MILLIMAN CLIENT REPORT

Average annual beneficiary health care costs for various Medicare coverage options

Commissioned by UnitedHealth Group (UHG)

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I. EXECUTIVE SUMMARY

UnitedHealth Group (UHG) commissioned Milliman to compare the value to beneficiaries of the Medicare Advantage (MA) program relative to other public and private health insurance options available to Medicare-eligible seniors. As of the date of this analysis, there are few comprehensive resources comparing average annual health care costs[1] paid by beneficiaries across various popular coverage options. Most Medicare beneficiaries are on fixed incomes, with 46% having annual incomes below $30,000 as of 2016,[2] rendering average annual health care costs a significant portion of income for many Medicare-eligible individuals, and a key determinant in the financial impact of health care coverage decisions for Medicare-eligible individuals. This analysis considers average annual health care costs borne by a Medicare beneficiary of average age and health status, not eligible to receive income-based assistance, and eligible for the program due to age rather than disability.

We estimate that such a beneficiary will incur approximately $1,475 less in health care costs annually under MA than Traditional Medicare fee-for-service (FFS), and about $1,800 to $2,325 less under MA than under two popular Medigap plan options, Plan G and Plan F, respectively. In each case, we compared an integrated Medicare Advantage and Prescription Drug (MA-PD) plan, the most popular type of MA plan, to FFS and Medigap plans, which are supplemented by standalone Medicare Prescription Drug Plans (PDPs), the most popular drug coverage option for seniors choosing FFS and Medigap. Note that the cost differentials above represent averages. Individual beneficiaries will certainly experience actual out-of-pocket (OOP) costs that vary from averages. We highlight considerations for beneficiaries with annual out-of-pocket costs that differ significantly from averages in a special section of this report dedicated to high-cost beneficiaries.

The demographic makeup of individuals choosing various coverage options differs; however, we adjust for this in our analysis using publicly available cost data and the Centers for Medicare and Medicaid Services (CMS)-Hierarchical Condition Category (HCC) risk adjustment model. Over half of Medicare beneficiaries are female, with the mix only slightly differing between MA (57%), FFS (53%), and Medigap (59%). Beneficiaries over the age of 75 are more prevalent in both MA (37%) and Medigap (45%) than FFS (34%). MA enrolls disproportionally more low-income membership (51%) than Medigap (37%) or FFS (44%). However, this report does not focus on beneficiaries eligible for government subsidies due to income, as discussed above.[3,4]

We performed this analysis for hypothetical 65-year-old and 85-year-old Medicare beneficiaries under the same coverage options—these results are adjusted for differences in the underlying health status. Results are summarized in Figure 1.

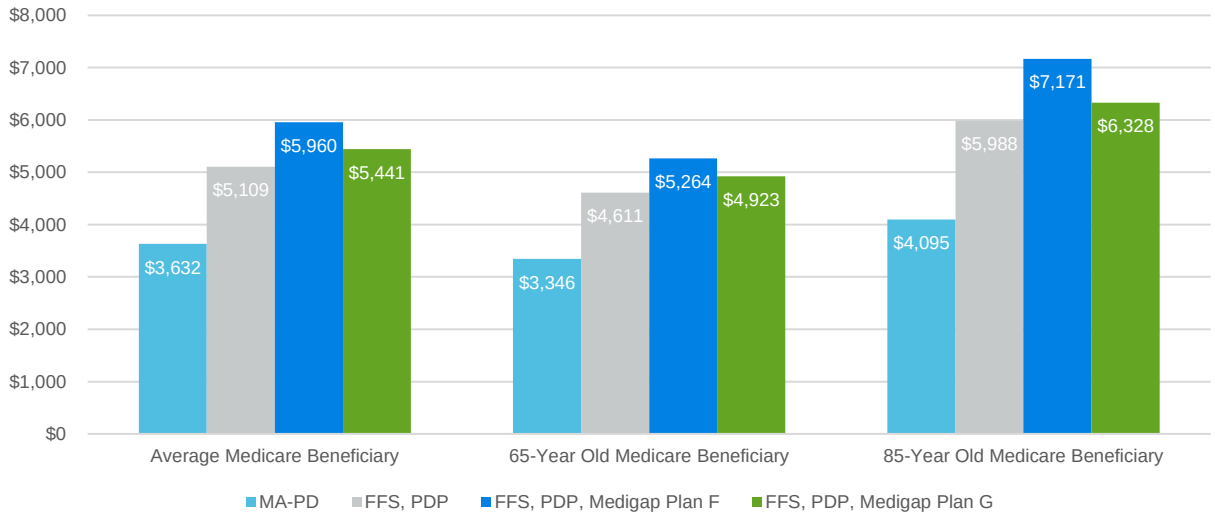
[1] *Annual health care costs* represent total health care-related spending by an individual beneficiary, including premiums and out-of-pocket (OOP) costs on deductibles, coinsurances, and copays for medical, drug, and ancillary services.

[2] AHIP (May 2019). Medicare Advantage Demographics Report, 2016. Retrieved September 12, 2019, from https://www.ahip.org/wp-content/uploads/MA_Demographics_Report_2019.pdf.

[3] Ibid.

[4] AHIP (May 2019). State of Medigap 2019. Retrieved September 12, 2019, from https://www.ahip.org/wp-content/uploads/IB_StateofMedigap2019.pdf.

FIGURE 1: ESTIMATED ANNUAL BENEFICIARY HEALTH CARE COSTS BY COVERAGE OPTION AND AGE



These beneficiary health care cost estimates include premiums (total member premium, that is, including the Part B premium, as well as the member premium for the MA-PD, PDP, and/or Medigap plan) and cost sharing for medical services, pharmacy services, and ancillary services, such as dental, vision, and hearing. While premium is the most visible cost to prospective beneficiaries when deciding what coverage to purchase, total health care costs, which are generally less understood by beneficiaries shopping for coverage, ultimately determine whether a coverage option is the best option financially. Results are outlined in greater detail in the Nationwide Comparison of the Coverage Value to Medicare Beneficiaries section below.

As of 2018, over 16 million individual Medicare beneficiaries chose an MA plan for coverage, while over 10 million chose Medigap plans.[5] Additionally, many Medicare beneficiaries receive supplemental coverage through Medicaid, or their employers (employer coverage may be provided through MA plans, Medigap plans, or other employer-sponsored health plans). Only approximately 6 million Medicare beneficiaries have no supplemental coverage.[6]

In addition to lower average annual health care costs, MA beneficiaries are protected from high out-of-pocket (OOP) costs by an annual maximum out-of-pocket (MOOP) limit available through MA plans; the average MOOP was approximately $5,000 in 2019.[7] FFS offers no such protection on total annual OOP spending. Care management programs and provider networks may be viewed by beneficiaries as limiting choice, though they do generate savings, and evidence has shown they improve quality.[8,9]

Medigap plans, while costly in terms of premium, do offer an option to Medicare beneficiaries both maximizing provider choice and minimizing variability in OOP costs. These plans tend to offer premiums in excess of the reduction in expected OOP costs they provide, but with a hard cap on spending for Medicare-covered services. In the case of Plan F, this cap is $0. Medigap plans, however, do not offer protection for services not traditionally covered by Medicare FFS, such as drugs, vision, and dental.

[5] Milliman analysis of CMS-provided Medicare Advantage enrollment data and Medigap filings from the National Association of Insurance Commissioners (NAIC).

[6] Kaiser Family Foundation (November 28, 2018). Sources of Supplemental Coverage Among Medicare Beneficiaries in 2016. Retrieved September 12, 2019, from https://www.kff.org/medicare/issue-brief/sources-of-supplemental-coverage-among-medicare-beneficiaries-in-2016/.

[7] By regulation, an MA plan's MOOP may not exceed $6,700 as of 2019.

[8] O'Connor, J.T. & Spector, J.M. (July 2, 2014). High-Value Healthcare Provider Networks. Milliman Report. Retrieved September 12, 2019, from https://www.ahip.org/wp-content/uploads/2016/02/High-Value-Provider-Networks-Issue-Paper-2014_07_01.final-pdf.pdf.

[9] Timbie, J.W. et al. (December 2017). Medicare Advantage and Fee-for-Service Performance on Clinical Quality and Patient Experience Measures: Comparisons from Three Large States. Health Services Research. Retrieved September 12, 2019, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5682140/.

II. BACKGROUND

UnitedHealth Group (UHG) commissioned Milliman to compare the value to beneficiaries of the Medicare Advantage (MA) program relative to other public and private health insurance options available to Medicare-eligible seniors. As of the time of this report, few existing resources provide objective, beneficiary-focused financial comparisons of the various options for Medicare coverage. In this report, we highlight differences in average annual beneficiary health care costs (i.e., premiums and cost sharing) among Medicare coverage options. We also describe a number of qualitative differences among the options.

The options analyzed, described in detail below, include Medicare Advantage (MA), Traditional Medicare fee-for-service (FFS), Prescription Drug Plans (PDPs), and Medicare Supplement policies (Medigap). We do not analyze options subsidized by employers for active or retired employees, nor do we analyze options for Medicare beneficiaries receiving financial assistance from Medicaid or other programs due to income.

- **Medicare Advantage:** Medicare Advantage Organizations (MAOs) contract with the Centers for Medicare and Medicaid Services (CMS) to offer privately managed insurance covering Part A, Part B, and frequently Part D (prescription drug) services—they are known as Medicare Advantage and Prescription Drug (MA-PD) plans. The MA program is an alternative to FFS, and beneficiary premiums for MA-PD coverage vary from $0 to over $400 per month in 2019, with an average of $28.80, in addition to the standard Medicare Part B premium ($135.50 per month in 2019). In many cases, additional health care services not covered by FFS are offered by MAOs, known as ancillary or supplemental benefits. These types of services vary widely and include items, such as hearing, vision, dental, over-the-counter (OTC) drug cards, and non-emergency medical transportation (NEMT) benefits. MAOs, through capitated payments from CMS, are incentivized to manage and coordinate the care of the beneficiaries enrolling in their plans.
- **Traditional Medicare FFS:** Those who are enrolled in traditional Medicare FFS can go to any doctor or hospital that accepts Medicare. Only Part A (facility services) and Part B (ambulatory services) services are covered under FFS, so beneficiaries opting for FFS must select a PDP plan or have some alternative drug coverage, such as Veterans Administration coverage or employer-provided insurance, if they would like coverage of pharmacy costs. All beneficiaries pay a premium for Part B services, which is $135.50 per month in 2019. Higher-income beneficiaries may pay higher premiums than the standard monthly amount.
- **Prescription Drug Plans:** While Part D benefits are typically bundled with MA-PD coverage, PDP organizations contract with CMS to provide Part D plans that cover only prescription drug benefits—mainly for FFS beneficiaries (including those who enroll in Medigap plans). Premiums for PDP plans range from just over $10 to $156 per month, with an average of about $39.75 per month. If a beneficiary is not enrolled in an MA-PD plan that provides both medical and drug coverage, they must enroll in a PDP plan to avoid facing penalties from CMS.[10]
- **Medigap:** Those in FFS can purchase private supplemental "wraparound" insurance known as Medigap[11,12] for a monthly premium, in addition to the standard Part B premium paid by Medicare beneficiaries. Medigap plans, such as Plans F and G,[13] are purchased from private insurance companies. Plans F and G are the most comprehensive and most popular Medigap plans on the market and, therefore, command high premiums. The premiums are exchanged for certainty in out-of-pocket costs—Plan F covers essentially all FFS cost sharing, while Plan G covers all but the Part B deductible. The high premiums are driven by the need for an administrative cost and profit load, as well as what some argue to be moral hazard due to lack of cost sharing,[14] and the lack of tools to control

[10] Note that members who enroll in MA-only plans, which are not the focus of this paper, typically have their pharmacy needs covered under something other than Part D, like creditable coverage from an employer or the Veterans Administration. Beneficiaries in MA-only plans are restricted from buying PDP coverage except in very limited circumstances.

[11] Medigap is also known as Medicare Supplement.

[12] Medigap is not technically health insurance. It is insurance against the potential of very high cost sharing under FFS—that is, it provides financial indemnification for cost sharing associated with health events where the primary insurance is FFS.

[13] There are 10 standardized Medigap plan designs, designated by letters A through N. Three states, Massachusetts, Minnesota, and Wisconsin, have different standardized plans through federal waivers.

[14] *Moral hazard* is the lack of incentive to guard against risk where one is protected from its consequences, e.g., by insurance.

underlying cost and utilization of medical services.[15,16] Less generous Medigap plans are available, with lower premiums to reflect leaner benefits. Medigap plans do not offer coverage for services not otherwise covered by FFS, including prescription drug coverage, so any coverage for services not covered by FFS must be obtained separately. Beneficiaries who choose MA are not eligible to purchase Medigap plans.

Most Medicare beneficiaries are on a fixed income, with 46% having annual incomes below $30,000 as of 2016.[17] In order to mitigate the unexpected out-of-pocket costs associated with Traditional Medicare FFS coverage, and because FFS does not have a maximum limit on a beneficiary's annual out-of-pocket costs, many beneficiaries choose MA-PD plans or Medigap plans to replace or supplement their FFS coverage, respectively. Additionally, MA plans offer supplemental benefits beyond those offered by FFS or Medigap plans, such as integrated prescription drug coverage, dental, and vision.

Of the 52 million Medicare beneficiaries covered by both Part A and Part B,[18] in 2016 over 14 million individual Medicare beneficiaries chose an MA plan for coverage and another approximately 6 million had Medicare FFS coverage only.[19] Over 9 million Medicare beneficiaries chose Medigap plans to supplement their FFS coverage.[20] The remaining 23 million Medicare beneficiaries receive supplemental coverage through Medicaid or their employers (employer coverage may be provided through MA plans, Medigap plans, or other employer-sponsored health plans).

In this report, we provide estimates of beneficiary health care costs associated with each of these programs for an average aged beneficiary (that is, the average of all members ages 65 and older), as well as a new entrant into Medicare (age 65) and an older Medicare enrollee (age 85). We will also review additional indicators of value that we did not otherwise objectively quantify.

This report provides results specific to average annual health care costs (premium and cost sharing) borne by beneficiaries in the above age groups. Results exclude beneficiaries receiving additional assistance from Medicaid, beneficiaries obtaining active employee or retiree coverage through an employer, beneficiaries in MA Special Needs Plans (SNPs), and institutionalized beneficiaries (i.e., beneficiaries in nursing homes or other long-term care facilities). We assume that the sample beneficiaries analyzed in the report obtain coverage for pharmacy costs through either an MA-PD plan or a PDP plan.

[15] Medigap plans lack the traditional tools used by health insurers to contain costs such as care management and negotiation with providers.

[16] As of 2020, Plan F will no longer be offered to beneficiaries newly eligible to Medicare, therefore Plan G will be the most generous coverage option beginning in 2020. We expect this may cause an increase in Plan G premiums for 2020 relative to 2019.

[17] AHIP, Medicare Advantage Demographics Report, 2016, op cit.

[18] There are 57 million total Medicare beneficiaries as of 2016, but approximately 4 million are enrolled in Part A only. We exclude these 4 million for consistency with our other enrollment information sources.

[19] Kaiser Family Foundation, Sources of Supplemental Coverage Among Medicare Beneficiaries in 2016, op cit.

[20] Milliman analysis of CMS-provided Medicare Advantage enrollment data and Medigap filings from NAIC.

III. NATIONWIDE COMPARISON OF THE COVERAGE VALUE TO MEDICARE BENEFICIARIES

We estimated average annual health care spending for Medicare beneficiaries under four different coverage options, using publicly available premium, enrollment, and benefit data, as well as proprietary Milliman Medicare Advantage and Part D pricing models. We analyzed these coverage options for three groupings of Medicare beneficiaries intended to represent beneficiaries of average health status at various stages of eligibility: non-dual beneficiaries eligible for Medicare due to age,[21] average 65-year-old newly eligible Medicare beneficiaries, and average older Medicare beneficiaries, with an average age of 85. For each coverage option and average beneficiary age grouping, we examine average annual out-of-pocket costs for cost sharing (i.e., copays, deductibles, and coinsurance), insurance premiums, and other out-of-pocket spending for health-related products and services on a calendar year (CY) 2019 basis.

The four scenarios are as follows:

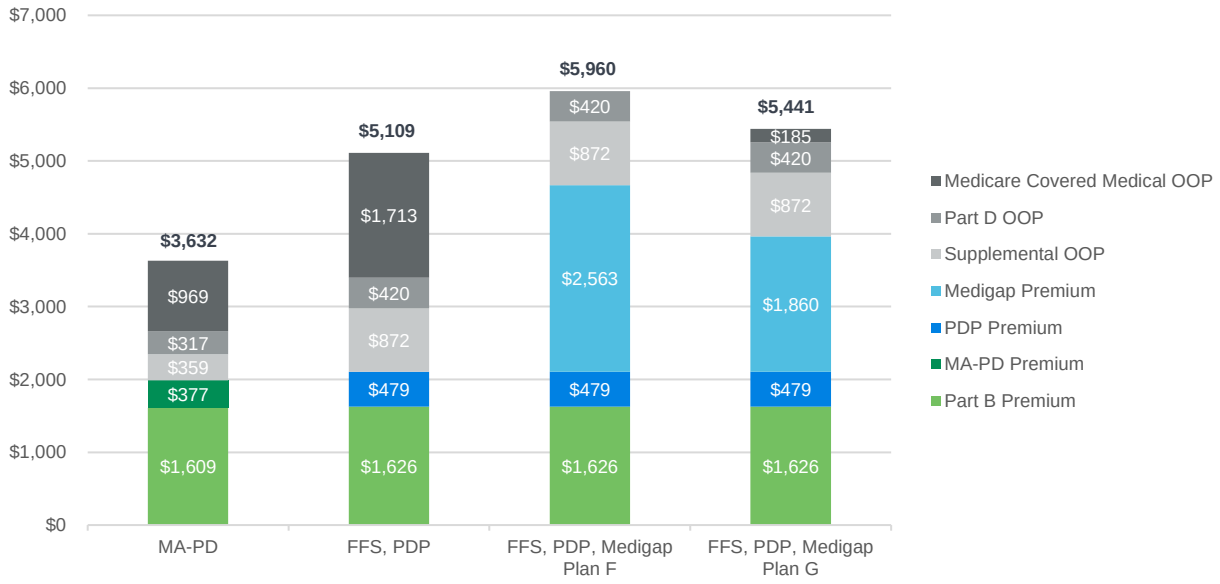
- **Medicare Advantage coverage:** This scenario reviews the medical, pharmacy, and ancillary benefit out-of-pocket costs, as well as total premiums paid by the member—MA-PD premium and Part B premium—under the MA program. This coverage option assumes all members choose to obtain Part D coverage under an MA-PD plan, and that supplemental benefits (like dental, vision, and hearing) are partly covered by the MA-PD plan.
- **Traditional Medicare FFS and PDP coverage:** This scenario reviews the medical out-of-pocket costs from traditional FFS and pharmacy out-of-pocket costs under a PDP plan and the premiums for Part B and PDP coverage, as well as the expected costs of additional supplemental benefits that are not covered under traditional FFS.
- **Traditional Medicare FFS, PDP, and Plan F or Plan G Medigap coverage:** These two scenarios assume that all members purchase one of the two richest and most popular available Medigap plans on the market—Plan F or Plan G. Average PDP and Part B premiums are included in these two scenarios as well. Results could vary if enrollees choose leaner Medigap plans, which have lower premiums but cover less out-of-pocket costs for beneficiaries. Also, we consider the expected costs of additional supplemental benefits that are not covered under traditional FFS, as well as the premiums and out-of-pocket costs under the PDP plan, which are not covered by Medigap plans.

[21] The average Medicare beneficiary in our analysis is approximately 73 years old and of average health for a beneficiary eligible for Medicare due to age. We exclude beneficiaries dually-eligible for Medicare and Medicaid as well as those eligible for Medicare due to disability and/or end-stage renal disease (ESRD). Both groups are known to have extremely different cost profiles and they are also limited in their coverage options, particularly under Medigap.

Nationwide comparison of annual health care costs for an average aged Medicare enrollee

Figure 2 illustrates our estimates of average annual health care costs for an average-aged Medicare beneficiary, split by type of cost to the beneficiary.

FIGURE 2: ESTIMATED ANNUAL HEALTH CARE COSTS FOR AVERAGE-AGED BENEFICIARY, BY TYPE OF COST



Note: The sum of individual components in this figure may not equal totals due to rounding

MA-PD plan coverage results in the lowest overall average total annual health care costs for beneficiaries, followed by FFS with PDP coverage. Both Medigap coverage options analyzed have higher average total annual costs than either the MA-PD or FFS options, though Medigap enrollees generally exchange these higher premiums for limited variability in annual out-of-pocket costs and expanded provider availability.

The average annual costs for a beneficiary who chooses Medigap Plan F are $850 higher annually than an average beneficiary who forgoes Medigap coverage, and only has Medicare FFS and PDP coverage, and they are about $2,325 higher than for an average member who chooses to purchase an MA-PD plan. The annual costs for a member who chooses Medigap Plan G are $330 higher annually than a member with only FFS and PDP coverage and they are $1,810 more than for an average member in an MA-PD plan. These costs are intended to represent the average, and it is certain that an individual beneficiary will experience difference costs based on that person's own circumstances.

These differences in out-of-pocket costs also indicate that the estimated actuarial value for the MA-PD scenario is 89.3%, while the actuarial value for the FFS scenarios is 83.3%.[22] Said another way, for every dollar of health care cost, MA-PD plans pay 89.3 cents and the member cost sharing is 10.7 cents. Similarly, under each of the three FFS scenarios, Medicare pays 83.3 cents of every dollar of health care costs, while the member pays the remaining 16.7 cents through cost sharing.

[22] We define *actuarial value* as the percentage of total Medicare-covered (that is, excluding any ancillary benefits) claim costs that are covered by each particular coverage option, i.e., (Payer Liability / [Payer Liability + Member Cost Sharing]). Claim costs are for core Medicare-covered benefits plus pharmacy claims, and exclude ancillary benefits, such as dental, vision, and hearing.

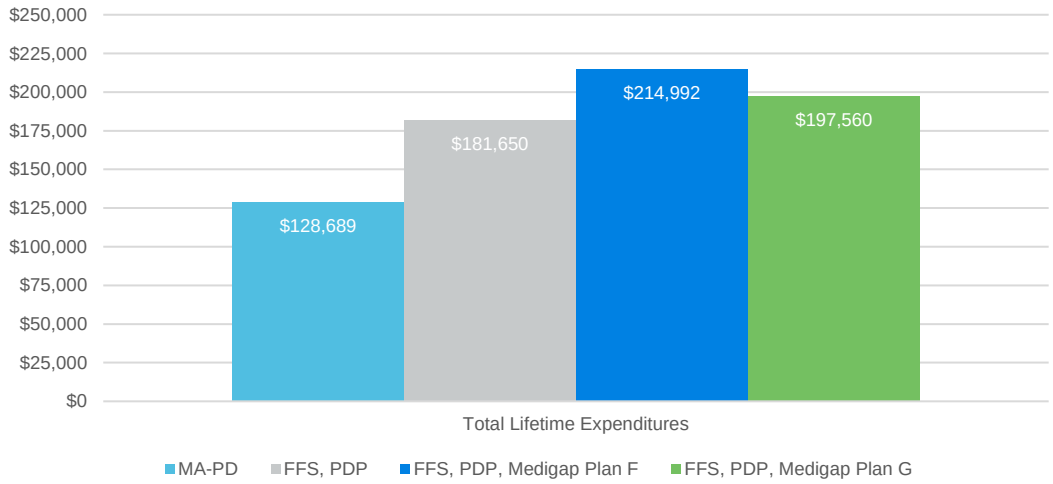
Some drivers of the differences in annual health care costs across coverage options are as follows:

- **MA-PD plans**: MAOs attract and retain members by offering lower cost sharing, which is required to be at least equivalent to, but is generally better than, FFS cost sharing, at a competitive premium. Based on our analysis, shown in Figure 2, the average annual health care spending for an MA-PD member is lower than that of FFS and Medigap members for reasons that include the following:
  - MA plans provide care management and coordination for their members, including directing members to appropriate services and providers to best manage their health care, as well as disease management programs aimed to improve health outcomes. Care management typically generates cost savings, but can be viewed as a limitation by some beneficiaries, as they may be required to obtain prior authorization, use specific providers, or try alternative treatments during the course of care.
  - Furthermore, MA-PD plans typically provide a selection of supplemental benefits for no additional premium, often with no or low cost sharing, to attract membership, as well as to assist in care management. We estimate that under an MA-PD plan the costs for these types of benefits are less than half of the full cost of benefits under the FFS program.
  - MA plans also implement provider networks, some of which limit coverage to a specific subset of providers who otherwise participate in Medicare Health Maintenance Organization (HMO) plans, or via preferred network arrangements by offering lower cost sharing to beneficiaries seeking care from a defined set of providers in Preferred Provider Organization (PPO) and point-of-service (POS) plans. Providers are often chosen to participate in networks due to a combination of quality and cost efficiency.
  - MA plans implement a maximum out-of-pocket (MOOP) spending limit for beneficiaries; while the regulatory maximum is currently $6,700, some MA-PD plans offer lower MOOP amounts—in 2019, the average MOOP in MA is just over $5,000. FFS has no such limit on a beneficiary's OOP medical costs, making the MOOP particularly important for those members who are likely to incur high medical costs.
- **PDP plans**: PDP plans generally offer leaner Part D benefits, in the form of higher cost sharing and a more restrictive formulary, than MA-PD plans, which results in higher drug-related health care costs for FFS and Medigap members relative to MA-PD members.
- **Medigap plans**: While the magnitude of out-of-pocket costs for FFS members may not be known in advance, it is generally assumed that beneficiaries choosing Plan F knowingly do so in order to "lock-in" out-of-pocket costs for Medicare-covered services. As a result, the premiums for Plan F significantly exceed average Medicare-covered health care costs under FFS (approximately $2,500 vs. $1,700) in order to cover administrative costs, profit, and risk loads inherent in Medigap premiums, as well as what some argue to be a moral hazard caused by the lack of any cost sharing—that is, beneficiaries are able to obtain covered care without limits or any utilization management controls.

Average lifetime cost differential for 65-year-old Medicare beneficiary

A typical 65-year-old will live for an average of about 21 more years, or through age 85.[23] We projected the annual health care costs of each Medicare coverage option for the average 65-year-old using assumptions for medical cost inflation and cost increases due to age, and then summed these costs over the average expected lifetime to demonstrate the total expected financial outlay over that same timeframe. While FFS, PDP, and Plan G coverage are expected to cost slightly more than only FFS and PDP coverage over a beneficiary's lifetime, FFS, PDP, and Plan F coverage represent about $33,300 in additional health care costs relative to only FFS and PDP coverage, and approximately $86,300 more expensive than MA-PD coverage over the same 21-year time horizon.

FIGURE 3: ESTIMATED LIFETIME HEALTH CARE COSTS FOR AVERAGE 65-YEAR-OLD BENEFICIARY, BY COVERAGE OPTION

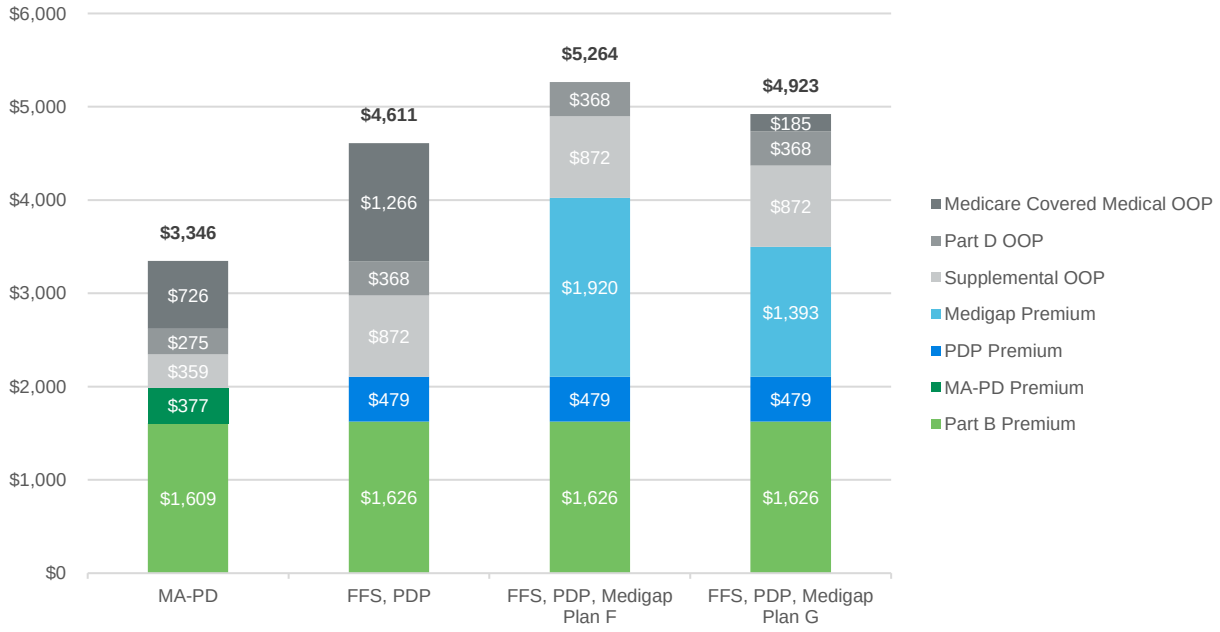


[23] https://www.ssa.gov/planners/lifeexpectancy.html

Annual total health care costs for specific age groupings

The relationship for the average beneficiary, shown in Figure 2 above, holds for an average 65-year-old newly eligible Medicare beneficiary, as well as for older Medicare beneficiaries. Figure 4 illustrates our estimates of average annual health care costs for an average 65-year-old Medicare beneficiary, split by type of cost to the beneficiary.

FIGURE 4: ESTIMATED ANNUAL HEALTH CARE COSTS FOR AVERAGE 65-YEAR-OLD BENEFICIARY, BY TYPE OF COST

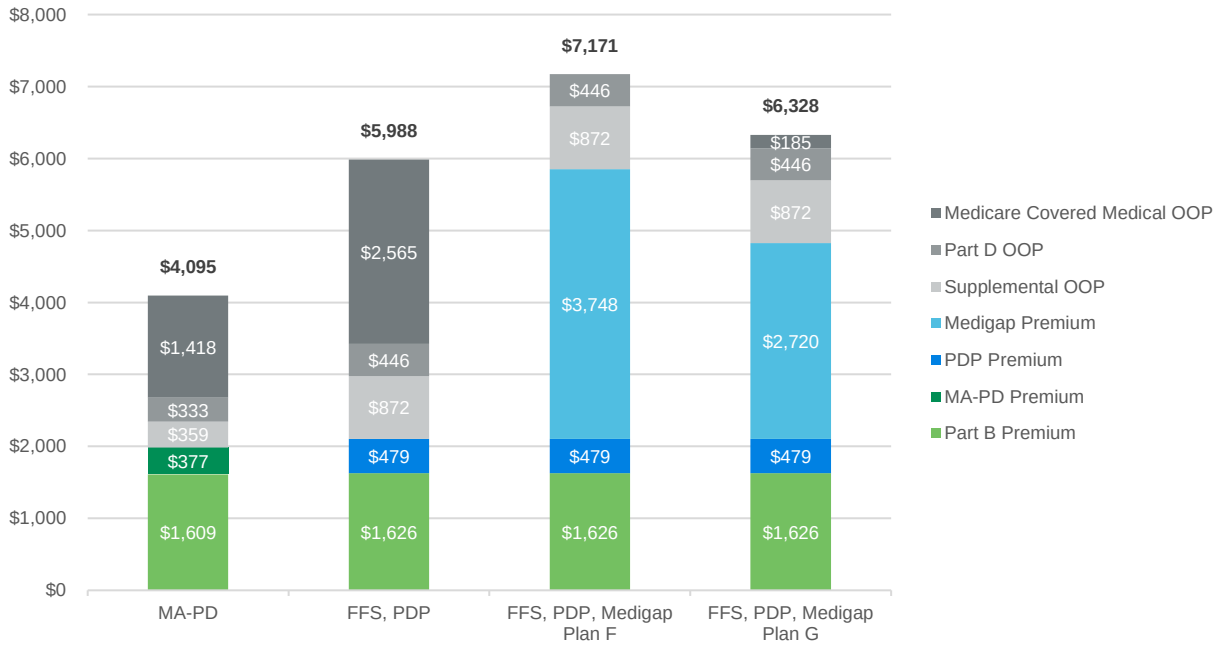


Note: The sum of individual components in this figure may not equal totals due to rounding

Similar to the average beneficiary results, an average 65-year-old new entrant to Medicare can expect to incur lower health care costs overall under an MA-PD plan than under the combinations of FFS, PDP, and/or Medigap coverage (approximately $1,250 to $1,925 lower). However, the differential is not as large as that for the average beneficiary ($1,475 to $2,325 lower). The primary driver of the difference in annual health care costs between options at age 65 relative to the average Medicare beneficiary is the Medigap premium, which varies by age in most states. The 65-year-old Medigap member will have lower premiums than the average Medigap member. MA-PD plans, in contrast, are community-rated. In other words, the rates do not vary by age, gender, or health status. As such, the MA-PD premium is the same for a 65-year-old as it is for a beneficiary at any other age. These costs are intended to represent the average for a 65-year-old. Individual beneficiaries will experience different costs based on that person's own circumstances.

Figure 5 illustrates our estimates of average annual total health care costs for an average 85-year-old Medicare beneficiary, split by type of cost to the beneficiary.

FIGURE 5: ESTIMATED ANNUAL HEALTH CARE COSTS FOR AVERAGE 85-YEAR-OLD BENEFICIARY, BY TYPE OF COST



Note: The sum of individual components in this figure may not equal totals due to rounding

Similar to the previous two examples, an average 85-year-old Medicare beneficiary can expect to incur lower annual health care costs overall under an MA-PD plan than under the combinations of FFS, PDP, and/or Medigap coverage (about $1,900 to $3,075 lower), though the differential becomes larger at this age. The estimated annual Medigap premiums in this scenario are much higher than in the previous average beneficiary and average age 65-year-old scenarios. We also expect that medical and drug out-of-pocket costs will be higher in this scenario given the morbidity of this population. These costs are intended to represent the average for an 85-year-old, and it is certain that an individual beneficiary will experience different costs based on that person's own circumstances.

Considerations for high-cost beneficiaries

While our report focuses on averages within groupings of beneficiaries, it should be noted that, for a beneficiary expecting to incur significantly greater than average health care expenses (for example, for Part B infusion medications), both Medigap policies and MA-PD plans offer financial protections in the form of a hard cap on out-of-pocket spending not offered by FFS on its own. While all MA-PD plans have a MOOP of $6,700 or less, most Medigap plans are limited to total annual health care spending significantly less than $6,700. In an effort to better understand which enrollees would benefit from theses financial protections, we studied FFS claim data for enrollees with more than $6,700 in annual out-of-pocket costs (i.e. cost-sharing expenses) for Medicare-covered services.

Figure 6 demonstrates that only about 3.5% of FFS enrollees exceed $6,700 in annual out-of-pocket costs, with average out-of-pocket spending of nearly $12,000 for those exceeding this amount. These patients incur over $80,000 in annual claims, and may be better off choosing an MA-PD plan or Medigap plan than FFS coverage alone. Further, beneficiaries who expect to have over $2,500 annually in out-of-pocket spending (the approximate average Plan F premium) for copays, coinsurance, and deductibles for Part A and Part B services over a multiyear time horizon may be better off with a Medigap plan than with an MA-PD plan, as beneficiaries in MA-PD plans may continue to accrue cost sharing up to $6,700, while a Plan F enrollee will not accrue Medicare-covered costs beyond the premium. Average premiums for Plans F and G are included below for comparison with out-of-pocket costs for this high-cost population.

FIGURE 6: FFS ENROLLEES EXCEEDING $6,700 ANNUAL OUT-OF-POCKET SPENDING

YEAR	HIGH-COST MEDICARE MEMBERS	AVERAGE ANNUAL TOTAL CLAIMS	AVERAGE ANNUAL PATIENT OOP	PLAN F – AVERAGE PREMIUM	PLAN G – AVERAGE PREMIUM
2015	3.5%	$83,090	$11,847	$2,263	$1,574
2016	3.4%	$84,067	$11,861	$2,284	$1,480
2017	3.6%	$85,372	$12,008	$2,426	$1,557

Note: Results are based on 2015 to 2017 data from the CMS 5% Sample, and are limited to non-Dual, non-ESRD, and non-Hospice members from these data sets.

Additional considerations not measured by annual health care costs

The previous sections outlined the estimated annual health care costs to a Medicare recipient under various coverage options. In addition to beneficiary costs, there are many additional considerations when a prospective beneficiary is deciding what type of coverage is best for them. These additional considerations include, in no particular order:

- **Care management:** Most MA plans provide care management and coordination for their members. Many plan sponsors incorporate programs to direct members to the most appropriate services and sites of service for their beneficiaries, to improve health outcomes through preventive care, and to coordinate the total care spectrum for members with numerous and complex conditions. As such, members with complex health profiles may benefit from the coordinated and holistic approach to their health care needs. However, these programs, if implemented improperly, may cause burden to the member due to administrative hurdles.
- **Availability of supplemental benefits in Medicare Advantage:** In recent years, CMS has allowed greater flexibility for MA plans to offer supplemental benefits, including provision of benefits that address social determinants of health. Many MA-PD plans offer ancillary benefits, including but not limited to routine dental, vision, hearing, meals, non-emergency medical transportation, nutritional therapy, over-the-counter drugs, and gym memberships. In contrast, FFS and Medigap policies do not include any supplemental benefits, and a member would have to buy standalone plans or pay full out-of-pocket costs to receive these benefits or services. According to the 2016 Medicare Current Beneficiary Survey, the most frequently self-identified chronic condition is related to vision (95% of respondents self-reporting as having vision issues.) Therefore, supplemental benefits may be a significant source of out-of-pocket savings for members of an MA-PD plan who need and utilize these supplemental services and benefits that are not covered under traditional Medicare FFS.
- **Existence of Special Needs Plans (SNPs) in Medicare Advantage:** There are several types of SNPs in the MA program, listed below. These plans may offer targeted ancillary benefits, which are not available in FFS, for members who qualify based on their health conditions or income-based characteristics to address their specific conditions or characteristics, such as maintenance drugs for members with diabetes and meals benefits for low-income members in a dual eligible SNP.
  - Chronic SNP (C-SNP): Plans for members with specified chronic conditions (e.g., diabetes, chronic heart failure).
  - Institutionalized SNP (I-SNP): Plans for members who are institutionalized in a nursing home, or functionally impaired seniors living in the community.
  - Dual eligible SNP (D-SNP): Plans for members who are eligible for both Medicare and Medicaid.
  - ESRD SNP: Plans for members with end-stage renal disease (ESRD).
- **Special supplemental benefits for the chronically ill (SSBCI), uniformity flexibility (UF), and value-based insurance design (VBID) benefits in Medicare Advantage:** CMS encourages MAOs to offer coordinated care through these various options to personalize and reduce the cost of the health care experience for specific individuals who are in need of more intensive therapies. As of CY 2020 for SSCBI, CY 2019 for UF, and CY 2017 for VBID, MAOs are allowed to design benefits that target a specific population, and these benefits may be offered non-uniformly to members in plans with these offerings.

- **Part D financial penalties:** A beneficiary who goes without Part D or other creditable drug coverage after that person's initial Medicare enrollment period will generally be liable for a late enrollment penalty on future PDPs, if and when the beneficiary eventually enrolls.[24] Therefore, members who actively choose to not enroll in Part D for their lifetime may see potential premium savings; but if those same members choose to enroll in Part D later in life, they could face steep financial costs depending on the length of time they have gone without Part D or other creditable coverage. These penalties do not apply to MA-PD members because the drug coverage is included with their MA coverage.
- **Guaranteed issue and premium protections in Medicare Advantage:** General enrollment plans (i.e., non-SNP) are guaranteed issue, with no underwriting. The only restriction in MA is that potential SNP beneficiaries need to prove they are eligible for those MA-PD plan types. The same premium is charged to each member, regardless of health status. Premiums may vary due to subsidies available to low-income members, but not age or conditions. While MA plans are able to increase their member premiums each year, there are strict filing restrictions around allowable premium increases. In contrast, Medigap policies are regulated at the state level, and most Medigap policies allow underwriting by age, health status, geography, and tobacco use, though some states only allow community rating. Therefore, premiums typically vary widely for an individual depending on their demographic, geographic, and/or health characteristics. In addition, many Medigap policies' premiums increase as the member ages. It is worth noting that Medigap premiums frequently increase with age, and future premiums are generally not known by beneficiaries with certainty at the time they first enroll in their Medigap plans.
- **Beneficiary access to providers (e.g., network access):** MA-PD plans rely on provider networks to coordinate care, implement programs, and reduce plan cost through preferred network rates. In an HMO, a member going out-of-network would not receive any insurance benefit, and would be obligated to pay all billed charges out-of-pocket. In a PPO, a member would pay the predetermined out-of-network benefit cost sharing, which is typically less generous than in-network benefit cost sharing. As a trade-off for including out-of-network access, many PPOs charge higher premiums. In contrast, FFS and Medigap policies typically do not offer any restrictions on provider access and members would not need to verify that their physicians and providers are in-network before receiving care, or worry about unexpected bills for out-of-network labs or procedures. An exception is Medigap "select" plans, which do have a preferred provider network for Part A services, and frequently lower premiums as a trade-off for the network restriction.
- **Medigap plan offerings:** Historically, Plan F has been the most popular Medigap option because it covers all out-of-pocket costs for Part A and Part B services for beneficiaries, making it easy for seniors to plan their annual expected health care spending. However, beginning in 2020, sales of Plan F will cease to newly eligible beneficiaries, due to legislative efforts to reduce health care spending. Seniors will no longer have the option to newly enroll in a Medigap Plan F that will cover all their costs (existing Medicare-eligible enrollees will be "grandfathered" in and remain eligible to enroll in Plan F, and will be able to keep their existing Plan F policies). However, Plan G will continue to be offered to beneficiaries; this plan is similar to Plan F, except the beneficiary is liable for the annual Part B deductible. The Part B deductible is $185 in 2019, and as Plan F is phased out it is anticipated that Plan G premiums will eventually increase to be more in line with where Plan F would be, less the deductible. Thus, although Plan F is going away for new Medicare eligibles, seniors will have a similarly comprehensive Medigap option to ensure predictable annual health care costs.
- **Predictable medical costs in the future:** Many aged Medicare beneficiaries are on a fixed income each year. By using a comprehensive Medigap plan like Plan F or Plan G, they allow themselves to have more predictable amounts for their medical out-of-pocket spending each year, without the uncertainty of high cost sharing due to a long hospitalization or coverage of Part B infusion medications under a FFS plan alone. The peace of mind for a beneficiary of having predictable costs year-over-year without network restrictions is in some cases worth more to them than the actual higher health care costs under Medigap. Additionally, as most Medigap policies allow underwriting, it is advantageous to the member to purchase the coverage prior to a health event that may preclude them from obtaining Medigap coverage.

[24] This penalty is calculated as a percentage of the nationwide base beneficiary premium each year, which was $33.19 in 2019.

Demographic information

The demographic makeup of beneficiaries selecting various coverage options differs across several measures, including gender, age, income, and geography. We adjust for these factors in our analysis using publicly available cost data and the CMS-HCC risk adjustment model. Figure 7 outlines several demographic measures across coverage options for 2016. These metrics are summarized from two America's Health Insurance Plans (AHIP) reports describing demographic information in greater detail.[25,26]

FIGURE 7: DEMOGRAPHIC INFORMATION FOR 2016

CATEGORY	MEDICARE ADVANTAGE	MEDIGAP	FFS EXCLUDING MEDIGAP	ALL MEDICARE BENEFICIARIES
GENDER				
Female	57%	59%	50%	54%
Male	43%	41%	50%	46%
AGE GROUP				
Younger Than 65 Years	14%	3%	23%	16%
65 to 74 Years	49%	52%	48%	49%
75 to 84 Years	27%	31%	20%	25%
85 Years and Older	10%	14%	8%	10%
GEOGRAPHIC LOCATION				
Rural	14%	29%	22%	20%
Urban	86%	71%	78%	80%
INCOME RANGE				
Less than $10,000	10%	4%	12%	9%
$10,000 to $19,999	24%	16%	22%	21%
$20,000 to $29,999	17%	17%	13%	15%
$30,000 to $39,999	12%	12%	10%	11%
$40,000 to $49,999	8%	10%	7%	8%
$50,000 or More	29%	42%	35%	35%

Note: The percentages in this table may not sum to 100 percent due to rounding

[25] AHIP, Medicare Advantage Demographics Report, 2016, op cit.

[26] AHIP, State of Medigap 2019, op cit.

IV. METHODOLOGY

We used detailed publicly available benefit design, premium, and plan, and county-level enrollment information, for all 2019 Medicare Advantage plans provided by CMS. We used this information, along with proprietary Milliman Medicare Advantage and Part D pricing models, to calculate the value of the medical MA-PD cost sharing in both the MA-PD program for all calendar year 2019 non-SNP MA-PD plans under the current MA payment methodology in each county. We also calculated the value of medical cost sharing under the FFS program at the county level. We summarized the premium paid for MA-PD plans and any Part B premium reductions in the MA-PD program. We applied a similar exercise to calculate the value of cost sharing under the Part D portion of an MA-PD plan and PDP plans relative to standard Medicare, and also captured the PDP premium paid.

Medical health care costs are calculated for a non-disabled average Medicare beneficiary not receiving income-based assistance. Part D costs were calibrated to published CMS values for MA-PD and PDP plans, separately, for a largely non-LI population. Geography and average risk scores were factors in developing the medical cost estimates and other assumptions. In calculating the expected lifetime costs for an average 65-year-old, we assumed an annual inflation rate of 4.7% and an average remaining life span of approximately 21 years; we projected the costs based on these assumptions for each of those 21 years and summed them together to demonstrate the lifetime costs for an average 65-year-old.[27,28] The annual inflation rate of 4.7% is commensurate with the long-term trend rate as measured in the 2019 Medicare Trustees Report and includes all components of trend that are applicable to costs outlined in this report.

To calculate the imputed costs for a 65-year-old and an 85-year-old, we applied relativities based on calculated member patient pay for medical and drug, separately. This analysis was performed using the Centers for Medicare and Medicaid Services (CMS) Medicare 2016 5% Sample and Milliman's 2017 Part D Consolidated Database (PDCD). The CMS 5% Sample was used as a proxy for medical data to determine the average Part A and Part B cost sharing per member per month (PMPM) for the non-dual-eligible beneficiaries by age band relative to the overall average, while the PDCD was used to determine the average Part D cost sharing PMPM for non-low-income (NLI) beneficiaries by age band relative to the average. Adjustment factors were then calculated from this information, relative to a 1.00 factor representing the overall average cost of the entire over-65 population. Please note that we exclude disabled Medicare beneficiaries from the medical adjustment factors, as these disabled beneficiaries are likely not reflective of a NLI population. We included all members in the Part D adjustment regardless of disabled status. Medical adjustment factors are applied to the calculated medical out-of-pocket costs for MA-PD and FFS, as well as to the Medigap premiums, as Medigap age-adjusted premiums are not readily available publicly.

We only analyzed general enrollment MA plans and did not analyze employer group waiver plans (EGWPs), SNPs, Program of All-inclusive Care for the Elderly (PACE) organizations, Medical Savings Account (MSA) plans, Medicare cost plans (1876 and 1833), and Medicare-Medicaid Plans (MMPs). We also focused exclusively on MA-PD plans under the MA program; that is, we excluded MA-only plans in this analysis. We focused our discussion around a largely non-SNP and largely NLI population.

Our analysis excludes the state of Alaska, as the MA-PD program currently has no offerings in that state. We also exclude the American territories (Puerto Rico, Virgin Islands, and American Samoa) in this analysis. The Medigap nationwide premium averages also exclude the states of Massachusetts, Minnesota, and Wisconsin, as Medigap is offered though a different set of standardized plans under a federal waiver in those states. The Medigap premium is sourced from the 2018 Mark Farrah Med Supp Market Data set, and is trended forward one year at the annual inflation rate of 4.7%, noted above, to ensure all values are stated on a 2019 basis.

[27] CMS (April 22, 2019). 2019 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds. Retrieved September 13, 2019, from https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/Downloads/TR2019.pdf.

[28] SSA. Social Security: Benefits Planner/Life Expectancy. Retrieved September 13, 2019, from https://www.ssa.gov/planners/lifeexpectancy.html.

V. CAVEATS AND LIMITATIONS

The authors of this report are consulting actuaries for Milliman, Inc. They are members of the American Academy of Actuaries, and meet the qualification standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

The material in this report represents the opinion of the authors and is not representative of the views of Milliman. As such, Milliman is not advocating for, or endorsing, any specific policy changes to the Medicare FFS or Medicare Advantage programs in this report.

The figures presented in this report are illustrative estimates for hypothetical average Medicare beneficiaries and based on publicly available information and Milliman proprietary data and models. This report is intended to illustrate average beneficiary cost differences among various Medicare coverage options and should not be used for any other purpose. Actual beneficiary health costs will vary from the estimates in this report, and will depend on the beneficiary's age, gender, geography, health status, available health plans, and other factors.

In completing this analysis, we relied on information from CMS, which we accepted without audit. However, we did review this information for general reasonableness. If this information is inaccurate or incomplete, conclusions drawn from this information may change.

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