



A New Way to Calculate Retirement Health Care Costs

Separating premiums and out-of-pocket costs makes it easier to plan for expenses.

February 2019

KEY INSIGHTS

- We believe viewing retirement health care costs as an annual expense, instead of as a lump sum, makes it easier for retirees to plan for and pay for them.
- Health insurance premiums are usually fixed and can be budgeted for and funded from monthly income. On the other hand, out-of-pocket expenses can vary from month to month and could be paid from savings or a fund earmarked for those purposes.
- Retirement health care costs can vary widely, depending on the type of insurance a retiree chooses, and no type of coverage is “typical.” So we believe it is useful to provide these estimates based on the type of insurance coverage.



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Health care costs are top of mind for every retiree or anyone who is nearing retirement. According to T. Rowe Price’s Retirement Savings and Spending study (2018), the top three spending concerns of retirees are (in order of importance): paying for long-term care services, health insurance premiums, and out-of-pocket health care expenses.¹

The projected health care costs in retirement provided by some of the

leading experts sound alarming. In its latest (2018) projection, the Employee Benefit Research Institute (EBRI) estimates that to have a 90% chance of covering all their health insurance premiums and out-of-pocket costs, a 65-year-old couple will need \$296,000.² And according to the most recent (2010) estimates from the Boston College Center for Retirement Research (CRR), a typical 65-year-old couple can expect to spend \$197,000 over their remaining lifetime with a 5% chance that the number exceeds \$311,000.³

¹ The Retirement Savings and Spending (RSS) study is a nationally representative annual survey of workers ages 21 and above who are either currently participating in a 401(k) plan or eligible to participate and have a plan balance of at least \$1,000. Along with 3,000 workers, the 2018 RSS study also includes a sample of 1,000 retirees who had a rollover IRA or a left-in-plan 401(k) balance.

² Fronstin, Paul and Jack VanDerhei. “Savings Medicare Beneficiaries Need for Health Expenses: Some Couples Could Need as Much as \$400,000, Up From \$370,000 in 2017.” EBRI Issue Brief, no. 460 (Employee Benefit Research Institute, October 8, 2018).

³ Webb, Anthony and Natalia Zhivan, March 2010. “What Is the Distribution of Lifetime Health Care Costs from Age 65?” Center for Retirement Research at Boston College, No 10-4.

“Premiums, similar to other monthly expenses, like a cable or utility bill, are often paid from monthly income. On the other hand, out-of-pocket expenses are much more likely to be funded from savings.

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These numbers don't include long-term care costs, which could be catastrophic in some cases.

While these numbers offer a good idea of how expensive retirement health care could be over several decades, they are not very helpful for individual financial planning. Here's why:

1. Lump-sum estimates of health care costs covering the entire duration of retirement are not useful for budgeting and planning purposes because health care expenses are not incurred as lump sums. Individuals have to make their health care decisions based on their financial resources at any given point in time.
2. There are embedded health insurance coverage assumptions in most of these calculations. Health insurance coverage varies significantly for retired Americans, even under the broad umbrella of Medicare. It is not clear if any particular type of health insurance coverage can be termed as “typical.”
3. Combining premiums and out-of-pocket costs tends to distort the perception of the risk of health care costs in retirement and complicates the associated financial planning. Premiums are relatively stable at the individual level, but out-of-pocket costs are more uncertain and, as a result, accounts for most of the variation in health care costs. Premiums also constitute the bulk of their health care expenses for the majority of retirees. As a result, for most retirees, a large chunk of their annual health care costs is predictable and can be easily planned for, a fact masked by the combined lifetime health care cost estimates.

By separating the premiums and out-of-pocket costs, retirees will be able to plan better for these expenses. Premiums, similar to other monthly expenses, like

a cable or utility bill, are often paid from monthly income. On the other hand, out-of-pocket expenses are much more likely to be funded from savings.

As a result, we believe that framing health care costs in retirement should be based on (at least) three factors:

- Annual costs
- Type of health insurance coverage
- Separation of premiums and out-of-pocket expenses

From an individual perspective, the more personalized the estimates are, the better. To that effect, a host of other factors (like income, age, health status, marital status, state of residence, etc.) can be added to this framework. But since it is not always possible to reliably estimate retiree health care costs using all these factors, we think our three-factor approach is a reasonable basic framework to estimate health care costs in retirement. Also, presenting a detailed picture of the distribution of these costs—rather than single summary measures like averages—addresses some of the personalization needs. For example, someone in excellent health might expect to be in the bottom quartile of out-of-pocket expenses, while someone with one or more serious chronic conditions might find themselves in the top decile of out-of-pocket expenses.

For the purposes of this research, we chose not to include the cost of long-term care. Although a majority of individuals do not incur out-of-pocket long-term care expenses during their retirement years, it could be catastrophic for a small fraction of retirees.⁴ The uncertainty of incurring any out-of-pocket long-term care expenses combined with the highly skewed distribution of long-term care expenses makes it very difficult to plan for them. But there are a couple of ways people

⁴Banerjee, Sudipto. “Cumulative Out-of-Pocket Health Care Expenses After the Age of 70,” EBRI Issue Brief, no. 446 (Employee Benefit Research Institute, April 3, 2018).

can prepare for long-term care expenses. Buying long-term care insurance could be a solution. There are a number of factors that could influence the decision to purchase long-term care insurance, including premiums (which could be very high), the level of assets an individual wants to protect, bankruptcy concerns about insurers, and the lack of caregivers. The other way is to self-insure using personal savings and then depend on Medicaid if assets are exhausted.

Below, we discuss in more detail why it is important to use annual costs, type of health insurance coverage, and separation of premiums and out-of-pocket expenses for a basic framing of retiree health care costs. Then, using this framework, we present health care cost estimates based on data from the Health and Retirement Study (HRS)⁵ and projected 2019 Medicare premiums. We also provide some guidelines on how individuals can plan to meet these expenses.

Why Use Annual Health Care Costs?

As mentioned earlier, cumulative health care cost estimates are useful in conveying the overall risk of health care costs in retirement, but there are certain disadvantages of using these estimates.

- **It's hard to build a financial plan around a lump sum** since health care expenses are not incurred as a lump sum, and it is not clear how such information can be used to plan for retirement health care costs. Let's take an example of a hypothetical 65-year-old couple who needs \$300,000 to fund their health care costs in retirement. How should they go about it? Should they set aside \$300,000 from their retirement savings at age 65 to meet their future health care cost needs? If so, how should they

allocate the sum between savings and investments? And what if they only have \$280,000 in retirement savings? Does that mean they have no chance of affording their projected health care expenses? And if they should not set aside the \$300,000 as a lump sum, how much do they need at age 65, 75, or 85? These types of questions immediately point out the problems one might face when using these lump-sum estimates to plan for health care costs in retirement.

- **The burden of health care costs seems higher when the cumulative approach is applied to health care costs alone without including income and assets.** If we're going to treat health care as a lump sum, let's apply that framework to the entire financial situation of a household and include assets and income.

Again, let's take the example of our hypothetical 65-year-old couple. Assume that they have \$400,000 in retirement savings and their combined monthly Social Security benefit is \$2,000. Surely, the \$300,000 needed for health care costs seems daunting for this couple. But instead of saying they receive \$2,000 per month from Social Security, let's say that with a 2% annual cost-of-living adjustment (COLA), the couple will receive approximately \$583,000 in Social Security benefits in the next 20 years.⁶ So, now, with almost \$1 million in assets between retirement savings and lifetime Social Security benefit payments, the \$300,000 projected for health care expenses seems less alarming.

Keep in mind that assets usually appreciate over time. So, let's assume the \$400,000 in retirement savings produces a 4% nominal return every year and the couple uses the returns to pay for health care and other

⁵Health and Retirement Study, public use dataset. Produced and distributed by the University of Michigan with funding from the National Institute on Aging (grant number NIA U01AG009740). Ann Arbor, MI.

⁶According to the Social Security life expectancies calculator, life expectancy for men and women at age 65 are 84.2 years and 86.7 years, respectively. <https://www.ssa.gov/cgi-bin/longevity.cgi>

expenses while keeping the principal intact. Now, they have another \$320,000 (not adjusting for inflation) worth of income generated from their retirement savings over 20 years in retirement. Between retirement savings (\$400,000), income generated from retirement savings (\$320,000), and lifetime Social Security payments (\$583,000), our couple has approximately \$1.3 million. This makes the \$300,000 health care costs estimate less intimidating. So, when all the numbers are presented as lump sums, the perception of risk changes.

This example clearly shows that the perception of risk changes based on how these costs are framed. Instead of converting everything into a cumulative lump-sum amount covering decades, it is better—and more prescriptive—to provide annual or point-in-time estimates because that is how most people assess these numbers.

A Closer Look at Health Insurance Coverage

Although most Americans aged 65 or above are covered by Medicare, the type of coverage is not uniform. There are several components of Medicare, and retirees have various options for how they want to receive their Medicare benefits. Each option comes with different cost implications.

Medicare consists of four parts:

- **Part A:** Covers room and board in the hospital. Part A has no premium for most people who have worked for at least 10 years in the U.S. and paid FICA taxes, but there are copayments and deductibles. However, a lot of the actual care received in a hospital falls under Medicare Part B.
- **Part B:** Covers outpatient services (e.g., doctor visits, lab tests, imaging services, surgeries, etc.) that are deemed medically necessary. Part B has a monthly premium, which can be deducted from Social Security payments. Part B also has copayments and deductibles.
- **Part C (Medicare Advantage):** This is the most confusing part of Medicare as it does not cover any specific medical benefits like Parts A, B, or D, which all have associated deductibles and copayments and sometimes no cap on out-of-pocket expenses. All these can result in significant out-of-pocket expenses. Part C essentially offers a way of reducing those expenses through private health insurance plans. Under Medicare Advantage (MA), individuals receive benefits of Parts A, B, and D and often additional services from a single private insurer. Usually, individuals have to pay a monthly premium in addition to Part B premiums and are subject to the network restrictions and other plan rules. MA plans can be either HMO or PPO plans. It is

Comparing Medicare Components



Part A

covers room and board in the hospital



Part B

covers outpatient services deemed medically necessary, such as lab tests and doctor visits



Part C

helps reduce expenses through private health insurance plans



Part D

helps lower the cost of prescription drugs

Advantages of Separating Out Premiums From Out-of-Pocket Expenses



A better understanding about the risk of health care expenses



The need to separate funding mechanisms for premiums and out-of-pocket expenses

important to note that once enrolled in Part C, care is delivered through the private insurers instead of Medicare.

- **Part D:** This federally created program is aimed at lowering costs of prescription drugs. Under Part D, people have to sign up for drug plans offered by private insurance carriers. Part D is optional, but paying a monthly premium usually results in lower copayments for medicines than not having any drug plan.
- **Supplemental Insurance:** Another way of lowering the out-of-pocket costs of traditional Medicare is to use a supplemental plan. The most common type of supplemental insurance is Medigap. These plans charge monthly premiums and protect from the out-of-pocket costs associated with traditional Medicare. Medigap policies are offered by private insurers. They are highly standardized under Medicare guidelines and are accepted in any facility that accepts Medicare. Other forms of supplemental insurance could include employer-sponsored insurance or Medicaid.

When it comes to the type of Medicare coverage, often it's not clear what a "typical" retiree means. According to the Kaiser Family Foundation (KFF), of all traditional Medicare beneficiaries in 2016, 30% had supplemental coverage through employer-sponsored insurance, 29% had supplemental Medigap coverage, and 19% had no supplemental coverage at all.⁷ In addition to that, in 2018, one in three of all Medicare beneficiaries were enrolled in a Medicare Advantage plan.⁸ The cost differences across these different types of coverage could be significant.

According to our estimates, in 2019, the median annual premium for retirees

covered by a Medicare Advantage HMO plan with prescription drug coverage will be around \$1,700 per person. An individual with traditional Medicare (A and B) with a prescription drug plan (Part D) will pay \$2,200. Lastly, an individual covered by traditional Medicare with a Medigap policy and a standalone prescription drug plan will pay around \$4,500 annually.

So, in order to better understand the burden of retirement health care costs, it's crucial to discuss them within a framework that specifies the costs under each type of coverage.

Why Separate Out Health Insurance Premiums and Out-of-Pocket Expenses?

The advantages of separating out premiums from out-of-pocket expenses include:

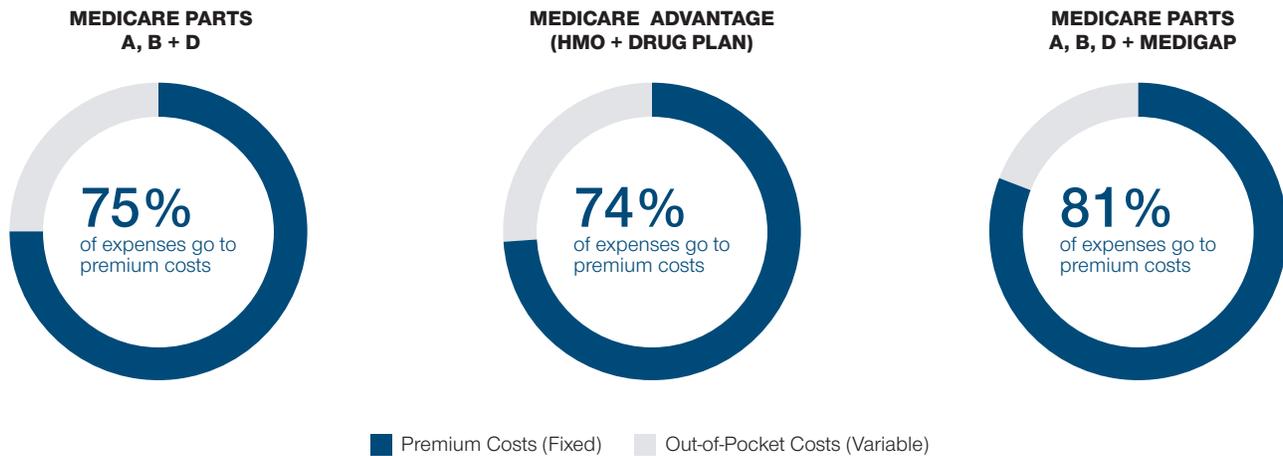
- **A better understanding about the risk of health care expenses:** The risk or uncertainty of health care costs is primarily associated with out-of-pocket expenses because they vary more widely than fixed premiums. For example, according to our estimates for those 65 and above with traditional Medicare (Part A and B) and a prescription drug plan (Part D), the 25th percentile and 90th percentile for annual premiums are \$2,000 and \$2,800, respectively. In comparison, the 25th and 90th percentiles for out-of-pocket expenses for the same group are \$300 and \$4,600. Also, year-to-year variation in insurance premiums for individuals is often predictable. From Figure 1, on the next page, we can see that health insurance premiums constitute nearly 75% of retirees' health care expenses regardless of the type of coverage.

⁷ Cubanski, Juliette, Anthony Damico, Tricia Neuman, and Gretchen Jacobson. "Sources of Supplemental Coverage Among Medicare Beneficiaries in 2016." The Henry J. Kaiser Family Foundation, Data Note, November 2018. <https://www.kff.org/medicare/issue-brief/sources-of-supplemental-coverage-among-medicare-beneficiaries-in-2016/>

⁸ Jacobson, Gretchen, Anthony Damico, Tricia Neuman, and Marsha Gold. "A Dozen Facts About Medicare Advantage." The Henry J. Kaiser Family Foundation, Data Note, November 2018. <https://www.kff.org/medicare/issue-brief/a-dozen-facts-about-medicare-advantage/>

(Fig. 1) A Look at the Share of Premiums in Total Annual Health Care Costs

Median percentage share of individual health insurance premiums (ages 65 and above)



Source: T. Rowe Price estimates based on projected 2019 Medicare premiums and data from the Health and Retirement Study (HRS).

This means that for a majority of retirees, a large part of their health care expenses is predictable and does not change much on a year-to-year basis. This helps make planning for such expenses easier.

- **The need to separate funding mechanisms for premiums and out-of-pocket expenses:** If premiums are a fixed month-to-month expense item, they are no different than rent or a cable bill. So, like those other items, premiums should also be funded from the regular stream of monthly income. Doing this helps retirees form a more accurate monthly budget, which in turn helps to create a better income plan. EBRI has shown that a portion of out-of-pocket expenses associated with routine care (e.g., doctor visits, prescription drugs) also remain remarkably stable throughout retirement.⁹ So, if a retiree can track routine out-of-pocket expenses, those could also be included in a monthly budget.

On the other hand, nonroutine out-of-pocket health care expenses

(e.g., surgeries, hospitalization, or other infrequent health events) are likely to be funded from a pool of liquid assets (savings). A realistic estimate of such expenses could help retirees to plan how much in liquid assets they should hold at any point in time to meet their health care cost needs. Simply put, premiums should be paid from income, while out-of-pocket expenses are likely to be paid from savings. So separate estimates are more helpful to make proper budgeting plans.

Health Care Cost Estimates

We use the announced and projected 2019 Medicare premiums and data from the Health and Retirement Study (HRS) to calculate the health care cost estimates for the 65 and older population. The HRS data are used to calculate the out-of-pocket expenses for each type of health insurance coverage and the income surcharges for premiums. On the next page, we examine three different sets of health care cost estimates corresponding

⁹ Banerjee, Sudipto. "Utilization Patterns and Out-of-Pocket Expenses of Different Health Care Services Among American Retirees," EBRI Issue Brief, no. 411 (Employee Benefit Research Institute, February 2015).

to three different health insurance coverage types:

- Traditional Medicare (Parts A and B) and a prescription drug plan (Part D)
- Medicare Advantage HMO plan with prescription drug coverage (MA-PD plan)
- Traditional Medicare (Parts A and B), a prescription drug plan (Part D), and Medigap

We present estimates separately for premiums, out-of-pocket expenses, and total health care costs as well. We also present a detailed description of the distribution of these costs by presenting the 25th percentile, 50th percentile (median), 75th percentile, and the 90th percentile. We do not present the mean or average costs because averages are not a good summary measure for highly skewed distributions (like the distribution of out-of-pocket expenses and total expenses).

Traditional Medicare (Parts A and B) and a Prescription Drug Plan (Part D)

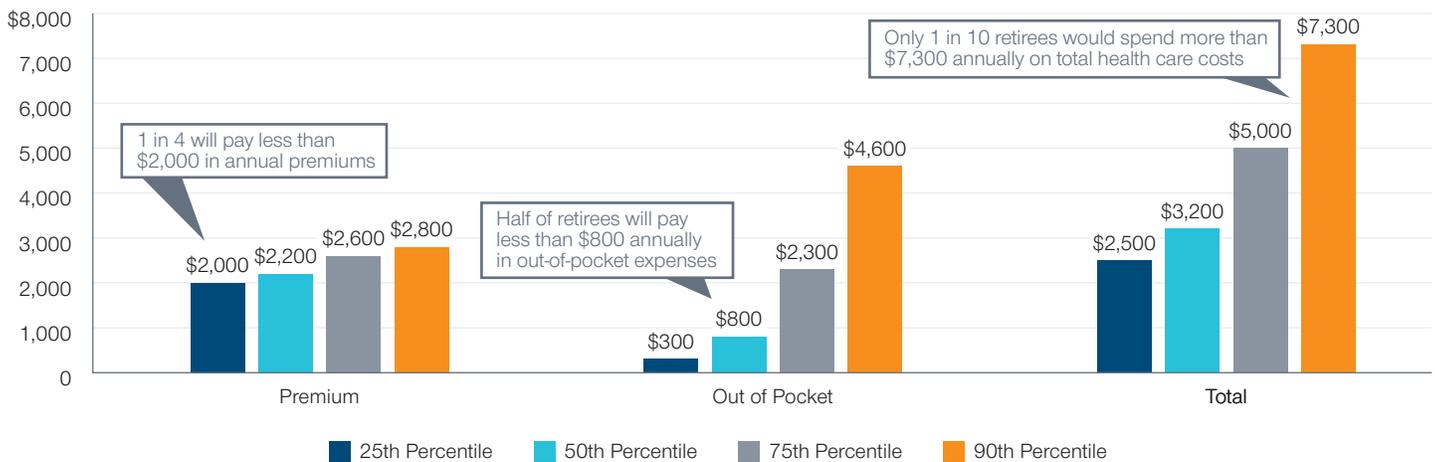
Figure 2 shows the estimated health care costs of retirees with coverage through traditional Medicare (Part A and Part B) and prescription drug coverage (Part D). Median total annual expenses for this type of coverage is \$3,200, with the bulk of it paid as premiums. So, half of retirees with this type of coverage will spend less than \$3,200 and the other half will spend more. As discussed earlier, out-of-pocket expenses have a much wider variation (25th percentile is \$300 and 90th percentile is \$4,600) than premiums (25th percentile is \$2,000 and 90th percentile is \$4,600). This underscores the importance of separating the two as discussed in detail earlier.

Medicare Advantage HMO Plan With Prescription Drug Coverage (MA-PD Plan)

According to the Kaiser Family Foundation (KFF), enrollment in Medicare Advantage plans has doubled in the past decade (from 9.7 million in 2008 to 20.4 million in 2018).¹⁰ Among Medicare

(Fig. 2) Estimated Annual Health Care Expenses for Those Covered by Traditional Medicare (Parts A and B) and a Prescription Drug Plan (Part D)

For individuals ages 65 and above

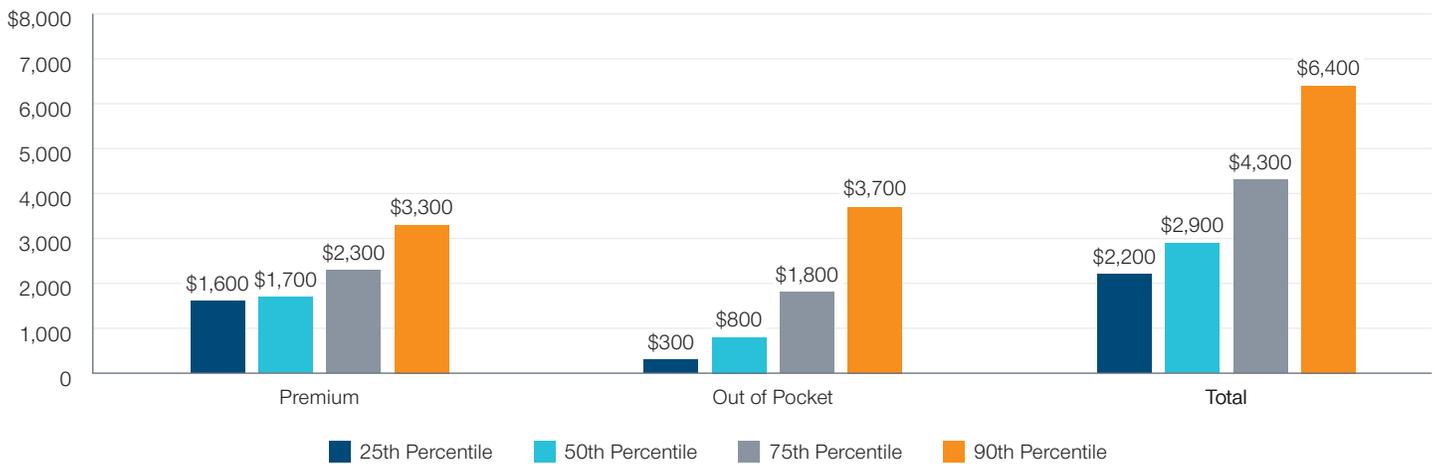


Source: T. Rowe Price estimates based on projected 2019 Medicare premiums and data from the Health and Retirement Study (HRS). All costs are rounded to the nearest hundred.

¹⁰ Jacobson, Gretchen, Anthony Damico, Tricia Neuman, and Marsha Gold. "A Dozen Facts About Medicare Advantage." The Henry J. Kaiser Family Foundation, Data Note, November 2018. <https://www.kff.org/medicare/issue-brief/a-dozen-facts-about-medicare-advantage/>

(Fig. 3) Estimated Annual Health Care Expenses for Those Covered by a Medicare Advantage HMO Plan That Includes Prescription Drug Coverage (MA-PD plans)

For individuals ages 65 and above



Source: T. Rowe Price estimates based on projected 2019 Medicare premiums and data from the Health and Retirement Study (HRS). All costs are rounded to the nearest hundred.

Advantage plans, MA-PD plans are by far the most popular because of lower premiums. According to the same KFF study, in 2018, 51% of MA-PD plans had no premium (in addition to Part B premiums) and the average monthly premium was only \$34. While HMOs offer lower premiums, they also come with network restrictions and often require prior authorization for services.

Figure 3 shows the costs associated with Medicare Advantage HMO plans with prescription drug coverage (MA-PD plans). A quick comparison of MA-PD HMO plan premiums with traditional Medicare with prescription drug coverage discussed in Figure 2 shows that the premiums for MA-PD plans are significantly lower. This might explain the rising popularity of MA-PD HMO plans. Out-of-pocket expenses are similar for the bottom halves (50th percentile and below) of these two types of plans, but higher in the top half (above 50th percentile) for traditional Medicare plans with prescription drug coverage. In general, comparing Figures 2 and 3, we can say that the costs are lower for MA-PD HMO plans compared with traditional Medicare with Part D coverage.

Traditional Medicare (Parts A and B), Prescription Drug Plan (Part D), and Medigap

Finally, Figure 4 on the next page illustrates the health care costs for retirees with traditional Medicare (Parts A and B), a prescription drug plan, and supplemental health insurance through Medigap. Supplemental insurance can take various forms. The Kaiser Family Foundation estimates that out of all traditional Medicare beneficiaries in 2016, 30% had supplemental employer-sponsored insurance, 29% had Medigap insurance, and 22% had coverage through Medicaid. For our discussion, we focus on Medigap because those with employer-sponsored insurance are unlikely to look for other types of coverage, and those under Medicaid might not have any other option. We don't consider any particular type of Medigap policy (like Plan F or Plan N). Premiums in Figure 4 represent the distribution of premiums of all Medigap policies that can be purchased directly from an insurance company, insurance exchange, or group plans provided by AARP.

Across the three different types of coverage scenarios considered,

traditional Medicare with Part D and Medigap, have the highest costs. This is primarily because of the Medigap premiums. Between Figure 2 and Figure 4, the only additional component is Medigap, and we can see that median annual premiums increase from \$2,200 to \$4,500. But the similar distribution of out-of-pocket expenses (as shown in Figures 2 and 4) is counterintuitive because the main purpose of Medigap coverage is to minimize the burden of out-of-pocket expenses under traditional Medicare. There are a couple of plausible explanations for the similar out-of-pocket expenses under traditional Medicare and traditional Medicare with Medigap.

- First, individuals with higher health care needs are more likely to choose Medigap. They are most likely to spend much more under traditional Medicare.
- Second, those who get Medigap policies might also consume more health care services (i.e., more preventive services) because

they want to use the benefits of Medigap protection.

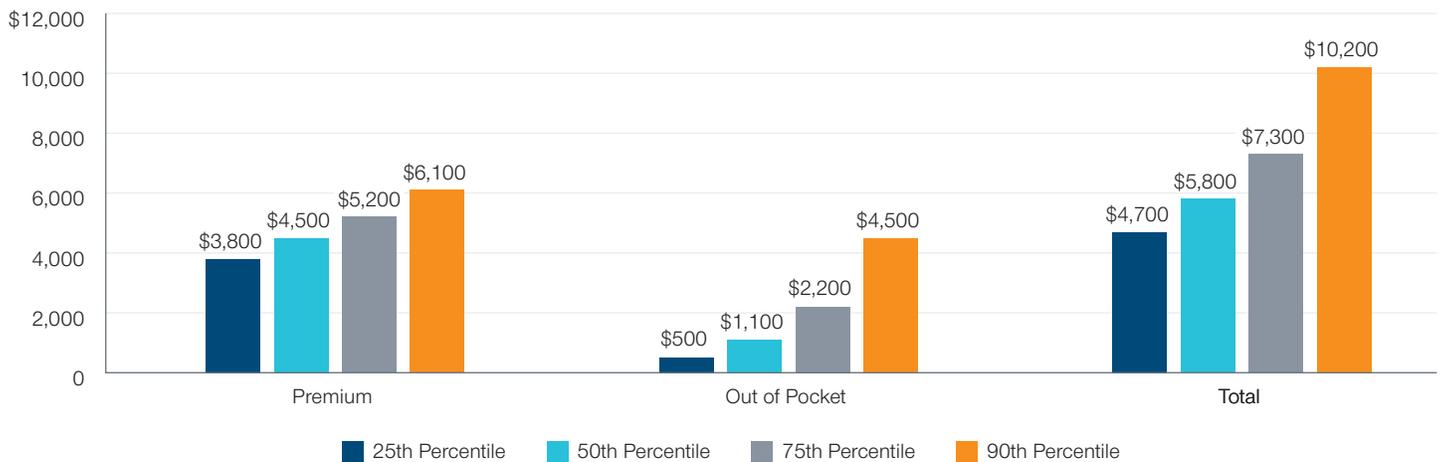
How to Plan for Health Care Expenses

It is clear that depending on what type of health insurance coverage an individual selects, health care expenses could be very different in both total health care expenses and the mix of premiums and out-of-pocket expenses. So this framework could be very useful to help individuals plan for their health care expenses based on the type of coverage they have.

Since, health insurance premiums are known in advance and can be easily included in the budget or income plan, retirees might be better served by planning to pay them from their monthly income, which might include Social Security benefits, pension payments, other annuity payments, systematic withdrawals from retirement accounts, etc. and use a dedicated pool of assets like a savings account earmarked for out-of-pocket expenses.

(Fig. 4) Estimated Annual Health Care Expenses for Those Covered by Traditional Medicare (Parts A and B), a Prescription Drug Plan (Part D), and Medigap¹¹

For individuals ages 65 and above



Source: T. Rowe Price estimates based on projected 2019 Medicare premiums and data from the Health and Retirement Study (HRS). All costs are rounded to the nearest hundred.

¹¹ Medigap policies bought either directly from an insurance company, an insurance exchange, or group plans provided by AARP are considered for these calculations. Individuals with supplemental coverage through any employer plan are not part of these calculations.

How much savings should someone have available at any point in time to meet the out-of-pocket costs? A safe strategy could be to hold the amount indicated by the 90th percentiles. For example, if someone with an MA-PD plan keeps \$3,700 for annual out-of-pocket expenses, chances are that in 9 out of 10 situations, she will be able to cover those expenses. Depending on the individual's health care needs and risk tolerance, the savings amount can be increased or decreased.

More importantly, the advantage of this approach is that one does not have to hold enormously large sums in savings accounts in advance of retirement, and as a result, forgo investment or interest earnings. After allocating for the annual out-of-pocket health care expense needs, retirees can keep the rest of their assets invested and benefit from potential

returns to meet their other needs, including long-term care.

The most tax-advantaged way to save for retirement health care costs is through a Health Savings Account (HSA).¹² HSAs are triple tax-advantaged, i.e., income is not taxed when contributed to an HSA, investments grow tax-deferred, and withdrawals are tax-free if the funds are used for qualified medical expenses. You can pay Medicare premiums (but not Medigap premiums) and qualified out-of-pocket expenses with tax-free withdrawals from your HSA. If you are currently saving for retirement and have access to an HSA, you might consider using it for long-term investment purposes. If you are already retired and have some money in an HSA, consider keeping a portion of your HSA in cash to pay for near-term qualified health care expenses.

ABOUT OUR STUDY

We provide a new approach to estimate retirement health care costs. Instead of estimating a lump-sum amount for the entire duration of retirement, we estimate the annual health care costs for retirees using empirical data from the Health and Retirement Study (HRS) and Medicare premiums. We argue that breaking down health care costs between insurance premiums and out-of-pocket expenses for different types of Medicare coverage is helpful to plan for such expenses.

¹²Young, Roger. "Using Health Savings Accounts Wisely." T. Rowe Price, February 2019.

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