ebri.org
Employee Benefit Research Institute

January 2016 • Vol. 37, No. 1

Notes



## AT A GLANCE

### Impact of Workplace Wellness-Program Participation on Medication Adherence,

*by Paul Fronstin, Ph.D., Employee Benefit Research Institute, and M. Christopher Roebuck, Ph.D., RxEconomics, LLC*

- This study analyzes data from a large employer that enhanced financial incentives to encourage enrollment in its workplace wellness programs. It estimates the effect of wellness-program participation on medication adherence in six chronic conditions: hypertension, dyslipidemia, diabetes, congestive heart failure, asthma/chronic obstructive pulmonary diseases, and depression.
- Biometric screenings led to an average increase in medication adherence for dyslipidemia and depression. Biometric screenings had no impact on medication adherence among individuals with hypertension, congestive heart failure, or asthma/chronic obstructive pulmonary diseases. Participation in health risk assessments (HRAs) had no statistically significant effects on medication adherence for any of the chronic conditions examined.
- Improvements in medication adherence may signal forthcoming medical-cost offsets and productivity enhancements from biometric screenings. Whether or not these benefits exceed program costs is a research question worthy of future study using data on a greater number of wellness programs, over longer time periods.

### Differences in Out-of-Pocket Health Care Expenses of Older Single and Couple Households,

*by Sudipto Banerjee, Ph.D., Employee Benefit Research Institute*

- The average per-person out-of-pocket spending for households ages 65 and above during a two-year period on doctor visits, dentist visits, and prescription drugs (referred to collectively as recurring health care services) is roughly $2,500 for both single and couple households. This amount does not change with age.
- There are large differences in non-recurring health care spending (which includes overnight hospital stays, outpatient surgery, home health care, nursing home stays, and other services) between older singles and older couples, and these differences increase with age. For those 85 and above, singles and couples on average spent $13,355 and $8,530, respectively, on these services during the two-year period of the study.
- Some of the largest differences in non-recurring health care spending between older singles and older couples are in home health care and nursing home expenses. This suggests that couples benefit from their spouses or partners acting as their caregivers.

 

# Impact of Workplace Wellness-Program Participation on Medication Adherence

*By Paul Fronstin, Ph.D., Employee Benefit Research Institute, and M. Christopher Roebuck, Ph.D., RxEconomics, LLC*

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The following organizations provide the funding for EBRI CRHBI: American Express Co., Ameriprise Financial, Inc., Aon Hewitt, Blue Cross Blue Shield Association, Boeing, Deseret Mutual Benefit Administrators, Federal Reserve Employee Benefits System, General Mills Inc., Healthways Inc., IBM, JPMorgan Chase, Mercer LLC, and Pfizer Inc.

## Introduction

This study represents the third in a series that analyzes data from a large employer, which enhanced financial incentives to encourage participation in its workplace wellness programs. In prior work (Fronstin and Roebuck 2015a), it was concluded that voluntary wellness programs disproportionately attracted relatively healthy individuals. A subsequent paper (Fronstin and Roebuck 2015b) examined the impact of participation in health risk assessments (HRAs) and biometric screenings on health services utilization and costs. That study made use of the quasi-experimental design generated by the rollout of the financial incentives to different groups, at different times. This allowed for control of individual selection bias to derive unbiased results. The main finding was that biometric screenings served to increase the use of, and spending on, prescription drugs; however the study cited the need for further research, since wellness programs may take several years to have a meaningful positive impact on health status, as evidenced through reductions in health services use and spending.

This paper explores whether this employer's HRAs and biometric screenings affected medication adherence among those diagnosed with, and on therapy for, six chronic conditions: hypertension, dyslipidemia, diabetes, congestive heart failure (CHF), asthma/chronic obstructive pulmonary disease (COPD), and depression. Although past work showed an increase in prescription drug utilization due to the wellness program, it cannot be concluded that this effect translated into an improvement in medication adherence—a metric arguably more important, since the link between medication adherence and decreased other non-drug medical services use and spending has been clearly established (Roebuck, et al. 2011). Indeed, finding a positive impact of wellness-program participation on medication adherence may be an early indicator of success, suggesting that health care cost savings are forthcoming.

## Data and Methods

### Study Sample

As in the two prior papers (Fronstin and Roebuck 2015a and Fronstin and Roebuck 2015b), study data came from a large manufacturer based in the Midwest, but with employees located throughout the U.S. Health insurance eligibility information, medical and prescription-drug claims, as well as wellness-program-participation data were obtained for the time period 2011–2013. The employer had offered HRAs since at least 2004 and implemented biometric screenings in 2007. Individuals' responses to HRAs and results of biometric screenings were also obtained.

The study sample included full-time active employees, 18–64 years old (as of Dec. 31, 2013), and continuously enrolled in the employer's health plan from 2011 through 2013. Employees in health plans that paid claims on a prepaid or capitated basis such as health maintenance organizations were excluded, as were spouses, partners, and other dependents. The final analytical dataset consisted of 71,982 employees.

**Study Design**

As described in greater detail in earlier work, the estimation strategy makes use of a natural experiment wherein the study employer altered the financial incentives it offered to members for their participation in HRAs and biometric screenings. Incentive changes were implemented differentially across certain groups and years. Briefly, starting with the 2012 plan year, non-union employees were offered a $20 per month (i.e., $240 per year) reduction in health insurance premiums if they completed HRAs. Prior to this, all employees received a $50 gift card for participating. The following year (2013), a subset of union employees collectively bargained for this new financial incentive for completing HRAs, but all other union workers continued to receive the gift card.

For biometric screenings, all employees were given a nominal reward for participating before 2013—mostly in the form of free books or a chance to win movie tickets. In 2013, non-union workers were required to participate in biometric screenings, in addition to completing HRAs, in order to continue to receive the $20 per month (i.e., $240 per year) reduction in health insurance premiums. Union workers were not offered financial incentives to participate in biometric screenings in 2013, but they did receive prize giveaways in years prior.

Given that the alterations in incentives for participating in HRAs and biometric screenings happened for different cohorts in different years, this study constructed three groups for analysis:

- Test Group 1 was comprised of the 15,312 union members who were exposed to the new financial incentive for completing HRAs starting in 2013.
- Test Group 2 included the 40,547 non-union employees who were offered the new financial incentive for participating in HRAs in 2012, and for both HRAs and biometric screenings in 2013.
- Lastly, the 16,123 union employees who never received the $20/month reduction in health insurance premiums during the three-year study period made up the Control Group.

Wellness-program-participation impacts on adherence to medications were investigated for six chronic conditions: hypertension, dyslipidemia, diabetes, CHF, asthma/COPD, and depression. Patients were classified as having one or more of these diseases if they had at least one inpatient or two outpatient (on different dates) medical claims with a relevant diagnosis code during a given year. Condition-specific adherence was calculated using the proportion of days covered (PDC)—a metric ranging from 0 to 1 that represents the fraction of days in the period that the patient had at least one drug for the condition on hand.

Multivariate regression models of each adherence (dependent) variable were estimated as a function of participation indicators for HRAs and biometric screenings, as well as the following covariates: geographic region, household size, health insurance plan type, annual wage amount, number of years of tenure with the employer, and the Charlson Comorbidity Index score. For a more detailed discussion of the modeling methodology, please see the Appendices from previous studies (Fronstin and Roebuck 2015a and Fronstin and Roebuck 2015b).

An important concern for the analysis was patient-level selection bias. Since wellness-program participation was voluntary, members may have made their enrollment decisions for unobserved reasons that may have also been correlated with medication adherence. Not accounting for this possibility may lead to biased estimates of the impact of the wellness programs. In response to this challenge, two analyses were pursued: First, linear, fixed-effects models were estimated, which control for all time-invariant personal characteristics that may be confounders. Since this approach does not eliminate potential endogeneity due to unmeasured variables that vary over time, an instrumental-variables (IV) approach was also used that made explicit use of the quasi-experimental design of the financial incentives rollout. Interestingly, the IV coefficients were similar in both magnitude and significance to their fixed-effects counterparts. Therefore, results from the latter are presented for brevity.

## Results

### Descriptive Statistics

Figure 1 presents the baseline (2011) sample means (by group) for the prevalence of each of the six chronic diseases. All other variable means have been reported elsewhere (see Fronstin and Roebuck 2015a; Fronstin and Roebuck 2015b). Dyslipidemia (i.e., high cholesterol) was the most common condition—present in 25–28 percent of the study population. The second-most prevalent disease was hypertension (19–21 percent), followed by diabetes (7–9 percent), depression (6–7 percent), and asthma/COPD (4 percent). CHF affected less than 1 percent of individuals included in the analysis.

Average PDC values at baseline for each condition are reported in Figure 2. Patients were most adherent to medications used to treat CHF (80–91 percent). Among employees diagnosed with, and on therapy for, hypertension, dyslipidemia, and diabetes, average PDCs ranged from 68 percent to 79 percent. Lower adherence was measured for individuals with depression (53–61 percent), and asthma/COPD (30–38 percent).

### Wellness Program Effects on Medication Adherence

Figure 3 presents the impacts of HRAs and biometric screenings on medication adherence from the linear, fixed-effects models. Of the 12 estimates, only 2 reached statistical significance. First, biometric screenings were shown to have had a positive 0.007 effect on medication adherence for dyslipidemia ($p<0.05$). Second, biometric screenings were also associated with a 0.026 increase in medication adherence for depression ($p<0.01$). No other parameter estimates for biometric screenings or HRAs were statistically different from zero.

## Conclusions

Health risk assessments and biometric screenings are increasingly used by employers to identify existing or potential health issues among their plan members. The hope is that information derived from these wellness programs will prompt patients to make meaningful lifestyle changes, use preventive care, and commence and comply with recommended treatment. Indeed, these steps would both reduce the burden of their illnesses and decrease the risk of future, adverse-health events.

In earlier work, no significant effects of HRAs were found in the first year post-completion. However, biometric screenings led to an increase in prescription-drug utilization by 0.31 fills per person per year ($p<0.01$), and associated prescription-drug costs (+$56 per person per year). Delving deeper into the therapeutic classes comprising this additional drug use, it was found that statins and selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs) were the top-three classes driving the increase in prescription-drug utilization. Therefore, the current findings on increased adherence are confirmation of the earlier results, since these are the primary medications used to treat dyslipidemia and depression.

Decision-makers faced with the decision of whether to allocate scarce resources to implement wellness programs must consider the economic costs and consequences of such programs. With short time horizons, programs like HRAs and biometric screenings may not provide a net benefit—especially if plan sponsors are offering financial incentives for member participation. Indeed, the earlier work confirms this. However, longer-term medical cost offsets and productivity enhancements may be possible through improved medication adherence made possible via information captured through biometric screenings. Whether these future benefits outweigh the costs is an empirical question requiring analysis of longer panel datasets, on a greater number of wellness programs.

Figure 1

**Percent of Sample Diagnosed With Various Chronic Conditions, by Group**

| Variable | Test Group 1: Select Union Members (N=15,312) | Test Group 2: Non-Union Employees (N=40,547) | Control Group: Other Union Members (N=16,123) |
|---|---|---|---|
| Hypertension | 21% | 21% | 19% |
| Dyslipidemia | 25% | 28% | 26% |
| Diabetes | 9% | 7% | 8% |
| Congestive Heart Failure (CHF) | 0.3% | 0.2% | 0.3% |
| Asthma/COPD | 4% | 4% | 4% |
| Depression | 7% | 7% | 6% |

Source: Employee Benefit Research Institute analysis based on administrative claims data.

Notes:

Test Group 1=No incentive for biometric screening, incentive for health risk assessments in 2013.

Test Group 2=Incentive for biometric screening in 2013, incentive for health risk assessments in 2012 and 2013.

Control Group=No incentive for biometric screening, no incentive for health risk assessments.

COPD=Chronic obstructive pulmonary disease

Figure 2

**Proportion of Days Covered (PDC) Among Individuals Diagnosed With Various Chronic Conditions, by Group**

| Variable | Test Group 1: Select Union Members (N=15,312) | Test Group 2: Non-Union Employees (N=40,547) | Control Group: Other Union Members (N=16,123) |
|---|---|---|---|
| Hypertension | 77% | 78% | 78% |
| Dyslipidemia | 68% | 71% | 72% |
| Diabetes | 77% | 77% | 79% |
| Congestive Heart Failure (CHF) | 91% | 80% | 88% |
| Asthma/COPD | 30% | 35% | 38% |
| Depression | 53% | 61% | 61% |

Source: Employee Benefit Research Institute analysis based on administrative claims data.

Notes:

Test Group 1=No incentive for biometric screening, incentive for health risk assessments in 2013.

Test Group 2=Incentive for biometric screening in 2013, incentive for health risk assessments in 2012 and 2013.

Control Group=No incentive for biometric screening, no incentive for health risk assessments.

COPD=Chronic obstructive pulmonary disease

Figure 3

**Impact of Biometric Screening and HRAs on Medication Adherence: Linear, Fixed-Effects Models**

| Variable | Biometric Screening | Health Risk Assessments (HRAs) |
|---|---|---|
| Hypertension PDC | 0.004 | -0.005 |
| Dyslipidemia PDC | 0.007** | -0.001 |
| Diabetes PDC | 0.003 | -0.0002 |
| Congestive Heart Failure PDC | 0.016 | 0.007 |
| Asthma/COPD PDC | 0.003 | -0.006 |
| Depression PDC | 0.026*** | 0.002 |

Source: Employee Benefit Research Institute analysis based on administrative claims data.

Notes:

HRAs=Health risk assessments.

PDC=Proportion of Days Covered.

COPD=Chronic Obstructive Pulmonary Disease.

*** Statistically significant at the 0.01level.

** Statistically significant at the 0.05 level.

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_____. "Financial Incentives, Workplace Wellness-Program Participation, and Utilization of Health Care Services and Spending." *EBRI Issue Brief, no. 417* (Employee Benefit Research Institute, August 2015).

Roebuck, M. Christopher, Joshua N. Liberman, Marin Gemmill-Toyama, and Troyen A. Brennan. "Medication Adherence Leads To Lower Health Care Use And Costs Despite Increased Drug Spending." *Health Affairs* 30, no. 1 (January 2011): 91-99.

# Differences in Out-of-Pocket Health Care Expenses of Older Single and Couple Households

*By Sudipto Banerjee, Ph.D., Employee Benefit Research Institute*

## Introduction

Health care expenses are a key component of retirement expenses. Prior research by the Employee Benefit Research Institute (EBRI) has shown that health care expenses represent the second-largest share of household expenses after home-related expenses for older Americans (Banerjee 2012, 2014). Also, health care is the only component of household expenditures that increases with age, both in terms of absolute dollars and as a share of total household expenses. For example, in 2011, average annual out-of-pocket health care expenses for a household between ages 65 and 74 was $4,383, capturing on average 11 percent of total household expenses. For households ages 85 and above, average out-of-pocket health care expenses increased to $6,603, capturing 19 percent of household expenses.

In a recent study (Banerjee, 2015), EBRI analyzed the utilization and out-of-pocket expenses of different health care services; based on the nature of the service and frequency of use, the study divided health care services into two categories: *recurring services* (doctor visits, prescription drugs, and dentist visits) and *non-recurring services* (overnight hospital stays, overnight nursing home stays, home health care, outpatient surgery, and special facilities). As the name suggests, recurring services are used regularly and their expenses are predictable. The usage and expenses of recurring services also remain pretty flat throughout retirement. On the other hand, usage and expenses of non-recurring services go up with age and are generally unpredictable. This distinction is important because it means that health care costs in retirement can be broken into predictable and unpredictable components. The advantage of doing so is that retirees can prepare differently to meet these expenses. While dedicating a portion of their monthly income stream seems appropriate to meet recurring expenses (thus adjusting their monthly income stream accordingly), holding onto some precautionary savings or purchasing more insurance seems a better approach for retirees to take to meet their non-recurring expenses.

The above study analyzed the expenses at the individual level. But like most financial matters, decisions regarding usage of health care services are also likely to be made at the household level. So, this study updates the previous study by analyzing these health care expenses at the household level.

## Data

The data for this study come from the Health and Retirement Study (HRS), a study of a nationally representative sample of U.S. households with individuals over age 50. It is the most comprehensive survey of older Americans in the nation and covers such topics as health, assets, income, and labor-force status in detail. It is a biennial longitudinal survey with survey waves in even-numbered years beginning in 1992. The initial sample consisted of individuals born between 1931 and 1941 and their spouses, regardless of their birth year. Newer cohorts have been added in the following years. The study is sponsored by the National Institute on Aging (NIA) and the Social Security Administration (SSA) and is administered by the Institute for Social Research (ISR) at the University of Michigan. The sample includes only the Medicare-eligible panel members (ages 65 and above). A supplement of HRS called the Consumption Activities and Mail Survey (CAMS), which collects detailed information on household spending, is also used for this study. Throughout the study participants are classified into three different age groups: ages 65–74 (Age Group I), ages 75–84 (Age Group II), and ages 85 and above (Age Group III).

## Out-of-Pocket Expenses for Health Care

All the numbers reported are for a two-year period between 2010 and 2012. Also, all the statistics are calculated conditional on having a non-zero expense. This report also includes total recurring and total non-recurring expenses

for the households studied. These total expenses are conditional on having at least one non-zero expense for at least one item in each of the two categories. If there is at least one non-zero expense, the missing values for other items for the household are assumed to be zero for the purposes of calculating total household expenses (done separately for recurring and non-recurring expenses). One important *caveat*: health insurance premiums and spending on over-the-counter drugs are not included in this study.

Figure 1 shows the recurring health care expenses for all households with at least one member age 65 or above. Over the two-year period, the average (mean) total recurring health care expenses were $3,499. The median (half above and half below) was $2,150 and the 90$^{th}$ percentile was $7,800 (which meant 10 percent of all 65+ households spent $7,800 or more). The most expensive recurring health care item was prescription drugs. The average amount spent on prescription drugs by these households was $2,369 and the 90$^{th}$ percentile was $5,040. Dentist visits took the next spot, followed by doctor visits.

Figure 2 shows the non-recurring health care expenses for the same group of households. Over the two-year period, the average total non-recurring expenses were $5,277. But 10 percent of these households spent $10,000 or more on non-recurring health care services, and there was one component of non-recurring services that could be very expensive: nursing home care. The average nursing home expense was $20,118 and the 90$^{th}$ percentile was $50,000. In-home care and hospital stays were the next two most-expensive services, with the average two-year expense per household being $2,865 and $2,178, respectively. Among the non-recurring services, nursing home care posed by far the biggest financial threat to retirees.

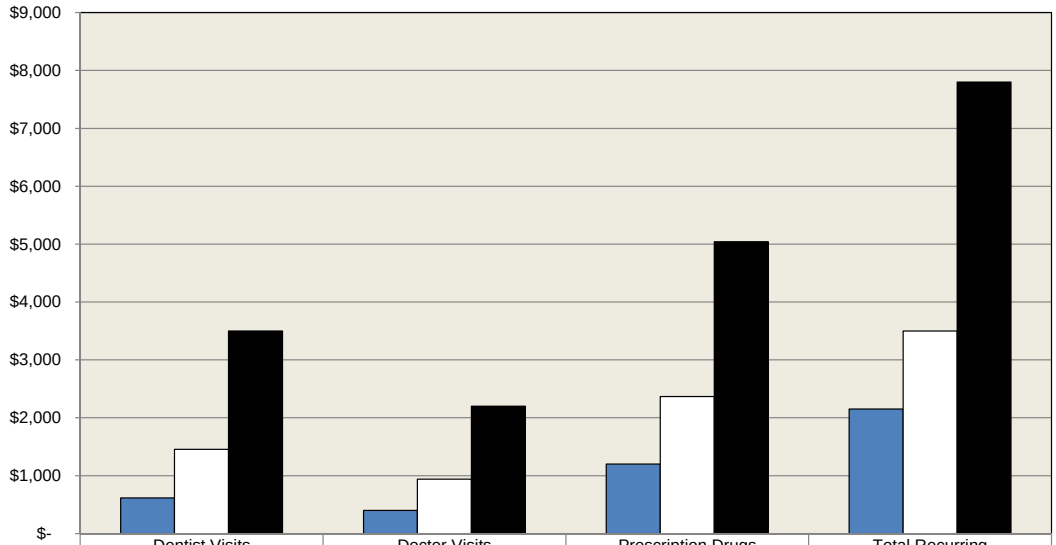
## Difference Between Singles and Couples

Figures 3 and 4 show the recurring health care expenses of all households ages 65 and above, singles and couples, respectively. The most important observation from these two figures was that per-person out-of-pocket recurring health care expenses were not any different between single and couple households. For example, Figure 3 shows that the average total recurring expenses for singles was $2,476 and Figure 4 shows that the average recurring expenses for couples was $5,109—so the average per-person out-of-pocket recurring health care expenses for a two-year period was around $2,500. As will be shown later, this finding was pretty robust across all age groups above 65. In terms of the individual components in recurring health care services, it seems couples spent a little less per person than singles.

Figures 5 and 6 show the differences between single and couple households in terms of non-recurring health care expenses. There were some large differences here. First, the average total non-recurring expense for singles in 65+ households was $7,122, compared with $3,161 for couples. This was an important observation. Not only did couples enjoy a returns-to-scale, in this case it pushed down their expenses below the singles. This was most likely due to the fact that in couple households, spouses or partners could act as caregivers for each other. Looking at some of the components of non-recurring expenses where the differences were largest made this point clear. For example, in-home care, which in many cases could be provided by a spouse or partner, exhibited large differences between singles and couples. The average two-year in-home care expense for singles was $3,957, compared with $1,478 for couples. The average nursing home costs for singles and couples were $21,346 and $16,169, respectively. There were large differences in expenses for other care as well ($1,541 for singles and $643 for couples).

A recent paper by DeNardi, French and Jones (2015) using data from Asset and Health Dynamics "Among the Oldest Old (AHEAD)" finds that singles at age 70 live shorter lives than couples at the same age. But in spite of their shorter life span, the study finds that singles are more likely to end up in a nursing home in any given year. The study concludes that this leads to higher medical spending per person for singles compared with couples. The evidence shown in Figures 5 and 6 certainly corroborates this conclusion.

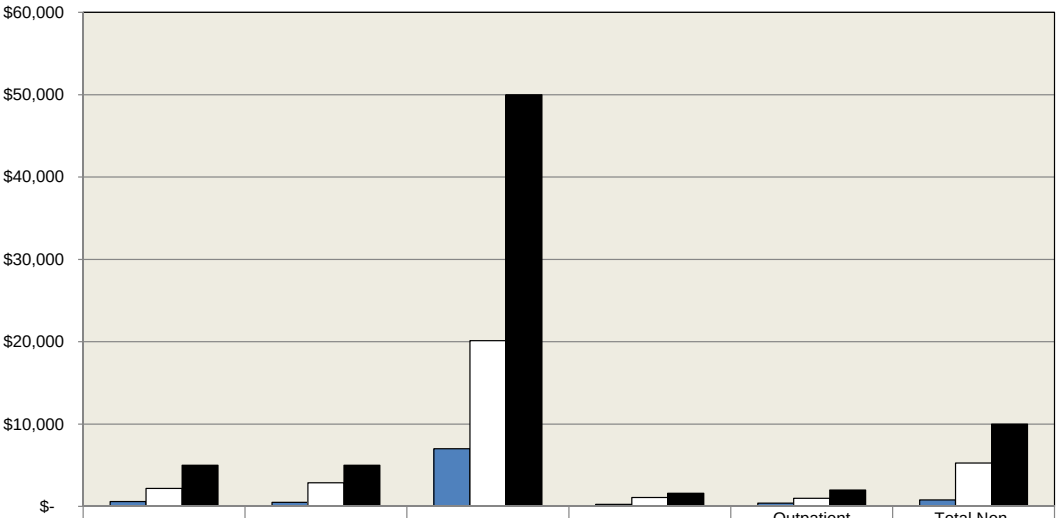
Figure 1
**Recurring Health Care Expenses* of All Age 65+ Households During a Two-Year Period Between 2010–2012**




| | Dentist Visits | Doctor Visits | Prescription Drugs | Total Recurring |
|---|---|---|---|---|
| Median | $615 | $400 | $1,200 | $2,150 |
| Average | $1,455 | $941 | $2,369 | $3,499 |
| 90th Percentile | $3,500 | $2,201 | $5,040 | $7,800 |

Source: Employee Benefit Research Institute estimates from Health and Retirement Study (HRS), 2012.
* Conditional on positive expenses.

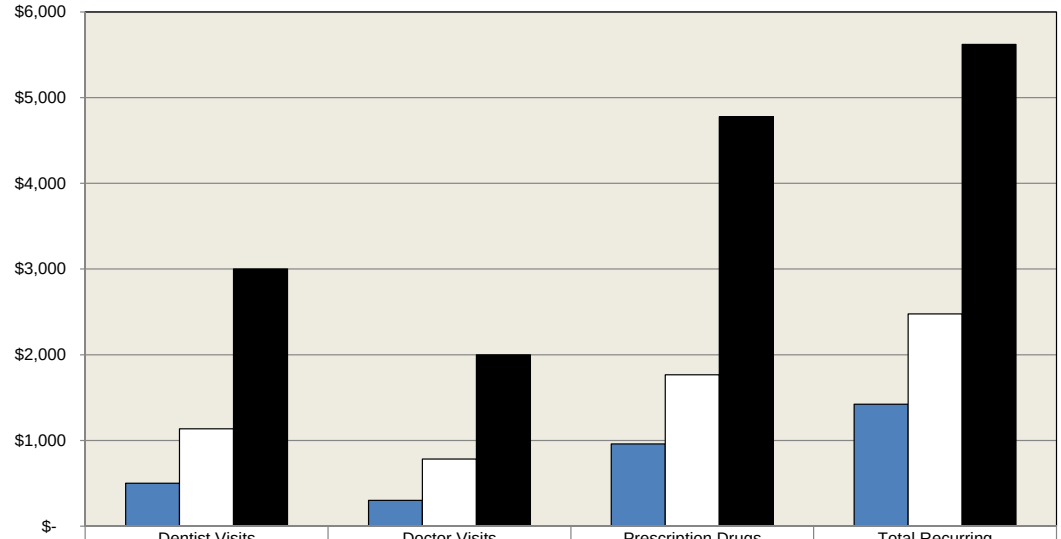
Figure 2
**Non-Recurring Health Care Expenses* of All Age 65+ Households During a Two-Year Period Between 2010–2012**




| | Hospital | In-Home Care | Nursing Home | Other Care | Outpatient Surgery | Total Non-Recurring |
|---|---|---|---|---|---|---|
| Median | $600 | $501 | $7,000 | $250 | $400 | $790 |
| Average | $2,178 | $2,865 | $20,118 | $1,079 | $994 | $5,277 |
| 90th Percentile | $5,000 | $5,000 | $50,000 | $1,600 | $2,000 | $10,000 |

Source: Employee Benefit Research Institute estimates from Health and Retirement Study (HRS), 2012.
* Conditional on positive expenses.

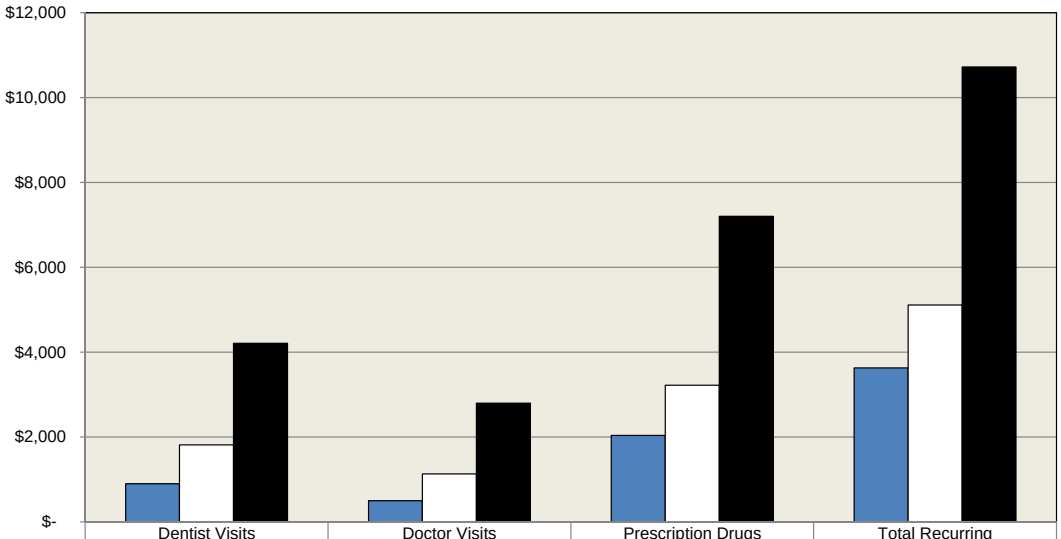
Figure 3
**Recurring Health Care Expenses* of All Age 65+ Single Households During a Two-Year Period Between 2010–2012**




| | Dentist Visits | Doctor Visits | Prescription Drugs | Total Recurring |
|---|---|---|---|---|
| Median | $500 | $300 | $960 | $1,423 |
| Average | $1,137 | $782 | $1,766 | $2,476 |
| 90th Percentile | $3,000 | $2,000 | $4,776 | $5,621 |

Source: Employee Benefit Research Institute estimates from Health and Retirement Study (HRS), 2012.
* Conditional on positive expenses.

Figure 4
**Recurring Health Care Expenses* of All Age 65+ Couple Households During a Two-Year Period Between 2010–2012**




| | Dentist Visits | Doctor Visits | Prescription Drugs | Total Recurring |
|---|---|---|---|---|
| Median | $900 | $500 | $2,040 | $3,630 |
| Average | $1,813 | $1,129 | $3,219 | $5,109 |
| 90th Percentile | $4,210 | $2,800 | $7,200 | $10,720 |

Source: Employee Benefit Research Institute estimates from Health and Retirement Study (HRS), 2012.
* Conditional on positive expenses.

## Difference Between Singles and Couple Across Different Age Groups

Figures 7 and 8 break down Figures 3 and 4 by age group. It was noted above that the average per-person out-of-pocket recurring health care expenses for the two-year period was roughly $2,500. Breaking down the numbers in Figures 3 and 4 by age provides an idea of how stable (and hence, predictable) these costs were. Figure 7 shows that the average total recurring expenses for singles in Age Groups I, II, and III were $2,490, $2,490, and $2,429, respectively. Figure 8 shows that among couples, the average total recurring expenses for Age Groups I, II, and III were $5,163, $5,047 and $4,963, respectively. So, looking at each age group separately and looking at singles and couples within each age group, it was clear that the recurring health care expenses were very predictable. Recurring out-of-pocket expenses were almost a fixed expense per person, on average. Of course, there could be variations around the average depending on an individual's health condition, income, and other factors.

Figures 9 and 10 break down Figures 5 and 6 by age group. It was noted above that the average non-recurring expenses were much higher for singles than couples. A comparison between Figures 9 and 10 provides another insight: The difference in non-recurring expenses between singles and couples increases with age. For Age Group I, the average total non-recurring expenses were $2,790 for singles and $2,024 for couples: a difference of $766. For Age Group II, the average total non-recurring expenses went up to $5,502 and $3,930 for singles and couples, respectively, a difference of $1,572. For the oldest age group, the difference went up to $4,825 ($13,355 for singles and $8,530 for couples). This is quite intuitive. As health breaks down with age, the advantage of having a spouse or partner to act as caregiver results in lower spending at higher ages. This is apparent if we look at certain components of non-recurring health care expenses. For Age Group III (85 and above), the average in-home care expenses for singles and couples were $5,320 and $2,165, respectively. For the same groups the average nursing home care costs were $25,540 and $18,331, respectively.

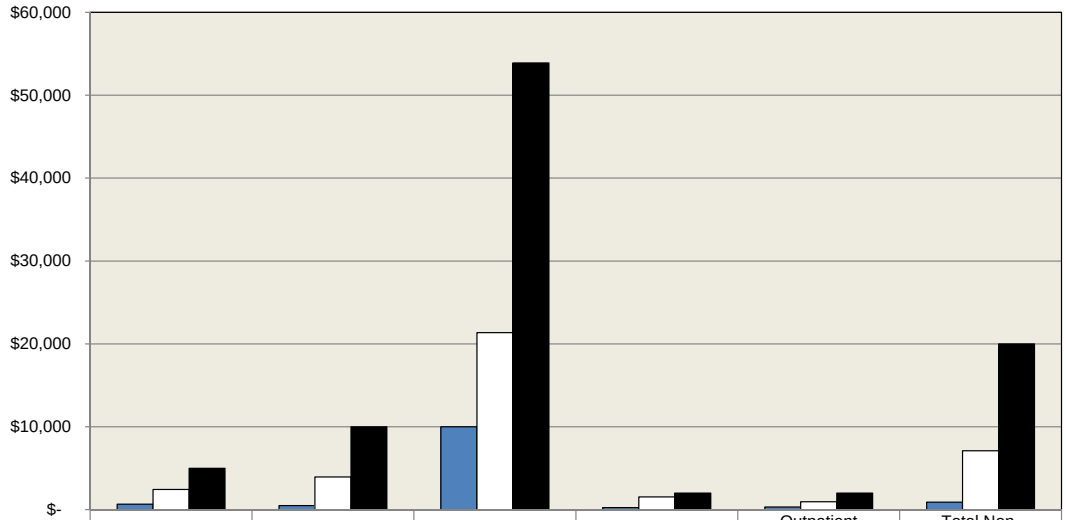
## Conclusion

Health care expenses are a major concern for retirees. But some retirees should be more concerned than others. Certainly, those who have existing medical conditions are likely to spend more. But at a more general level, singles are likely to spend more on health care services than couples. It should be noted that health insurance premiums and spending on over-the-counter drugs are not included in this study.

This study examines in detail the differences in out-of-pocket health care spending between couple and single older households. The major findings include:

- The average per-person out-of-pocket spending for households ages 65 and above during a two- year period on doctor visits, dentist visits, and prescription drugs (referred to collectively as recurring health care services) is roughly $2,500 for both single and couple households. This amount does not change with age.
- There are large differences in non-recurring health care spending (which includes overnight hospital stays, outpatient surgery, home health care, nursing home stays, and other services) between older singles and older couples, and these differences increase with age. For those 85 and above, singles and couples on average spent $13,355 and $8,530, respectively, on these services during the two-year period of the study.
- Some of the largest differences in non-recurring health care spending between older singles and older couples are in home health care and nursing home stays. This suggests that couples benefit from their spouses or partners acting as their caregivers.

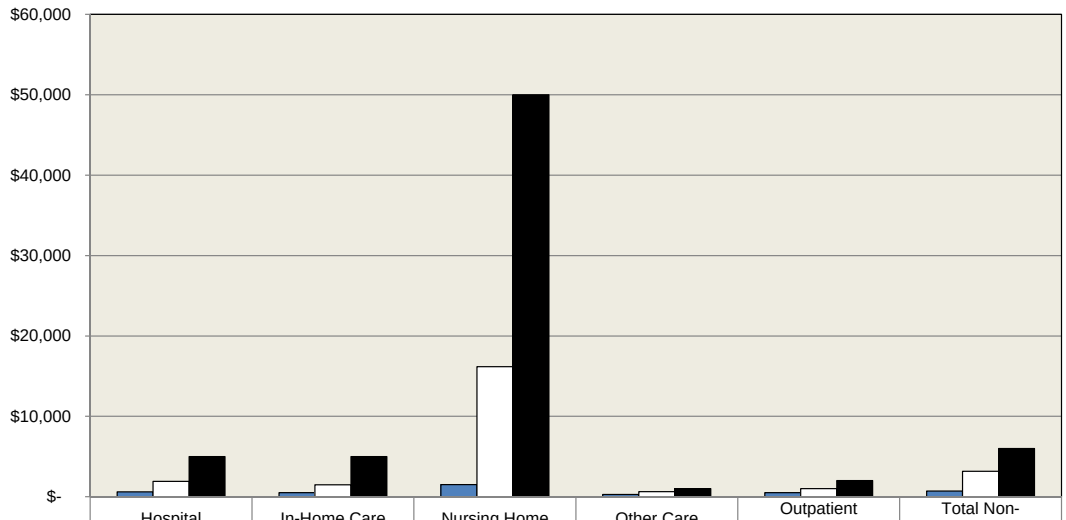
Figure 5
**Non-Recurring Health Care Expenses* of All Age 65+ Single Households During a Two-Year Period Between 2010–2012**




| | Hospital | In-Home Care | Nursing Home | Other Care | Outpatient Surgery | Total Non-Recurring |
|---|---|---|---|---|---|---|
| Median | $675 | $500 | $10,001 | $250 | $328 | $900 |
| Average | $2,445 | $3,957 | $21,346 | $1,541 | $968 | $7,122 |
| 90th Percentile | $5,000 | $10,000 | $53,900 | $2,000 | $2,000 | $20,000 |

Source: Employee Benefit Research Institute estimates from Health and Retirement Study (HRS), 2012.
* Conditional on positive expenses.

Figure 6
**Non-Recurring Health Care Expenses* of All Age 65+ Couple Households During a Two-Year Period Between 2010–2012**

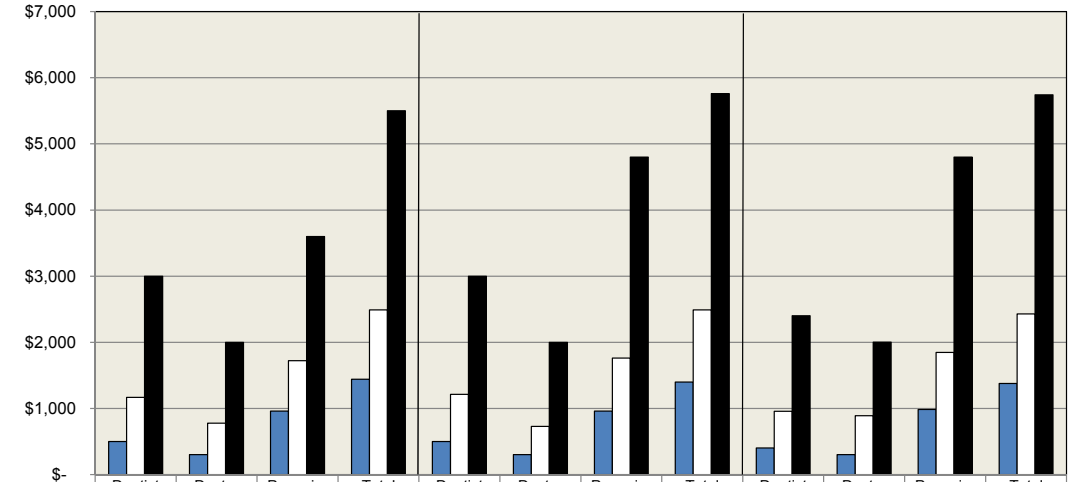



| | Hospital | In-Home Care | Nursing Home | Other Care | Outpatient Surgery | Total Non-Recurring |
|---|---|---|---|---|---|---|
| Median | $600 | $500 | $1,500 | $279 | $500 | $700 |
| Average | $1,905 | $1,478 | $16,169 | $643 | $1,013 | $3,161 |
| 90th Percentile | $5,000 | $5,000 | $50,000 | $1,000 | $2,000 | $6,000 |

Source: Employee Benefit Research Institute estimates from Health and Retirement Study (HRS), 2012.
* Conditional on positive expenses.

Figure 7

**Recurring Health Care Expenses* of All Age 65+ Single Households During a Two-Year Period Between 2010–2012, by Age Group**

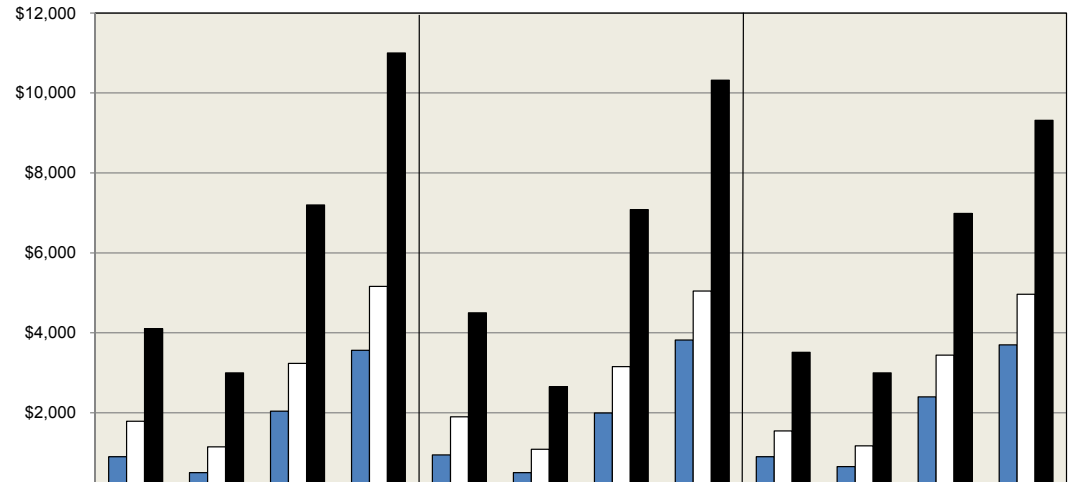



| | 65–74 | | | | 75–84 | | | | 85+ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dentist Visits | Doctor Visits | Prescrip-tion Drugs | Total Recurring | Dentist Visits | Doctor Visits | Prescrip-tion Drugs | Total Recurring | Dentist Visits | Doctor Visits | Prescrip-tion Drugs | Total Recurring |
| Median | $500 | $300 | $960 | $1,440 | $500 | $300 | $960 | $1,400 | $401 | $300 | $984 | $1,376 |
| Average | $1,168 | $777 | $1,721 | $2,490 | $1,214 | $727 | $1,763 | $2,490 | $957 | $890 | $1,846 | $2,429 |
| 90th Percentile | $3,000 | $2,000 | $3,600 | $5,500 | $3,000 | $2,000 | $4,800 | $5,760 | $2,400 | $2,001 | $4,800 | $5,741 |

Source: Employee Benefit Research Institute estimates from Health and Retirement Study (HRS), 2012.
* Conditional on positive expenses.

Figure 8

**Recurring Health Care Expenses* of All Age 65+ Couple Households During a Two-Year Period Between 2010–2012, by Age Group**

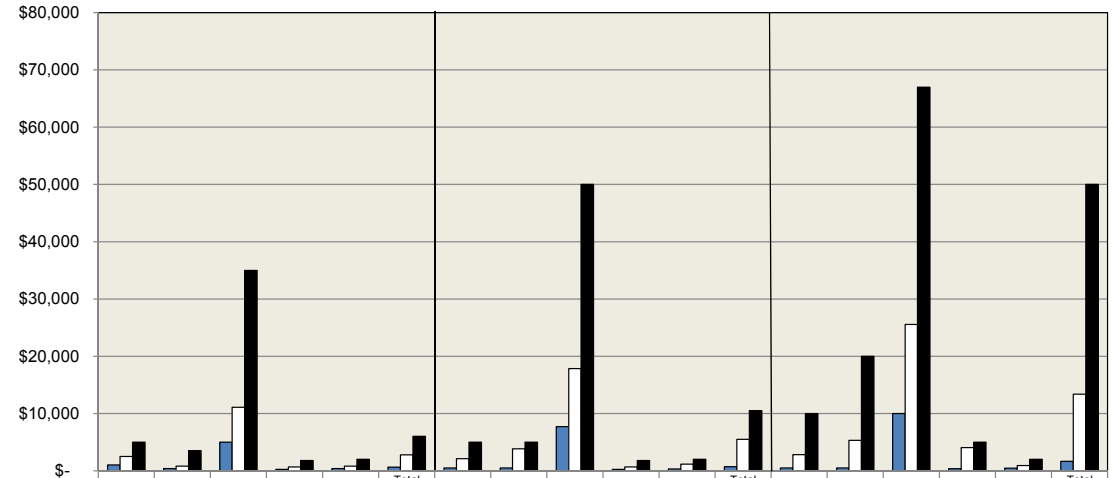



| | 65–74 | | | | 75–84 | | | | 85+ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dentist Visits | Doctor Visits | Prescrip-tion Drugs | Total Recur-ring | Dentist Visits | Doctor Visits | Prescrip-tion Drugs | Total Recur-ring | Dentist Visits | Doctor Visits | Prescrip-tion Drugs | Total Recur-ring |
| Median | $900 | $500 | $2,040 | $3,561 | $945 | $501 | $1,992 | $3,819 | $900 | $651 | $2,400 | $3,700 |
| Average | $1,788 | $1,146 | $3,233 | $5,163 | $1,897 | $1,088 | $3,156 | $5,047 | $1,548 | $1,174 | $3,442 | $4,963 |
| 90th Percentile | $4,100 | $3,000 | $7,200 | $11,000 | $4,500 | $2,650 | $7,080 | $10,320 | $3,511 | $3,000 | $6,984 | $9,315 |

Source: Employee Benefit Research Institute estimates from Health and Retirement Study (HRS), 2012.
* Conditional on positive expenses.

Figure 9

**Non-Recurring Health Care Expenses* of All Age 65+ Single Households During a Two-Year Period Between 2010–2012, by Age Group**

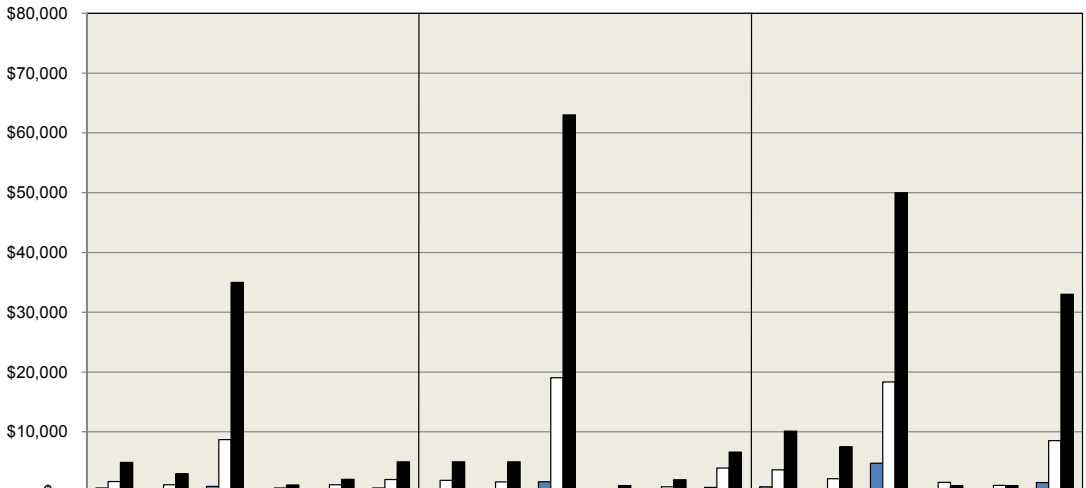



| | 65–74 | | | | | | 75–84 | | | | | | 85+ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Hospital | In-Home Care | Nursing Home | Other Care | Outpa-tient Surgery | Total Non-Recur-ring | Hospital | In-Home Care | Nursing Home | Other Care | Outpa-tient Surgery | Total Non-Recur-ring | Hospital | In-Home Care | Nursing Home | Other Care | Outpa-tient Surgery | Total Non-Recur-ring |
| Median | $1,000 | $375 | $5,001 | $254 | $375 | $624 | $501 | $501 | $7,701 | $250 | $300 | $700 | $501 | $501 | $10,001 | $350 | $450 | $1,656 |
| Average | $2,501 | $788 | $11,079 | $654 | $791 | $2,790 | $2,113 | $3,817 | $17,844 | $672 | $1,163 | $5,502 | $2,810 | $5,320 | $25,540 | $4,029 | $912 | $13,355 |
| 90th Percentile | $5,001 | $3,500 | $35,000 | $1,800 | $2,000 | $6,000 | $5,000 | $5,001 | $50,000 | $1,800 | $2,001 | $10,500 | $10,001 | $20,001 | $67,000 | $5,001 | $2,001 | $50,000 |

Source: Employee Benefit Research Institute estimates from Health and Retirement Study (HRS), 2012.
* Conditional on positive expenses.

Figure 10

**Non-Recurring Health Care Expenses* of All Age 65+ Couple Households During a Two-Year Period Between 2010–2012, by Age Group**




| | 65–74 | | | | | | 75–84 | | | | | | 85+ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Hospital | In-Home Care | Nursing Home | Other Care | Outpa-tient Surgery | Total Non-Recur-ring | Hospital | In-Home Care | Nursing Home | Other Care | Outpa-tient Surgery | Total Non-Recur-ring | Hospital | In-Home Care | Nursing Home | Other Care | Outpa-tient Surgery | Total Non-Recur-ring |
| Median | $600 | $350 | $875 | $300 | $500 | $600 | $501 | $500 | $1,650 | $232 | $304 | $700 | $800 | $501 | $4,751 | $300 | $300 | $1,500 |
| Mean | $1,697 | $1,153 | $8,690 | $603 | $1,135 | $2,024 | $1,872 | $1,618 | $19,058 | $459 | $797 | $3,930 | $3,632 | $2,165 | $18,331 | $1,555 | $1,042 | $8,530 |
| 90th Percentile | $4,900 | $3,000 | $35,000 | $1,100 | $2,050 | $5,000 | $5,001 | $5,000 | $63,000 | $1,002 | $2,001 | $6,609 | $10,100 | $7,500 | $50,001 | $1,001 | $1,000 | $33,000 |

Source: Employee Benefit Research Institute estimates from Health and Retirement Study (HRS), 2012.
* Conditional on positive expenses.

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*EBRI Employee Benefit Research Institute Notes* (ISSN 1085–4452) is published monthly by the Employee Benefit Research Institute, 1100 13th St. NW, Suite 878, Washington, DC 20005-4051, at $300 per year or is included as part of a membership subscription. Periodicals postage rate paid in Washington, DC, and additional mailing offices. POSTMASTER: Send address changes to: *EBRI Notes*, 1100 13th St. NW, Suite 878, Washington, DC 20005-4051.  Vol. 37, no. 1.

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