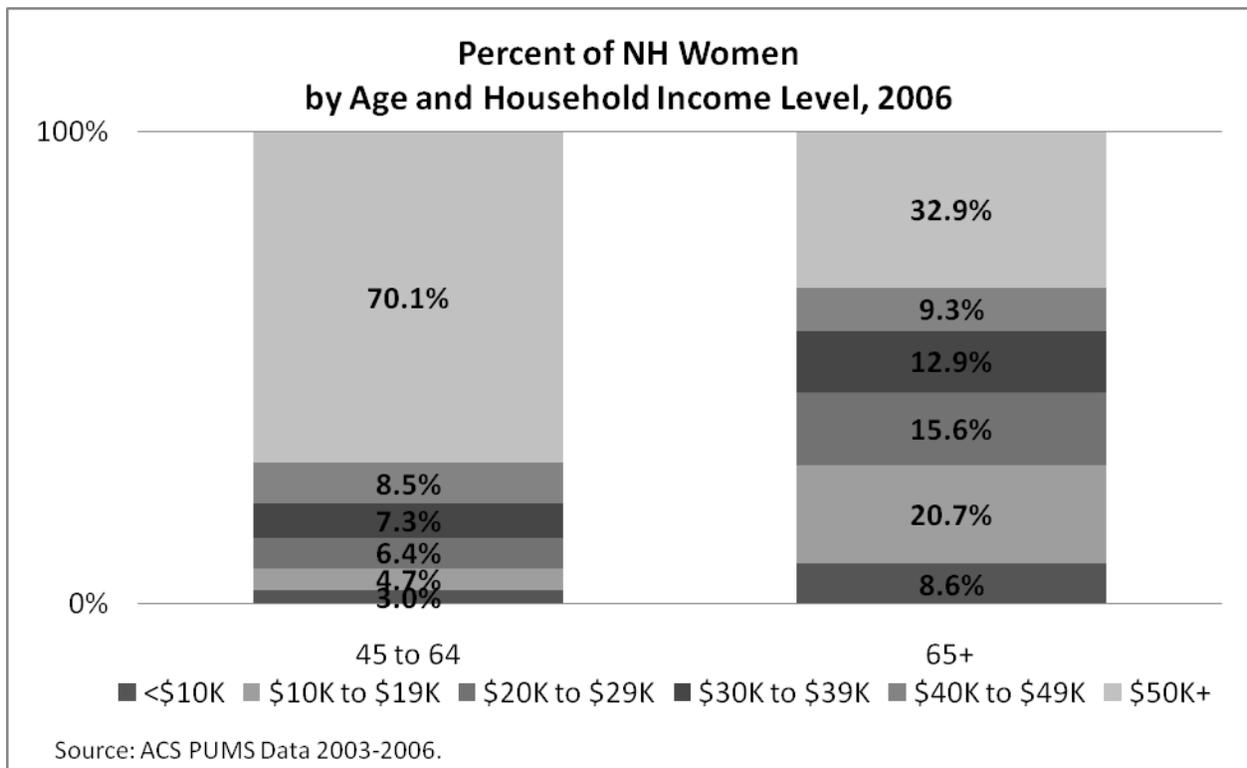
Women Who Live Alone

Older women who live alone have significantly lower incomes than those who are married or living with others. **More than 60% of older women living alone have household incomes below $20,000 and are thus at risk of not being able to meet the basic costs of living,** as shown in Figure 6. Median household income among older women living alone is $16,139; for married couples, it is $44,438, and for those living with others, it is $63,435.

---

[7] Note that the $20,000 estimate is what is needed for a woman living alone. Amount is likely substantially higher for two person families (about $30,000 using the MA study); thus, the actual number of women at risk for hardship would be higher.

NH Women 65+ Household Income Distribution By Household Type

Living Alone:
- <$20K: 62%
- $20-49K: 31%
- $50-79K: 4%
- $80K+: 3%

With Others:
- <$20K: 6%
- $20-49K: 32%
- $50-79K: 23%
- $80K+: 39%

Married:
- <$20K: 10%
- $20-49K: 47%
- $50-79K: 23%
- $80K+: 20%

Legend: ■ < $20K   ■ $20-49K   ■ $50-79K   ■ $80K+

Source: ACS PUMS Data 2003 - 2006
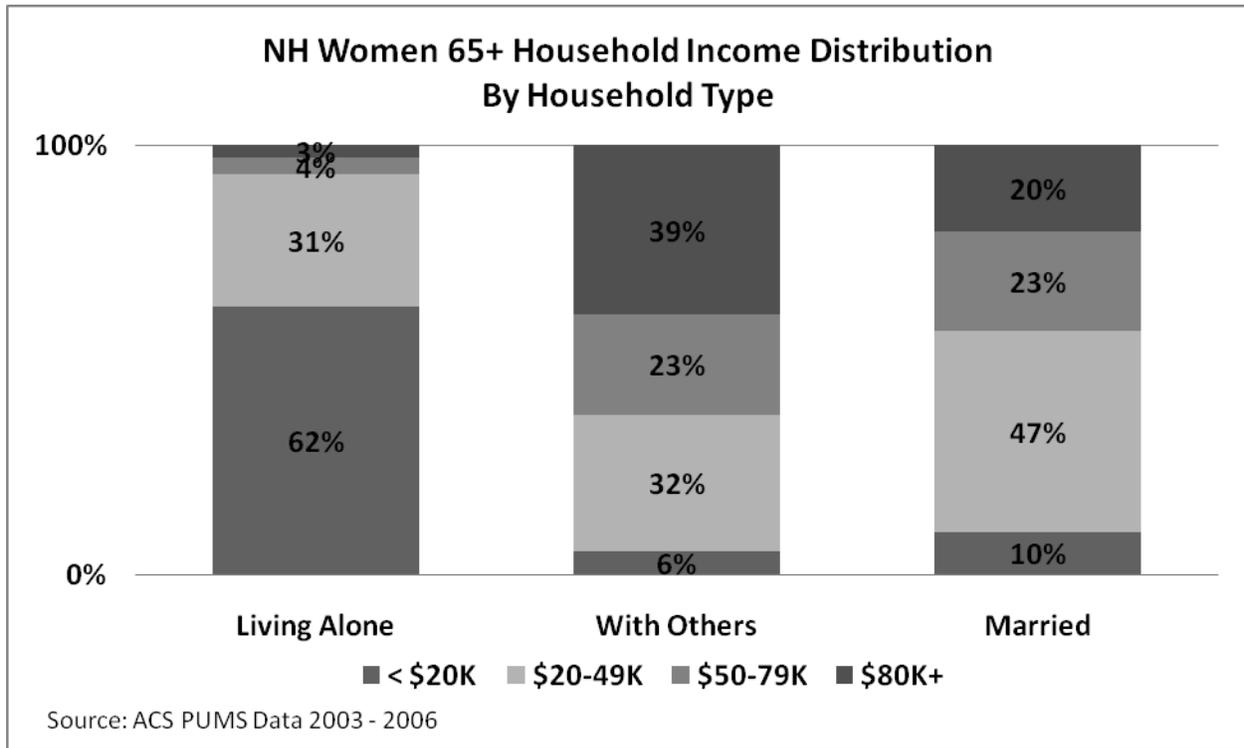
The higher household income among married older women or those living with others reflects a greater reliance on wages--presumably from a spouse or other household members. Women living alone rely more heavily on social security, and less on wages, as shown in Figure 7. The average social security benefit for woman ages 65 and over nationally was $10,303 in 2006; half the amount of a livable income. Nationally, 43% of all older unmarried women receiving Social Security benefits relied on Social Security for 90% or more of their income.[8]

Figure 7: Household Income by Income Type for NH Women Aged 65 and Older

Living Alone
- Wages: 13.0%
- SS/Retirement: 60.4%
- Additional: 22.3%
- Other: 4.4%

Legend: ■ Wages ■ SS/Retirement ■ Additional ■ Other

Source: ACS PUMS Data 2003 - 2006

Married
- 24.2%
- 54.3%
- 17.2%
- 4.3%

With Others
- 63.8%
- 25.9%
- 7.1%
- 3.2%

---
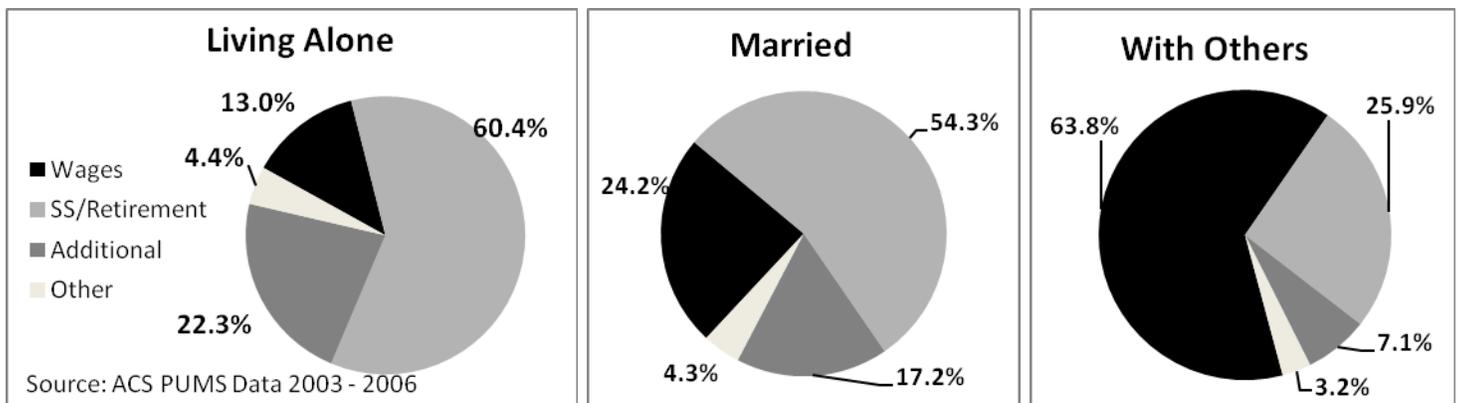
[8] Social Security Administration. http://www.ssa.gov/pressoffice/factsheets/women.htm Accessed 10/21/08.

One of the greatest challenges faced by older women is paying for the costs of housing.[9] Of older women who live alone, about 60% own their own homes; of this group, 28% still have mortgage payments. Those without a mortgage pay an average of 25% of their income for housing (see Figure 8); those with a mortgage pay 44% (Figure 9). For the 36% who rent their homes, rental costs take up an average of 44% of their income.[10]

Figures 8 and 9: Housing Expenses as Percent of Household Income

---
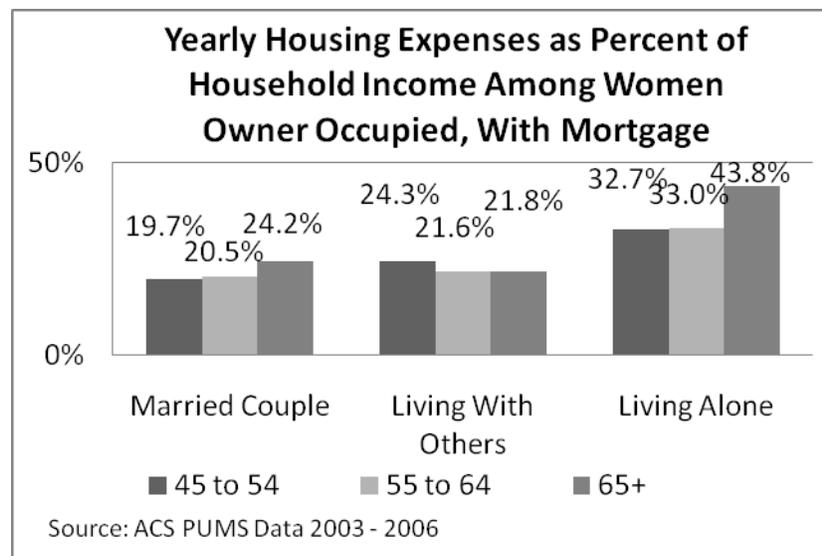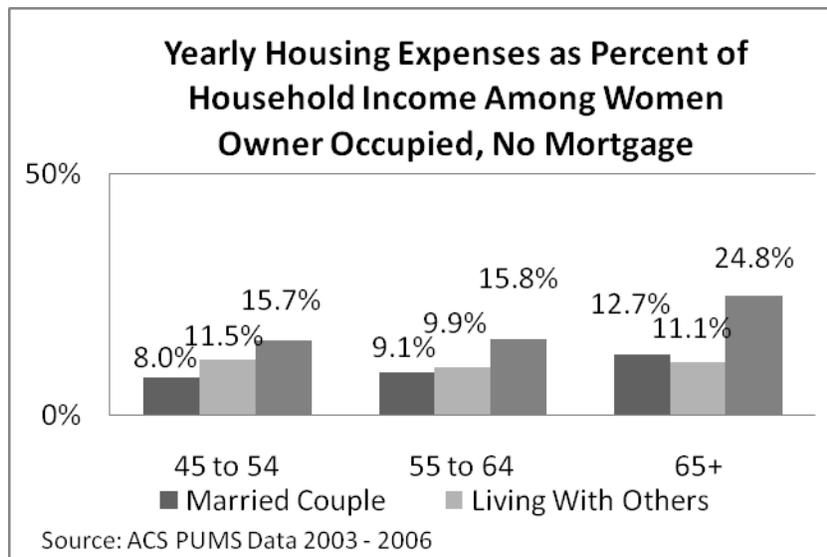
[9] Housing expenses include mortgages and other debts on the property, real estate taxes; property insurance, utilities, and fuel.
[10] Based on American Community Survey PUMS 2003 - 2006 estimates.

Even though married couples tend to have higher incomes, 10% have incomes below $20,000, putting them at even greater risk financially because that income has to support both the woman and her spouse.   Furthermore, while married women are generally more financially secure when family members are working, their retirement security is often dependent on their spouses. On average, married older women in New Hampshire have personal incomes equal to 26% of their total household incomes. [10] So, if an older woman's marriage ends in divorce or she becomes widowed, her income in many cases may not be sufficient to cover even the costs of housing, let alone the costs of living. While divorce is uncommon (there were 70 divorces in this age group in New Hampshire in 2006[11]), losing a husband to illness or old age is quite common. **Both divorce and widowhood are serious threats to older women's economic security.**

Even as older women find themselves more reliant on social security for their income, the benefits they gain from this program are influenced by issues of gender as well (Meyer, 1990). Meyer notes that, as a result of the program's structure, income is based on wages earned and so does not provide value for unpaid caregiving or domestic labor. If a woman spends more than 5 years caregiving, years above 5 count as $0 when estimating the benefit that is due. The program also assumes a permanency to marriage and family life that is frequently not the case in today's society, as survivor benefits are only available to women who have been married at least 10 years.

---

[11] NH Division of Vital Statistics, data on divorces during 2006, accessed online at http://www.sos.nh.gov/vitalrecords on 10/09/08.

How many will be at risk in the future?

While nearly 28,000 older women in New Hampshire were identified as poor or near-poor (with household incomes below $20,000), the Institute expects this number to grow as the baby boom population ages into retirement. According to state projections for 2020, the number of women aged 65 and older in New Hampshire is expected to grow by 78% (+74,006), as shown in Figure 10.

Figure 10: 2020 Projected Population Growth Among Women
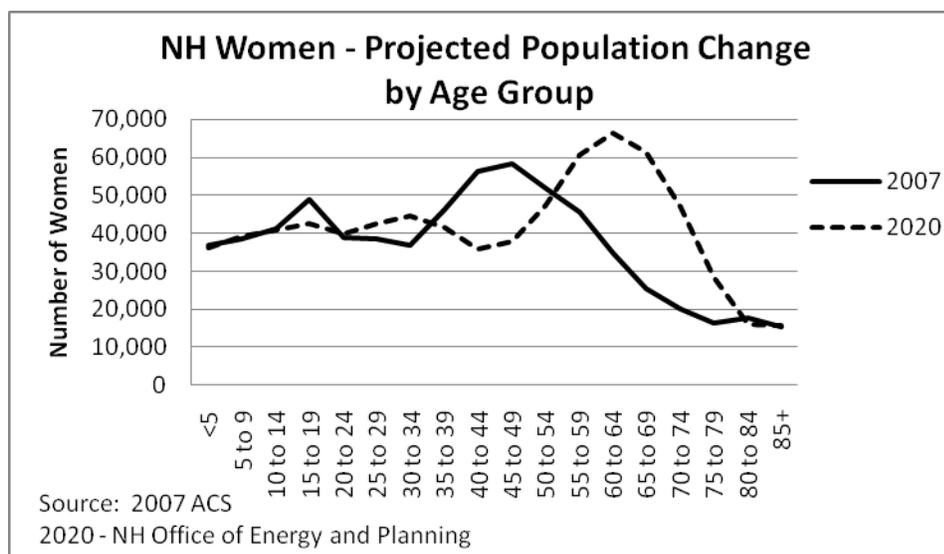
If the percent of women 65 and older at risk of not maintaining a livable income remains at about 29% in 2020, the 27,821 at risk in 2007 will grow to an estimated 48,998 based on OEP's projections. If the percent at risk drops to 20% due to better education and higher incomes, an estimated 33,791 women would still be at risk of not maintaining a livable income. If risk increases to 40% due to the lack of employer supported pensions, changes to the Social Security benefit, or early withdrawal of savings, then the Institute estimates that as many as 67,583 may be in jeopardy. While many economic and other factors will influence the actual numbers of older women in need, the sheer size of the baby boom population indicates a likely increase in the number of older women who are not financially secure.

How can retirement insecurity impact public costs?

As a result of limited resources in their "golden years," many older women may: opt to delay appropriate health care or medications due to cost, spend less on needed goods and services in their communities, and/or find themselves increasingly reliant on public welfare. As a result, the

costs of women's economic insecurity during retirement are borne not just by individuals but also by the broader public on a range of levels. The following is a more detailed look at one component of public support - state spending on Medicaid.

Older women as drivers of Medicaid spending.

Nationally, 31% of all Medicaid expenditures are for old age beneficiaries, and women comprise 70% of this group. Of Medicaid beneficiaries aged 85 and over—the most costly group—81% are women (Kaiser Family Foundation, 2007). State expenditures for Medicaid in FY 2006 accounted for 29% of our general fund's spending (Mann, Alker, Barish, & Odeh, 2008). Recent analysis of 2005 state Medicaid spending by the New Hampshire Center for Public Policy Studies shows that the cost of older women's nursing home and community-based care is a substantial component of this expenditure. [12]   Additionally, the Center noted that:

- Half of all spending for women on Medicaid is for those 65 and older; totaling $197 million in 2005 for 9,313 women.
- Seventeen percent of all Medicaid spending in 2005 was for seniors aged 85 and over, and 86% of those costs were for women.
- The 2005 average cost to Medicaid for women aged 85 and older was $28,634 per woman.

Population growth will dramatically increase Medicaid spending.

Applying current Medicaid costs to the expected population growth yields an initial estimate of the increase in Medicaid spending that can be expected. The projected population change of 78% for women over 65 suggests a potential increase of $154 million in New Hampshire by 2020 over Medicaid spending in 2005, for a total of $351 million. The actual amount encumbering by taxpayers in 2020 may be higher or lower, depending on a number of factors, among them changes in health care costs and changes in the financial status of women as they get older.

Cost projections for most goods and services rely on the use of the general consumer price index, which has averaged 2.8% growth between 2000 and 2006.   However, inflation rates for medical care have been much higher, averaging 4.3%. If health care costs continue to increase at a 4.3% inflation rate until 2020, the impact of inflation and population growth on Medicaid expenditures would result in a figure of $660 million. With the federal match rate of 50%, New Hampshire tax payers could expect to pay close to a third of a billion dollars towards Medicaid by 2020.

Concerning the future financial security of women, there are a range of factors which may positively or negatively impact their fiscal resources and, thereby, their potential reliance on Medicaid for their health care. For example, young women today are better educated than

---

[12] Unpublished analysis of 2005 state Medicaid spending data by the NH Center for Public Policy Studies.

today's older women, as shown in Figure 11, and education is a strong predictor of income, so there may be greater economic well-being.

Figure 11: Most Baby Boomer Women are Better Educated Than Elderly Women Today
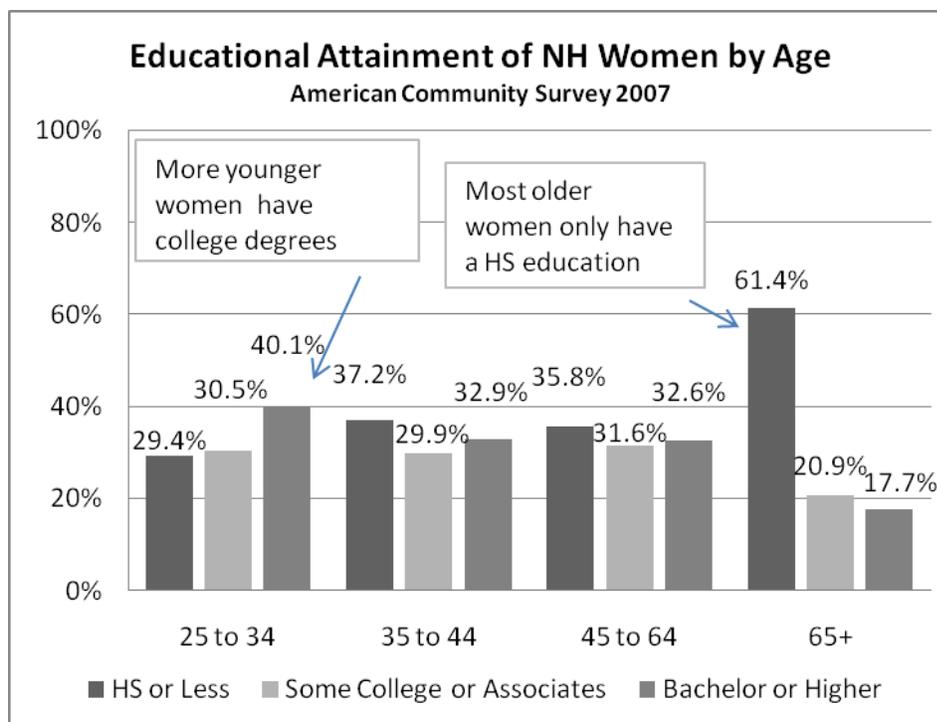
Conversely, the widespread change from defined benefit pension plans to defined contribution plans[13] continues today, putting younger workers at much greater risk financially than their elders who had a defined level of income promised from their previous employers. Also, national trends show workers are beginning to take their social security benefits earlier, which reduces the amount of their benefit over their retirement years. Both of these trends will likely *reduce* economic security for future retirees (Munnell, et al., 2007), so the overall change in poverty levels and retirement security is uncertain.

What are some policy and program options to increase retirement savings?

Estimating the future impacts of retirement insecurity on individuals and the broader public is a challenging process which merits additional study and debate. As discussed in this brief, there

---

[13] Under defined benefit plans, retirees were promised a certain level of income, generally through a company pension plan; in defined *contribution* plans more common today, employers contribute to often modest 401k plans, but do not promise any specific level of income to the retiree.

are a number of factors which can result in either greater or lesser estimates of retirement insecurity among women. Despite these remaining questions, there are facts that we do know now:

- Due to a variety of reasons, women earn less over their lifetimes than men and are therefore at a substantial financial disadvantage by the time they reach retirement age.
- Older women who live alone are at greatest risk for retirement insecurity, as 60% take in less than a livable income.
- With each generation, women are living longer and may therefore require more resources to be in place in order to manage all the fiscal needs of living, including needs for health care, goods and services, respite, and caring for family.
- Many women lack sufficient financial literacy to ensure adequate planning for their later years.
- New Hampshire's aging population will continue to grow. Outside of new interventions or substantial shifts across the economic landscape, systemic factors shaping fiscal inequality now will continue to shape people's lives in the years to come.

In looking at ways to improve retirement security, not only for women but for all our residents, the New Hampshire Women's Policy Institute identified a number of programs that have been shown to increase retirement savings, or that show promise in terms of increasing opportunity and access to retirement savings plans, in both the public and private sectors.

State-Sponsored Voluntary Retirement Program
A number of states are working on state-sponsored voluntary retirement savings plans. Much like the current 529 college savings plans, these plans have the state set up a program to provide the vehicle for individual savings accounts, but do *not* entail state funding of contributions or matching funds for the account. The plans are targeted to low and moderate income workers and are intended to make savings plans more accessible to those at lower income levels, allowing smaller individual contribution amounts, and a range of simple, secure choices. A number of legislators in New Hampshire have been exploring the feasibility of such a plan here.

Automatic Enrollment into Private Retirement Plans
Having employees automatically enrolled in a retirement plan unless they choose to opt out has been shown to increase participation rates in employers' retirement plans. In one study automatic enrollment increased women's participation rates from 35% to 86%. Currently most employers require an employee to opt *in* if they want to enroll, as opposed to having them opt *out* if they do not want to participate.   New Hampshire could encourage or require such practices among its employers.

Targeted Educational Seminars on Retirement Savings
Private employer educational seminars that are targeted to the particular needs of the audience are associated with higher participation rates and contribution levels, especially for lower wage employees (Bayer, Berhneim, and Scholz, 1996).   New Hampshire could encourage these kinds of seminars in the private sector and increase options for this type of education, especially for women.

Encourage Local Ordinances That Support Older Women Living with Family
The data show that older women who are living with others (often their children) have significantly higher household incomes than those who are married or living alone. Community leaders could ensure that local ordinances do not restrict the development or use of 'mother-in-law' apartments, or could go farther to encourage these arrangements.

Education for Women to Advance Their Careers and Earnings
Scholarships for adult learners could increase the number of women and men who would further their education, and go on to get a degree during their career, thus increasing their opportunities for higher wages.   Scholarships for nontraditional occupations for women could increase options for higher wages as well.

If we are able to take steps now to improve retirement security, the savings in both the private and public sectors would be substantial.   For example, if retirement security for just 100 women could be improved such that they could delay or forgo placement in a nursing home, the projected savings would be approximately $7.4 million. [14]

Outlook for the Future

Women's longer life spans combined with lower income and fewer savings results in many older women being at significant risk of economic hardship, with those who live alone being at the greatest risk. Improving women's retirement security is a critical aspect of the public policy challenges facing the state. Supporting long term care for an increasing aging population, and helping citizens age in their homes and maintain independence despite rising housing, fuel and healthcare costs will in turn strengthen NH's economic future. Although women's greater risk of economic hardship during later years is largely driven by historical patterns of work, caregiving, and occupational concentrations, there are public and private policies that can alleviate the risks and create potential benefit for all New Hampshire taxpayers.

---

[14] This assumes an average nursing home stay of 2.4 years, and an average cost of $31,000 per year (based on 2005 costs and adjusted for inflation).

In addressing this challenge, New Hampshire does have some advantages. On average, the state has a highly educated and wealthy population with relatively high workforce participation. Workforce participation among women 55 and older nationally has been increasing over the past two decades.[15] These are positive developments in terms of women's financial security, since working longer (or retiring later) and earning higher pay are important strategies to help build retirement security.

New Hampshire faces challenges as well, including having mostly small companies which are less likely than larger firms to offer retirement plans.   A 2002 survey showed only one out of three small firms who responded had some form of retirement plan. The state also faces serious fiscal constraints in the state budget which may restrict new ideas or actions that carry a cost, even when those ideas may produce cost savings in the long run.

In order to address the immediate and long term needs of older women and some of our most vulnerable citizens, the state should take an active role in encouraging and facilitating savings, improving financial education, and ultimately increasing savings for taxpayers. This report is intended to provide the data and the information needed for policy makers to gain a better understanding of the limits and challenges for retirement security among women and to offer a range of potential solutions which can help to alleviate the implications of these challenges.

---

[15] U.S. Department of Labor, Bureau of Labor Statistics, Employment and Earnings, January 1988, 1998, and 2008.

Works Cited

Bayer, P.; Berhneim, B.D.; and Scholz, J. (1996). *The Effects of Financial Education in the Workplace: Evidence from a Survey of Employers*. NBER Working Paper No. W5655.

Kaiser Family Foundation. (2007). *State Medicaid Facts for New Hampshire and the U.S.: FY 2004.*

Kenyon, D. (2006). *New Hampshire's Basic Needs and Livable Wage*. UNH Office of Economic Initiatives and North Country Council, Inc.

Lusardi, A. & Mitchell, O. (2005). *Financial Literacy and Planning: Implications for Retirement Wellbeing*. MRRC Working Paper WP 2005-108, Dartmouth College.

Meyer, M. H. (1990). "Family Status and Poverty Among Older Women: The Gendered Distribution of Retirement Income in the United States." *Social Problems.* 37: 551-563.

Metlife Mature Market Institute. (1999). *The MetLife Juggling Act Study: Balancing Caregiving with Work and the Costs Involved*. MetLife Mature Market Institute, the National Alliance for Caregiving, and The National Center on Women and Aging.

Munnell, A.; Golub-Sass, F.; Perun, P.; & Webb, A. (2007). *Households 'At Risk': A Closer Look At The Bottom Third.* Boston Center for Retirement Research. Paper # 7-2 and # 8-3, January. Boston, MA.

Munnell, A.; Webb, A.; Golub-Sass, F. (2007). *Is There Really a Retirement Savings Crisis? An NRRI Analysis*. Retirement Research at Boston College. Paper # 7-11. Boston, MA.

Mann, C.; Alker, Joan; Barish, David; Odeh, M. (2008). *Medicaid and State Budgets: Looking at the Facts.* Center for Children and Families, Georgetown University. Washington, DC.

Russell, L.; Bruce, E.; and Conahan, J. (2006). *The Elder Economic Security Standard for Massachusetts.* Gerontology Institute, University of Massachusetts Boston, and Wider Opportunities for Women.

Social Security Administration. (Feb., 2002). *Women and Social Security* (Fact Sheet). Washington, DC.

Health Resources and Services Administration. (2007). *Women's Health USA 2007*. U.S. Department of Health and Human Services. Rockville, MD.

Wakabayashi, C. & Donato, K. (2006). "Does Caregiving Increase Poverty among Women in Later Life? Evidence from the Health and Retirement Survey." *Journal of Health and Social Behavior.* Vol. 47, #3. P.258-274.

Methodology

Multiple years of the Public Use Microsample (PUMS) data for the American Community Survey (ACS) can be downloaded from the U.S. Census website for each state: www.census.gov. From the main page, users can click on American Fact Finder, then on Data Sets, then on American Community Survey. PUMS data downloads for both person level and household level characteristics are currently available for the years 2000 through 2007.

For the purposes of the research conducted, the following steps were taken to create the raw data set, adjust for inflation, and develop estimates for standard error.

Creating the Data Set

1) Person- and household- level PUMS data for each of the years 2003 through 2006 were downloaded and stored into an SPSS file.
2) Using the serial number field, the household-level data was merged into the person-level data set to create a single person-based data set for each year which contained all the person-level information along with each person's household characteristics.
   a. Exception: In 2006, the PUMS data included information on group quarters. Person- and household- level data were removed for individuals living in group quarters in order to allow for appropriate combining of the data across multiple years.
3) Each of the years 2003-2006 were combined to create one master data file of individuals who were surveyed during the time period.

Adjustments for Inflation

1) Each year of the PUMS data includes a variable entitled [Adjust] which is multiplied by the dollar amount of interest (e.g. median household income) to determine the actual dollar amount for that year.
2) To put all amounts into constant 2006 dollars, the result from step 1 for data in years 2003 through 2005 needed to be adjusted. The Bureau of Labor Statistics provides the relevant adjustment factors for the Consumer Price Index Research Series Using Current Methods (CPI-U-RS) at http://www.bls.gov/cpi/cpiurs1978_2006.pdf
   a. For example, to express year 2003 dollars in terms of 2006, the adjusted 2003 dollars would be multiplied by 1.096261. This is the result of dividing the adjustment factor for 2006 (296.1) by the factor for 2003 (270.1).

Estimating Standard Error

Although each year's release of the PUMS data is accompanied by a data users document (typically entitled *PUMS Accuracy of the Data 200(X),* also downloadable from www.census.gov) which identifies a methodology for estimating error for that year, the methodology is insufficient for estimating error across multiple years of combined data. Based

on discussions with Dale Garrett of the U.S. Census, the following methodology based on Generalized Variance Functions (GVF) was adopted to estimate standard error.

   Note on sampling fractions. PUMS are intended to have a 1% sample. However, the years before 2005 had a smaller sample due to start up of the ACS. As a result, the value 0.7 is used as the sampling fraction for 2003 and 2004. For 2005 and 2006 (and onward), the PUMS sampling fraction should be precisely 1% of the universe. In the equations below, the sampling fraction is symbolized by [K].

   Note on design factors. Since design factors (which take into account CAPI subsampling and nonresponses) can change from year to year, the largest of the competing design factors was used in the calculations below to provide a more conservative (larger) estimate of the standard errors. In the equations below, the design factor is symbolized by [DF].

1) Estimating SE for Proportion / Percents

   $$SE = DF * SQRT[((100-K)/(K*PeriodBase))*Proportion*(1-Proportion)]$$

   K is the sum of the following: 1 for each year from 2005 onward, 0.7 for each year previous to 2005. So for the 2003-2006 period, K would become (0.7+0.7+1+1) = 3.4

2) Estimating SE for Medians

   A. Calculate standard error for 50% proportion

      $$SE(50 \text{ percent}) = DF * SQRT[((100-K)/(K *B))*50*50]$$

      B=base of the frequencies.

      K is the the sum of the following: 1 for each year from 2005 onward, 0.7 for each year previous to 2005. So for the 2003-2006 period K would become (0.7 + 0.7 + 1+ 1) = 3.4

   B. Determine standard error for the median. The following instructions are provided in the PUMS Accuracy of the Data (2006) document.

      1. Subtract from and add to 50 percent the standard error determined in Part A.

         p_lower = 50 – SE (50 percent)
         p_upper = 50 + SE (50 percent)

2. Determine the categories in the distribution that contain p_lower and p_upper. If p_lower and p_upper fall in the same category, follow step 3. If p_lower and p_upper fall in different categories, go to step 4.

3. If p_lower and p_upper fall in the same category, do the following:

   a. Define A1 as the smallest value in that category
   b. Define A2 as the smallest value in the next (higher) category
   c. Define C1 as the cumulative percent of units strictly less than A1
   d. Define C2 as the cumulative percent of units strictly less than A2

   Use the following formulas to determine the lower and upper bounds for a confidence interval about the median:

   Lower Bound: [(p_lower-C1)/(C2-C1)] * (A2 – A1) + A1

   Upper Bound: [(p_upper-C1)/(C2-C1)] * (A2 – A1) + A1

4. If p_lower and p_upper fall in different categories, do the following:

   a. For the category containing p_lower: Define A1, A2, C1, and C2 as described in step 3. Use these values and the formula in Step 3 to obtain the lower bound.
   b. For the category containing p_upper: Define new values for A1, A2, C1, and C2 as described in Step 3. Use these values and the formula in Step 3 to obtain the upper bound.

5. Use the lower and upper bounds determined in Steps 3 and 4 to calculate the standard error of the median.

   SE (median) = (1/2) * (Upper Bound – Lower Bound)

3) Estimating SE for Ratios

   A. Determine standard error for ratios, such as the mean of an estimate and for the ratio of two estimates

   $SE(\bar{Y}) = DF * SQRT[(100\text{-}3.4)/(3.4*B))*s^2$

   B = the base or denominator of the mean

   s^2 = sample variance of the characteristic

$$s^{2\,=}$$

$$\frac{\sum_{i=1}^{n} w_i y_i^2 \;-\; (\sum_{i=1}^{n} w_i y_i)^2 / \sum_{i=1}^{n} w_i}{\left(\sum_{i=1}^{n} w_i\right) - 1}$$

Where:

> w_i is the weight of the ith sample record
> y_i is the value of the characteristic for the ith sample record
> n is the number of sample records

B. Determine standard error for the ratio

$$SE\left(\frac{X}{Y}\right) = \left(\frac{X}{Y}\right) * \sqrt{\frac{SE(X)^2}{X^2} + \frac{SE(Y)^2}{Y^2}}$$

> Where X and Y refer to the estimates and standard errors derived elsewhere.

Supplemental Tables for American Community Survey

Public Use Microsample Data for New Hampshire, 2003-2006 Data Set

Figure 1 Table:
Women's Median Earnings as Percent of Men's

	Female Personal Income	Male Personal Income	Ratio, Female to Male	Conf. Interval (+/-)
16 to 29	$23,263	$26,315	88.4%	2.2%
30 to 44	$35,549	$48,794	72.9%	3.8%
45 to 54	$35,549	$52,815	67.3%	0.8%
55 to 64	$34,841	$48,794	71.4%	3.3%
65+	$22,548	$32,631	69.1%	5.8%

Figure 2 Table:
NH Part-time and Full-time Workers by Gender

	Males			Females		
	Average Over 4 Years	Percent	Conf. Interval (+/-)	Average Over 4 Years	Percent	Conf. Interval (+/-)
Part Time	59,486	14.8	0.4%	128,081	35.3%	0.5%
Full Time	341,739	85.2	0.4%	234,801	64.7%	0.5%

Figure 4 Table:
Women by Household Type by Age

	Married Couple	Conf. Interval (+/-)	Living With Others	Conf. Interval (+/-)	Living Alone	Conf. Interval (+/-)
16 to 29	20.0%	1.1%	75.3%	1.2%	4.6%	0.6%
30 to 44	67.1%	1.1%	27.6%	1.0%	5.2%	0.5%
45 to 54	67.1%	1.3%	21.6%	1.1%	11.3%	0.9%
55 to 64	64.5%	1.6%	17.6%	1.3%	17.9%	1.3%
65+	42.8%	1.5%	18.7%	1.2%	38.5%	1.5%
Average Number of	274,110		170,576		69,725	

Women Over 4 Years						

Figure 5 Tables:
Percent of NH Women by Age and Household Income Level

	<$10K	Conf. Int. +/-	$10K to $19K	Conf. Int. +/-	$20K to $29K	Conf. Int. +/-	$30K to $39K	Conf. Int. +/-	$40K to $49K	Conf. Int. +/-	$50K+	Conf. Int. +/-
16 to 29	5.9%	0.6%	5.5%	0.6%	7.0%	0.7%	7.3%	0.7%	9.9%	0.8%	64.4%	1.2%
30 to 44	2.9%	0.4%	3.3%	0.4%	4.8%	0.5%	6.3%	0.5%	7.5%	0.6%	75.2%	0.9%
45 to 64	3.0%	0.3%	4.7%	0.4%	6.4%	0.5%	7.3%	0.5%	8.5%	0.6%	70.1%	0.9%
65+	8.6%	0.8%	20.7%	1.2%	15.6%	1.0%	12.9%	1.0%	9.3%	0.8%	32.9%	1.4%

2007 ACS	
Estimated Number of NH Women by Age Group (includes non-group and group/institutional residents)	
16-29	116,680
30-44	139,616
45-54	110,247
55-64	80,599
65+	94,951

Figure 6 Tables
Household Income Levels of NH Women Aged 65 and Older

% Less than $20K

	Married	Conf. Int +/-	Living w Others	Conf. Int +/-	Living Alone	Conf. Int +/-
16 to 29	6.1%	1.4%	10.7%	0.9%	45.0%	6.0%
30 to 44	1.9%	0.4%	13.0%	1.4%	26.6%	4.2%
45 to 54	2.7%	0.5%	8.9%	1.6%	27.6%	3.4%
55 to 64	3.6%	0.7%	8.9%	2.1%	28.2%	3.3%
65+	10.0%	1.3%	5.5%	1.5%	62.4%	2.3%

% $20K to $49K

	Married	Conf. Int +/-	Living w Others	Conf. Int +/-	Living Alone	Conf. Int +/-
16 to 29	27.2%	2.6%	22.0%	1.2%	48.3%	6.0%
30 to 44	12.0%	0.9%	29.2%	1.4%	45.9%	4.7%
45 to 54	10.7%	1.0%	28.3%	1.9%	43.2%	3.8%
55 to 64	22.8%	1.6%	25.7%	2.4%	50.3%	3.7%
65+	46.7%	2.2%	31.8%	3.5%	30.8%	2.1%

% $50K to $79K

	Married	Conf. Int +/-	Living w Others	Conf. Int +/-	Living Alone	Conf. Int +/-
16 to 29	38.2%	2.8%	25.8%	1.3%	5.7%	2.8%
30 to 44	29.6%	1.2%	26.2%	1.8%	18.5%	3.7%
45 to 54	25.3%	1.4%	31.0%	2.6%	21.1%	3.1%
55 to 64	27.7%	1.7%	25.4%	3.2%	14.6%	2.6%
65+	23.2%	1.9%	23.3%	2.8%	3.8%	0.9%

% $80K+

	Married	Conf. Int +/-	Living w Others	Conf. Int +/-	Living Alone	Conf. Int +/-
16 to 29	28.6%	2.6%	41.5%	1.5%	1.0%	1.2%
30 to 44	56.4%	1.3%	31.6%	1.9%	9.0%	2.7%
45 to 54	61.3%	1.5%	31.8%	2.6%	8.1%	2.1%
55 to 64	45.9%	1.9%	39.9%	3.6%	7.0%	1.9%
65+	20.1%	1.8%	39.4%	3.3%	3.0%	0.8%

Figure 7 Tables
Household Income by Income Type for NH Women

Married Households

	Earnings	Conf. Int. +/-	Retirement	Conf. Int. +/-	Additional	Conf. Int. +/-	Other Inc.	Conf. Int. +/-
16 to 29	97.8%	4.7%	0.4%	0.1%	1.0%	0.6%	0.9%	0.3%
30 to 44	95.8%	2.2%	1.1%	0.2%	1.9%	0.4%	1.2%	0.1%

45 to 54	92.2%	2.7%	3.3%	0.3%	3.3%	0.6%	1.2%	0.1%
55 to 64	76.8%	3.7%	15.1%	1.0%	6.1%	1.0%	2.0%	0.3%
65+	24.2%	2.9%	54.3%	2.7%	17.2%	2.6%	4.3%	0.7%

Living With Others

	Earnings	Conf. Int. +/-	Retirement	Conf. Int. +/-	Additional	Conf. Int. +/-	Other Inc.	Conf. Int. +/-
16 to 29	92.3%	3.1%	3.0%	0.3%	2.4%	0.6%	2.3%	0.2%
30 to 44	86.9%	4.3%	5.7%	0.7%	2.6%	0.7%	4.8%	0.7%
45 to 54	84.5%	5.2%	7.2%	1.0%	4.1%	1.4%	4.3%	0.6%
55 to 64	78.4%	6.3%	12.3%	1.6%	6.0%	2.1%	3.3%	0.8%
65+	63.8%	6.2%	25.9%	2.0%	7.1%	2.1%	3.2%	0.7%

Living Alone

	Earnings	Conf. Int. +/-	Retirement	Conf. Int. +/-	Additional	Conf. Int. +/-	Other Inc.	Conf. Int. +/-
16 to 29	95.9%	11.9%	2.4%	1.6%	0.2%	0.1%	1.5%	1.8%
30 to 44	95.6%	10.7%	1.5%	0.5%	2.0%	1.3%	0.9%	0.4%
45 to 54	89.4%	8.0%	3.3%	1.1%	4.3%	2.5%	3.1%	1.1%
55 to 64	70.5%	7.6%	14.9%	2.8%	10.5%	4.2%	4.1%	1.2%
65+	13.0%	2.6%	60.4%	4.0%	22.3%	4.7%	4.4%	1.0%

Figures 8 and 9 Tables
Housing Expenses as Percent of Household Income

Yearly Housing Expenses as Percent of Household Income
Women Only, Owned, No Mortgage Payment

	Married Couple	Conf. Int. +/-	Living With Others	Conf. Int. +/-	Living Alone	Conf. Int. +/-
45 to 54	8.0%	0.5%	11.5%	1.4%	15.7%	2.7%
55 to 64	9.1%	0.6%	9.9%	1.4%	15.8%	2.6%
65+	12.7%	0.7%	11.1%	1.2%	24.8%	2.1%

Yearly Housing Expenses as Percent of Household Income
Women Only, Owned, Paying Mortgage

	Married Couple	Conf. Int. +/-	Living With Others	Conf. Int. +/-	Living Alone	Conf. Int. +/-
45 to 54	19.7%	0.5%	24.3%	1.4%	32.7%	2.9%
55 to 64	20.5%	0.9%	21.6%	1.6%	33.0%	3.3%
65+	24.2%	2.4%	21.8%	1.9%	43.8%	6.3%