Medicare Related Products CE

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Medicare-Related Products CE

Medicare-Related Products and Risk Adjustment

To actuaries and other financial professionals, risk adjustment means charging a premium or paying capitation in proportion to the expected costs of an individual or group. Health plans that participate in the Medicare Advantage (MA) program receive payment for each Medicare enrollee. Risk adjustment allows the Centers for Medicare & Medicaid Services (CMS) to pay plans for the risk of the beneficiaries they enroll, instead of an average amount for Medicare beneficiaries. By risk adjusting plan payments, CMS is able to make appropriate and accurate payments for enrollees with differences in expected costs. Payments are figured using risk adjustment, which is used to adjust bidding and payment based on the health status and demographic characteristics of an enrollee. Risk scores measure individual beneficiaries' relative risk and risk scores are used to adjust payments for each beneficiary's expected expenditures. By risk adjusting plan bids, CMS is able to use standardized bids as base payments to plans.

Payment Adjustment

CMS utilizes the CMS-HCC (Hierarchical Condition Categories) risk adjusted payment methodology to adjust payments for enrollees' demographic characteristics and diagnoses; this model is the basis for risk adjustment for Medicare Advantage organizations. Risk adjustment is used to calibrate payments to health plans based on the relative health of the at-risk populations. In particular, if insurers are limited in the extent to which premiums can vary by health status or other factors that are associated with health spending, risk adjustment can help ensure that health plans are appropriately compensated for the risks they enroll. A well-designed risk adjustment system is one that properly aligns incentives, limits gaming, and protects risk-bearing entities (e.g., insurers, health plans). Currently, risk adjustment is used in the Medicare Advantage and Medicare prescription drug programs, many Medicaid programs, other governmental programs, and some private plans.

Health risk assessment is a means of objectively determining whether an individual or group represents a risk that is reasonably close to the population average and, if not, of quantifying the relative deviation from the average. Individuals who are expected to incur higher health spending are considered relatively worse (i.e., higher) risks than those who are expected to incur lower spending.

Adjustments and Health Insurance Plans

Health risk adjustment is the process of adjusting payments to organizations (usually health insurance plans) based on differences in the risk characteristics of people

enrolled in each plan. Risk adjustment relies on risk assessment to determine the relative risks among individuals and groups. Risk adjustment methods can be designed to accomplish several goals, including:

- Compensating insurers fairly and equitably for the risks they assume;
- Reducing the effects of either inadvertent or intentional risk selection so that insurers in a competitive market can compete on the basis of medical and administrative efficiency and quality of service and care, rather than on the ability to select risk;
- Maintaining consumer choice from among multiple health plans based on premiums that reflect plan design differences and relative medical and administrative efficiencies, rather than selection;
- Protecting the financial soundness of the system.

Risk adjustment may be necessary when rating restrictions prohibit health plans from recognizing health status or other risk factors in premium rates. For instance, in a pure community-rating environment, premiums are not allowed to vary by health status or other factors that are associated with health spending, such as age and gender. Even when rating rules allow the use of such factors, the degree to which premiums are allowed to vary by insured characteristics is often limited. When premiums for individuals at risk for high health spending don't reflect fully those higher costs, health plans could develop strategies for avoiding high-risk individuals. Risk adjustment can be used to reallocate premium income among plans to take into account the health status of plan participants. Risk adjustment helps to make payments to competing plans more equitable, thereby protecting plan solvency and reducing the incentives for competing plans to avoid high-risk individuals with higher-than-average costs.

Risk adjustment would also be appropriate when multiple health plan options are available to members. When plans with high cost-sharing requirements are offered alongside plans with low cost-sharing requirements, people who expect to be high users of medical care tend to enroll in the plans with lower cost sharing, even after the plan design differences are reflected in the premium. Reflecting this selection in the premiums would result in even larger premium differences between the plan offerings. Risk adjustment can be used by a plan to internally reallocate funds to adjust for selection, when actual premiums are set to reflect plan-design differences, but not the full effect of selection.

How Health Risk Adjustment Is Used Today

Since the 1980s, the Medicare program has offered beneficiaries the choice between a traditional, government-administered plan as well as government-funded private plans, known as Medicare Advantage (MA) plans, which today cover roughly a quarter of Medicare's members.

Medicare- Risk adjustment is used to adjust plan payments in the Medicare Advantage (MA) program, as well as in the Part D prescription drug program. Payments to MA plans currently are adjusted to reflect enrollee demographics and diagnoses based on historical medical claims data, as well as Medicaid, disability, and institutional status. Payments to prescription drug plans are adjusted using similar methods, including demographics and diagnoses based on historical medical claims data, as well as Medicaid using similar methods, including demographics and diagnoses based on historical medical claims data, as well as low-

income subsidy eligibility and institutional status. Data on drug claims are scheduled to be incorporated into the risk adjustment process in 2011. For both MA plans and drug plans, plan payments for new enrollees are adjusted for demographics and nondiagnosis-based factors only.

Medicaid- Many state Medicaid programs include managed care programs, in which Medicaid enrollees can or must enroll with a private health insurance company. Many of these state Medicaid programs employ claims-based risk adjustment to mitigate selection issues, using various approaches and methodologies.

Critics of traditional public provision often point to its minimal incentives for cost-control.

The traditional Fee-for-Service (FFS) Medicare program, for example, pays hospitals, physicians and other health care providers on the margin for services rendered to enrollees, and thus some providers may deliver services with little clinical benefit if the payment covers more than their marginal cost. In contrast, the government pays MA plans a fixed capitation payment to cover an enrollee's expected health costs, giving plans an incentive to reduce the provision of low-value services.

Capitation

Capitation is a payment arrangement for health care service providers such as physicians or nurse practitioners. It pays a physician or group of physicians a set amount for each enrolled person assigned to them, per period of time, whether or not that person seeks care. These providers generally are contracted with a type of health maintenance organization (HMO) known as an independent practice association (IPA), which enlists the providers to care for HMO-enrolled patients. The amount of remuneration is based on the average expected health care utilization of that patient, with greater payment for patients with significant medical history. Rates are also affected by age, race, sex, type of employment, and geographical location, as these factors typically influence the cost of providing care.

But this arrangement also gives plans the incentive to enroll individuals whose expected costs are lower than their capitation payment, which does not reduce total Medicare costs but merely transfers government funds to private plans, paying for enrollees with lower-than-average expected health care costs.¹

To address this concern, in 2004 the Center for Medicare and Medicaid Services (CMS), the federal agency that administers the Medicare program, introduced a comprehensive risk adjustment formula based on more than seventy disease categories. The formula was used to generate a risk score for each individual, and capitation payments were determined by multiplying the risk score by a county-level cost factor. The objective of the formula was to reduce differential payments the cost to

 ¹ Joseph P. Newhouse, 1996. "Reimbursing Health Plans and Health Providers: Efficiency in Production versus Selection," Journal of Economic Literature, American Economic Association, vol. 34(3), pages 1236-1263, September.

the Medicare program of financing an individual's coverage when a patient is in a private MA plan minus the counterfactual cost to Medicare had the FFS program covered her directly.

Concept of Risk Adjustment

This section provides a conceptual overview of risk adjustment. Issues are perfect versus imperfect information, imperfect signals available to the regulator, the incentive problems that health based-payments are intended to correct, and the strategic responses to risk adjusted payments. This section uses a simplified framework using primarily a graphical approach. It focuses on the case where there are only two states of the world, two types of health care goods, two types of consumers, and two possible signals about consumer types. It is assumed that the only information that is *contractible* (usable for paying capitated health plans), are the signals about consumer types. Realized states of the world, actual levels of spending on each type, and true patient types are not observable to the payer. Even if they are observable to all agents, including the sponsor, they may nonetheless not be contractible.²

In this example consumers can find themselves in one of only two possible states of the world; healthy and diabetic. Healthy consumers use only general practitioner services (GP) and cost α per year. Diabetic consumers use both GP and specialists services (SP) and cost $\alpha+\beta$.

The annual cost of healthy consumers under a given set of incentives is α , while β is the incremental cost of diabetes. Basic medical care is the function of GPs while specialists services would be used by high risk types. Specialist care is used more intensively by high risk types than the other service (GPs).

It is given that there are only two types of consumers, called low and high risk types. The initial focus is on the simple case where low risk types are always healthy and high risk types are always diabetic. It is assumed that both types are equally common in the population. While it is true that there is no uncertainty (risk) in this polar case, it is still convenient to think of each type as potentially having a distribution across different states of the world. This simple model captures the essential features needed for talking about risk adjustment. Most of the useful insights arise due to imperfect signals about patient types rather than due to uncertainty about how consumer types are related to which state of the world consumers find themselves in.

² From "Risk Adjustment in Health Care Markets: Concepts and Applications," R. Ellis, International Health Care Financing 2007

Figure 1

No Risk Adjustment when quantities of each service supplied are exogenous. Health plan is reimbursed the simple average cost. An average service provided is at X for entire population.



This situation is shown in Figure 1, where healthy (low risk) consumers consume at some point A using only GP services and diabetic consumers (high risk) consume at some point B. In this economic model, only variation in consumer health status drives the variation in demand for different types of care.

The optimal risk adjustment formula to use depends on the objective function of the sponsor, as well as the cost structure, competition, health plan and consumer objective functions, the information (signals) available to sponsor, consumers, and health plans, and the strategic behavior allowed by the health plans. The assumption is that health plans maximize profits, or what is also known as net revenue.

The objective function of the sponsor is initially assumed to be very simple. The sponsor wishes to simply pay each health plan the expected value of each signal for each consumer.

No risk adjustment signals

The simplest case is one in which the GP and SP services provided to each type of consumer are exogenous to (independent of) payments and information, and there are no signals about consumer type available. If quantities of care offered are unaffected by capitation payments, then it does not matter whether consumer types are observable or unobservable by the health plan or consumers at the time that plan enrollment decisions are made. Under pure capitation, health plan budgets are set prospectively and will set revenue (or cost) equal to the expected amount of $R = \alpha + \beta/2$ per person, where this formula reflects the equal prevalence in the population of high and low risk types.

This no risk adjustment situation is shown in Figure 1, with X being the average quantity of services consumed. As long as the proportion of high risk types enrolling in the plan is no greater than the population average, then the plan can at least break even by subsidizing the losses on high cost types with the savings on the low cost types.

Economists would point out that X is not incentive compatible for all possible plans: plans will not want to participate if they have a higher proportion of diabetics than the population average used for payment. Accommodating such plans creates the desire for risk adjustment by the sponsor. Of course a profit maximizing health plan would prefer not to have to enroll high risks. Under the stated assumptions plans do not have any tools available for avoiding diabetics, since no information is available *ex ante*. With no risk adjustment, health plans are forced to carry out the key role of redistributing funds from low to high risk consumers. Now it stands to reason that, whenever possible, a profit-oriented health plan would prefer to exclude high risk types based on observable signals, but they assume that plans can perfectly select which consumers to avoid or "dump." Almost all countries and markets prohibit explicit dumping of high risk consumers. Settings where the exclusion (dumping) of high risk types is allowed include the individual and small employer markets in the US and supplementary health insurance policies in many countries.

Perfect signals

Model assumptions are changed so that perfect information is available. Health status signals S are costlessly available to all agents (consumers, health plans and sponsors) at the beginning of each period. Signals are informative about each patient's risk type. In the simplest case there are only two possible signals, so that S takes on values of either 0 or 1. Assume initially that the signal S is perfectly informative, so that a value of 1 (0) perfectly classifies a consumer as a high (low) risk type.

With perfect information by all agents, the sponsor wishing to pay health plans the expected cost will pay a risk adjusted payment of Ri = α + β Si for each consumer i. Since signals are perfect, then the implied payment parameters are R1= α and R2 = α + β . This is the conventional risk adjustment solution, calculating α and β so as to just pay the average cost of each signal. Even if health plans (or regions) vary in the proportions of high and low risk types, payments will equal costs. Since profits on each type of consumer are zero, a health plan should be just indifferent to enrolling consumers who have low or high risk signals. Conventional risk adjustment with perfect information and solves the objective of eliminating the incentive problem facing profit maximizing health plans to selectively avoid or "dump" unprofitable consumers when the signals used are the only information known to health plans, and costs of treating patients are exogenous. It can be said that Medicare risk adjustment payment formulas are calculated while implicitly using assumptions similar to those used here. It is straightforward to calculate the α and β parameters empirically using a regression approach. Recent theoretical research has greatly expanded the understanding of risk adjustment incentives and possible corrections to it. The following sections highlight some basics.

External imperfect signals and service quantities

The last model assumes that the signals are perfectly informative: once the signal is observed then the true type of each consumer is known and perfect risk adjustment is feasible. Unfortunately the norm is that signals are highly imperfect. Empirical studies repeatedly find that even for serious chronic conditions such as AIDS, diabetes, multiple sclerosis and quadriplegia, less than 75 percent of consumers with these diagnoses coded in one year have the same information coded the following year. **[17, 18] Even** signals of serious illness are highly imperfect.

There are two broad possibilities for why signals are imperfect. Signals may exogenously misrepresent true patient risk types, or signals may be endogenously (intentionally) chosen by the health plan or providers so as to influence payments. Suppose that proportion γ_i of type i consumers have a signal S = 1. In order for the signal to be informative proportion $0 \le \gamma_L < \gamma_H \le 1$ is needed. The polar case $\gamma_L = 0$ and $\gamma_H = 1$ corresponds to the perfect information case just considered. Empirically, it is widely found that some low risk types have a false positive signal ($0 < \gamma_L$) and many high risks have false negative signals ($\gamma_H < 1$). This means that those with a signal S = 1 will be less than $\alpha+\beta$.

Figure 2

Perfect and imperfect conventional risk adjustment. Perfect risk adjustment (A*, B*) is just the limiting case of improving information $(X \rightarrow A' \rightarrow A'' \rightarrow A^*$ for low risk types and $X \rightarrow B' \rightarrow B'' \rightarrow B^*$) so that payments by the sponsor for each type more closely match costs.



As shown in Figure 2, starting from the point X where no information is available, improving risk adjustment signals will better differentiate between low and high risk types, reducing the calculated payment for healthy signals (S = 0) toward α and increasing the calculated payment for S = 1 toward β . Under these assumptions the proportion of a plan with high risk signal S = 1 would be (γ_H + γ_L)/2, the average cost of

those signal S = 1 would be R₁= α + $\beta \gamma_H$ / (γ_L + γ_H), while the average cost of signal S = 0 would be R₀= α + β (1- γ_H)/(2- γ_L - γ_H) which yields the correct weighted average of low and high cost types.

Internal Influences on Risk Adjustment Signals

Among actuaries and policy makers, one of the great concerns with implementing risk adjustment is over the problem of endogenous signals, which is to say that the information used to make payments is influenced by the payment formulas themselves. For example, following the introduction of the Diagnosis-Related Group (DRG) system in the U.S., there is convincing evidence of a meaningful increase in the apparent coded severity of hospitalized patients due to the new incentives which raised Medicare payments by a few percentage points. Similar concerns arise with the policy implementation of risk adjusted payments.

The pattern of information used for calibrating the models may differ from the pattern that will arise after risk adjusted payments are introduced. Concern over this endogeneity has influenced the choice of risk adjusters for the Medicare program. This concern was a major factor in the Medicare programs choice of payment formulas that intentionally ignored diagnoses predictive of lower cost conditions. In terms of the simplified model used here, endogenous signals would mean that health plans would wish to increase the proportion of high risk types $\gamma'_L > \gamma_L$ and $\gamma'_H > \gamma_H$ reported beyond the levels used to calibrate the models, γ_L and γ_H . The reported proportion of high risks enrollees has increased, and there will be an overpayment to the health plans until payments are recalibrated. Such recalibration to accommodate coding prevalence changes is what took place with DRGs in the late 1980's and with Medicare's all encounter HCC model in 2006.

Capitation Payments and Spending

An incentive is something that motivates an individual to perform an action. The study of incentive structures is central to the study of all economic activity. Economic analysis of the differences between societies (and between different organizations within a society) largely amounts to characterizing the differences in **incentive structures** faced by entities involved in these collective efforts. Ultimately, incentives aim to provide value for money and contribute to organizational success. It is a widely held belief that quantities and qualities of health care services will respond to payment incentives. The concept can be adapted to health plan behavior in response to capitated payments. The classic supply-side response to capitation would be a reduction in spending on all types of services. This possibility is shown in Figure 3, where spending on both diabetics and healthy types is reduced in response to moving from fees to capitated payments. Since the quantities of services are no longer exogenous, the initial fee based quantities (A⁰, B⁰) are distinguished from the capitation induced quantities (A¹, B¹). Costs parameters for each type also change from (α^0 , β^0) to (α^1 , β^1).

Figure 3

Capitated quantities of services (A^1, B^1) will differ from quantities offered under Fee-For-Service (A^0, B^0) due to supply-side moral hazard. Simple selection model might have all spending reduced by the same percentage amount. Conventional risk adjustment will yield correct payments if capitated quantities are used.



Much effort has been dedicated to estimating this plan-level change in spending in response to capitation incentives³. The hallmark of this approach has been to model total health spending, allowing for a uniform proportional or absolute reduction in spending in response to capitation incentives. Empirical plan selection models that estimate how total health care spending differs between managed care, indemnity and other types of health plans work on the assumption of a simple proportional or additive adjustment to total costs. It is not uncommon to calculate the cost savings of HMOs or other plan types.

If health plans respond to capitation incentives by reducing spending on all types of services uniformly, then this does not create particular problem for risk adjustment. A uniform reduction can be accommodated by reducing the payment parameters (α , β) proportionally. This sort of correction is reflected in Medicare adjustments to the adjusted average per capita cost (AAPCC) during the 1980s and 1990, where payments were reduced by 5% to accommodate expected response by capitated health plans (CMS, 2006).

Health Plan Answer to Capitation Payments.

Health plans can behave strategically in how generously they provide each type of specific health care services⁴. Regulators may be able to prohibit dumping of unprofitable consumers, but they cannot easily prevent health plans and providers from increasing or decreasing the availabilities of certain specialists or types of services. If

³ Lee, L.F. (1983) Generalized Econometric Models with Selectivity. Econometrica 51, 507-512.

⁴ Glazer, J., McGuire, T.G., (2000) Optimal risk adjustment of health insurance premiums: an application to managed care. Am Econ Rev 90 (4), 1055–1071.

certain types of consumers are unprofitable because risk adjustment is imperfect, then health plans have an incentive to avoid enrolling or treating these consumers by reducing the provision of the health care services that are most attractive to them. In the present model, rather than reducing spending on all types of services proportionally, health plans will have an incentive to reduce spending on SP because it is used more heavily by high risk types. At the same time, plans will have an incentive to compete to attract low risk types, by oversupplying GP services to the healthy. This process may or may not result in an increase in GP services being made available to high risk types, depending on whether the health plan is able to differentiate the services offered to the two observable types.

Differences in opinion exist on this point. One point of view assumes that even though plans know the signal of a consumer, they are not able to differentiate the quantity of services (GP and SP) offered to a given signal type. It would seem that plans cannot offer GP services more generously to the S = 0 than the S = 1 consumers, while others believe that they can. This leads to different conclusions about plan rationing and optimal payments.

Figure 4

Conventional Risk Adjustment with quantities of services offered strategically determined. Unless true types are observable, imperfect signals will tend to cause health plans to oversupply GP services attractive to the healthy (supplying A^2 rather than A^0) while undersupplying specialist services (B^2 versus B^0) used by diabetics.



The discussion gives the following insights; first, each consumer type can be thought of as having a set of indifference curves between GP and SP services. For a given level of spending, there will be some optimal combination of GP and SP services that maximizes consumer utility, and those quantities of good will differ by consumer type. It is natural to ask in this framework whether the amounts offered are the utility maximizing quantities under different payment formulas. Indifference curves are shown in Figure 5 illustrating that the initial allocation at B⁰ need not be welfare maximizing for

high risk types: there is no particular force under FFS reimbursement ensuring that quantities provided are efficient.

Second, if risk adjustment is perfect, then capitated health plans will compete by offering services to each type where welfare is maximized. (This result is not shown graphically.) With complete information, health plans will wish to maximize consumer welfare for the same reasons that competitive firms do so. As long as health plans are indifferent between enrolling a given consumer, then they will try to do the best thing by them.

The third idea is that if signals are imperfect, then health plans will distort quantities in an inefficient way. As shown in Figure 5, quantities of SP will be greatly reduced (to point B^2), to deter high risk types, while quantities of GP will tend to be increased (to A^2) to try to attract the low risk types. Notice the key role of consumer choice. Because consumers can be attracted to a better set of services offerings, then health plans will compete in this dimension. If payment formulas are recalibrated using the new service quantities, then conventional risk adjustment formulas will validate the results of this form of health plan competition by reducing payments for S = 1 signals, and increasing them for S = 0 signals, confirming the service intensity choices of the health plans. Alternatively, if the conventional risk adjustment formula continues to be based on a distinct FFS sample, as is true for the Medicare program, then the formula may misrepresent the costs of both types when they are enrolled in the capitated plans. Even though the sponsor is breaking even conditional on the signals, they are not maximizing consumer welfare.

Optimal Risk Adjustment

One way to solve this service distortion is to broaden the objective function of the sponsor. An objective function is an equation to be optimized given certain constraints and with variables that need to be minimized or maximized using nonlinear programming techniques. An objective function can be the result of an attempt to express a business or organizational goal in mathematical terms for use in decision or optimization studies. Researchers have introduced the concept of "optimal risk adjustment" in which the sponsor's goal is to maximize consumer welfare rather than to just break even. Instead of restricting the sponsor to consider only unbiased risk adjustment formulas, they allow the sponsor to make payments for some signals that differ from the expected cost of each signal. An example of an optimal risk adjustment solution to this distortion is to use the structure of demand and the exogenous signal reporting process to systematically overpay for signals S = 1 while underpaying for S = 10. For each observed signals S = 1 implying a high risk type, the health plan should be compensated for more than the incremental cost of that consumer, to cover the inferred presence of other high risk types in the same plan. This overpayment for S = 1 will make the health plan more willing to enroll high risk types, and to offer more SP services that will attract them.

The optimal risk adjustment equilibrium for this simplified example is shown in Figure 5. It is useful to contrast the conventional and optimal risk adjustment results. Continuing

with the previous example with imperfect signals, consider the case where $\gamma_L = 0$ but $\gamma_H = \frac{1}{2}$. This corresponds to the case where half of all diabetics have a signal reporting their type, but half do not. There are no false positives.

Figure 5

Optimal Risk Adjustment with quantities of services strategically determined. By increasing the payments for diabetics to β^3 which enable B³ rather than B² and reducing the payment for healthy consumers to enable only A³, health plans can be made indifferent to enrolling healthy or diabetic consumers and induced to provide efficient services to both types.



Assume that the regulator calculates conventional risk adjustment payments based on unbiased estimates using the imperfect signal S using FFS data. In this case, conventional risk adjustment would pay $\alpha^0 + \beta^0$, for those with S = 1, and pay $\alpha^0 + (1 - \gamma_H) \beta^0$ for the S = 0 types. If the plan simply enrolled a representative mix of high and low risk types, then it would break even. If instead the plan is able to discourage some of the true high risks from enrolling, then for the extra share of its enrollees with S = 0, it could receive $\alpha^0 + (1 - \gamma_H) \beta^0 > \alpha^0$ for the low risk types it enrolls, making a profit. Hence in order to achieve this, the plan would reduce SP and increase GP spending, offering service mix such as A² and B² in Figure 5.

One response to this incentive is to overpay for the high risk types, making them sufficiently attractive as to encourage plans to compete for them. If α^0 and β^0 were the optimal levels of spending to achieve, then the solution would be to pay α^0 for the S = 0 types, and $\alpha^0 + \beta^0 / \gamma_H = \alpha^0 + 2\beta^0$ for the S = 1 types. Notice that by overpaying two times the expected difference in costs for the high signal, the regulator undoes the disincentive to attract high risk types. In general, the FFS level of services would not be the desired level, and some alternative level such as A³ and B³ in Figure 5, where $\alpha^3 < \alpha^0$ and $\beta^3 < \beta^0$. Although attractive conceptually, achieving an optimal level in practice may be difficult. Knowing the optimal consumption points A³ and B³ may not be feasible, and the structure of the information set, such as the rates of true and false positive signals, may not be known to the sponsor. The optimal risk adjustment payment can be

very sensitive to the degree of imperfect signaling. For small γ_H , it may be necessary to greatly overpay S = 1. In some situations, underpayment for low risks may also be needed, which imposes non-negativity constraints on payments. This solution points the direction that should be considered by sponsors where health plans compete to avoid high risk types: overpay for high risk type signals and underpay for low risk type signals relative to conventional risk adjustment, in order to encourage desirable competition to attract high risk type consumers.

Risk Adjustment Formula Basics

The Balanced Budget Act of 1997 (BBA) mandated that a risk adjustment payment methodology, incorporating information on beneficiaries' health status, be implemented in the Medicare+Choice (M+C) program (now the Medicare Advantage program) no later than January 2000. Under the BBA, risk adjustment of M+C payments was initially to be based only on data from enrollees' inpatient hospital stays, with later implementation of risk adjustment based on data from additional sites of care. CMS selected the Principal Inpatient Diagnostic Cost Group (PIP-DCG) model as the risk adjustment method to be implemented in 2000. The PIP-DCG model is an algorithm that uses base-year inpatient diagnoses, along with demographic factors, to predict total health spending in the following year. CMS has used the PIP-DCG model to determine relative risk factors and predict health expenditures for beneficiaries and, as a result, has risk adjusted payments to participating health plans. This model recognizes diagnoses for which inpatient care is most frequently appropriate and which are predictive of higher future costs.



Mechanics of the Bidding Process- Medicare Advantage

The Medicare Advantage (MA) program allows Medicare beneficiaries to receive their Medicare benefits from private plans rather than from the traditional fee-for-service (FFS) program. Under some MA plans, beneficiaries may receive additional benefits beyond those offered under traditional Medicare and may pay additional premiums for them. Medicare paid plans a capitated rate for the 22 percent of beneficiaries enrolled in MA plans in 2008. These payments amounted to \$78 billion in 2007, 18 percent of total Medicare spending.

Available MA plans include health maintenance organizations (HMOs), preferred provider organizations (PPOs), private fee-for-service (PFFS) plans, and special needs plans (SNPs). For payment purposes, there are two different categories of MA plans: local plans and regional plans. Local plans may be any of the available plan types and may serve one or more counties. Medicare pays them based on their enrollees' counties of residence. Regional plans, however, must be PPOs and must serve all of one of the 26 regions established by the Centers for Medicare & Medicaid Services (CMS). Each region comprises one or more entire states.

MA Bidding, Benchmarks, and Supplemental Benefits

Medicare Advantage plans participate in a bidding process in which plans submit bids in three parts, representing the estimated per-person, per-month revenue needed to offer:

- Medicare Part A and B benefits
- Medicare Part D benefits (for plans offering Part D)
- Supplemental benefits that add benefits or reduce Medicare's cost sharing. Added benefits can be either a non-Medicare medical item or service or a Part D "enhanced" benefit.

The standardized bid reflects the expected monthly cost of a plan enrollee who has nationally average demographic and health status as defined under the CMS risk adjustment model (a "risk score" of 1.0).

CMS then compares the first part of this bid (for Medicare's Part A and B benefits) with a benchmark. CMS sets the benchmark for local plans, based on county-level MA capitation rates in the plan's service area. Generally speaking, for a given year, the county benchmarks are the previous year's MA county payment rates, updated by the projected national growth in per capita Medicare spending. National Medicare per capita growth is defined as "the projected per capita rate of growth in expenditures ... for an individual entitled to benefits under Part A and enrolled under Part B..." [Social Security Act, Section 1853(C)(6)(A)].

Defining the Medicare Advantage products Medicare buys

Under the MA program, Medicare buys insurance coverage for its beneficiaries from private plans with payments made monthly. The coverage must include all Medicare Part A and Part B benefits except hospice. All plans, except PFFS plans, must also offer an option that includes the Part D drug benefit. Plans may limit enrollees' choices of providers more narrowly than under the traditional fee-for-service program. Plans may supplement Medicare benefits by reducing cost-sharing requirements, providing coverage of non-Medicare benefits, or providing a rebate of all or part of the Part B or Part D premium. To pay for these additional benefits, plans must use their cost savings in providing the Medicare benefit and may charge a supplemental premium.

Determining Medicare payment for local MA plans

Plan bids partially determine the Medicare payments they receive. Plans bid to offer Parts A and B (Part D coverage is handled separately) coverage to Medicare beneficiaries. The bid here is presented as the bid to cover an average, or standard, beneficiary. The bid will include plan administrative cost and profit. CMS bases the Medicare payment for a private plan on the relationship between its bid and benchmark. The benchmark is a bidding target. The local MA benchmarks are based on the countylevel payment rates used to pay MA plans before 2006. (Those payment rates were at least as high as per capita FFS Medicare spending in each county and often substantially higher because the Congress set floors to raise the lowest rates to stimulate plan growth in areas where plans historically had not found it profitable to enter.) Generally, CMS updates the local benchmarks each year by the national growth rate in per capita Medicare spending.

If a plan's standard bid is above the benchmark, then the plan receives a base rate equal to the benchmark and the enrollees have to pay an additional premium that equals the difference between the bid and the benchmark. If a plan bid falls below the benchmark, the plan receives a base rate equal to its standard bid.

Medicare payments are also based on enrolled beneficiaries' demographics and health risk characteristics. Medicare uses beneficiaries' characteristics, such as age and prior health conditions, and a risk adjustment model—the CMS–hierarchical condition category (CMS–HCC)—to develop a measure of their expected relative risk for covered Medicare spending. The base payment for an enrollee is the base rate for the enrollee's county of residence, multiplied by the enrollee's risk measure, also referred to as the CMS–HCC weight.

Plans that bid below the benchmark also receive payment from Medicare in the form of a "rebate." The law defines the rebate as 75 percent of the difference between the plan's actual bid (not standardized) and its casemix-adjusted benchmark. The plan must then return the rebate to its enrollees in the form of supplemental benefits or lower premiums. The plan can apply any premium savings to the Part B premium (in which case the government retains the amount for that use), to the Part D premium, or to the premium for the total package that may include supplemental benefits. For example, if a local plan bid \$700 per month in a county with an \$800 benchmark (for simplicity, assume that the plan assumes an average casemix in its bid), the plan would receive a base rate of \$700 and a rebate of \$75, and would have to provide \$75 in the form of reduced premiums or supplemental benefits.

The above system relates to Medicare payments for Part A and Part B services. When a plan offers Part D prescription drug benefits as part of its package, it submits a separate bid for the Part D portion. Payment for the Part D prescription drug portion of the plan benefits is calculated separately, the same way as if the plan were offering a stand-alone prescription drug package. The only difference from stand-alone prescription drug plans is that the MA plan may choose to apply some of its rebate payments to lower the Part D premium that enrollees would otherwise be required to pay.



The MA Non-Drug Payment System

Note: PPO (preferred provider organization), CMS–HCC (CMS–hierarchical condition category). Medicare payments also reflect an intra-service area adjustment based on the county of residence of the enrollee.

Determining Medicare payment for regional MA plans

Aside from a few special payment incentives, payment for regional MA plans is determined like payment for local plans, except that the benchmarks are calculated differently. CMS determines the benchmarks for the MA regional plans by using a more complicated formula that incorporates the plan bids. A region's benchmark is a weighted average of the average county rate and the average plan bid. As directed by law, CMS computes the average county rate as the individual county rates weighted by the number of Medicare beneficiaries who live in each county. The average plan bid is each plan's bid weighted by each plan's projected number of enrollees. CMS then combines the average county rate and the average bid into an overall average. In calculating the overall average, the average bid is weighted by the number of enrollees in all private plans across the country, and the average county rate is weighted by the number of all Medicare beneficiaries who remain in FFS Medicare.



Benchmarking for Regional PPOs

The CMS-HCC risk adjustment models are used to calculate risk scores, which predict individual beneficiaries' health care expenditures, relative to the average beneficiary. Risk scores are used to adjust payments and bids based on the health status (diagnostic data) and demographic characteristics (such as age and gender) of an enrollee. Both the Medicare Advantage and Prescription Drug programs include risk adjustment as a component of the bidding and payment processes. CMS uses risk adjustment to:

• Standardize bids so that each plan has a bid for the average Medicare beneficiary

- Compare bids based on populations with different health statuses and other characteristics
- Adjust plan payment based on the characteristics of the enrolled population

CMS has developed separate risk adjustment models for the Parts A and B benefits offered by plans under Part C and for the Part D benefits offered by prescription drug plans. Within each benefit, CMS also developed segments of the models for subpopulations with distinct cost patterns.

Note: MA (Medicare Advantage), FFS (fee-for-service).

Risk Adjustment Influence on MA Plans

It can be noted that risk adjustment can influence the optimal screening efforts of profitmaximizing MA plans. Before risk adjustment, firms have incentives to enroll the lowestcost enrollees along all dimensions observable to them. After risk adjustment, they reduce efforts to screen along dimensions included in the risk adjustment formula and increase efforts along dimensions excluded from the formula. Thus, after risk adjustment the prevalence of conditions compensated by the formula will rise among MA enrollees ("extensive margin selection" falls), but their actual cost conditional on their risk score falls ("intensive margin selection" increases), as they are now more powerfully selected along dimensions not included in the formula. Thus, both before and after risk adjustment, MA enrollees are positively selected with respect to underlying cost, but due to different mechanisms.⁵

Medicare Advantage Capitation Payments and Risk Adjustment Background

Since establishing MA plans in the 1980s, CMS has generally focused on adjusting payments along two dimensions of cost: individual attributes and geography. Individual attributes are used to generate an individual-level risk score. This risk score is then multiplied by a county-level benchmark, and capitation payments for an individual (i) in a year (t) in county (c) are thus equal to

capitation payment_{itc} = Risk score_{it} X Benchmark_{ct}

where, *i* = individual *t* = year *c* = county

Evolution of the Risk Adjustment Process

Risk adjustment is not a static process and changes were made to the system over time. The following describes how the methodology for calculating risk scores has changed, as well as how county-level benchmarks have evolved.

Risk adjustment Prior to 2004

Throughout the 1980s and 1990s, county benchmarks were generally set to 95 percent of county FFS costs (generally calculated based on a moving average over the past eight years), as it was believed that MA plans should be able to deliver services more efficiently than FFS (Medicare Payment Advisory Commission, 2009). However, by the late 1990s, the strict link between benchmarks and FFS costs began to fray, as benchmarks were raised beyond FFS costs in areas of low MA penetration in an effort to expand access to MA plans. By the end of 2003, benchmarks were roughly 103 percent of average FFS spending (Medicare Payment Advisory Commission, 2004).

⁵ "Risk Selection Response to Risk Adjustment: Evidence from the Medicare Advantage Program" Jason Brown, et al, *SIEPR 10-024*

During the 1980s and 1990s, CMS used a "demographic model" to generate individuallevel risk scores, so-called because it included only demographic variables (gender, age, and disability and Medicaid status) as opposed to disease or health conditions. MA plans do not report cost or claims data to CMS, so CMS used the FFS population to determine how each of these demographic factors contributes to average costs. CMS found that the model explained only one percent of the variation in medical costs among the FFS population.⁶ Given the difficulties in out-of-sample prediction, it is unlikely that the model explained any more of the variation among the MA population.

Because of the low predictive power of the demographic model, there was substantial scope for MA plans to target enrollees who were healthier (and thus cheaper) than the demographic model would predict. Indeed, previous research has shown that during this period MA plans were able to attract patients who were far less costly than the FFS population in general or than predicted by the demographic model. Estimates suggest that individuals switching from traditional FFS to MA had medical costs between 20 and 37 percent lower than individuals who remained in FFS (Langwell and Hadley, Commission (1997), Mello et al. (2003) and Batata (2004)).

Federal policymakers reacted to this evidence by enhancing the risk adjustment procedure. In 2000, CMS introduced the principal inpatient diagnostic cost group (PIP-DCG) model. Due to the lack of MA cost data, the model used inpatient diagnoses (thus excluding outpatient and physician diagnoses) documented on FFS claims data to predict FFS costs the following year. As MA plans do not submit claims data, applying this model to the MA population required that MA plans submit \encounter data," which documents an enrollee's diagnoses. CMS found that the PIP-DCG model could explain 6.2 percent of the variation in FFS costs.

Between 2000 and 2003, risk scores were calculated as a 90/10 blend of the demographic and PIP-DCG models:

Risk score = 0:9 x Demographic score+0:1 x PIP-DCG score:

Thus, the introduction of the PIP-DCG model raised the portion of MA cost variation explained by risk scores from one to $0.9 \times 1 + 0.1 \times 6.2 = 1.5$ percent.

Risk adjustment Since 2003

The difference between county benchmarks and FFS costs continued to grow after 2003. By 2009, benchmarks reached 118 percent of county FFS costs (Medicare Payment Advisory Commission, 2009).

In 2004, CMS introduced a more comprehensive risk adjustment regime that is based on the hierarchical condition categories (HCC) model. Like the PIP-DCG model, the HCC model uses claims data from the FFS population to calibrate a model that predicts

⁶ Pope, G., et al. (2004). Risk adjustment of Medicare capitation payments using the CMS-HCC hcc model. Health Care Financing Review, 25 (4)

FFS costs in the following year, though the HCC model accounts not just for inpatient claims, but physician and outpatient claims as well. The model distills the roughly 15,000 possible ICD-9 codes providers list on claims into seventy disease categories. ICD-9 is an abbreviation for International Statistical Classification of Diseases and Related Health Problems Version IX. CMS provides the file mapping ICD-9 conditions to HCC categories at:

http://www.cms.gov/MedicareAdvtgSpecRateStats/Downloads/RAdiagnoses.zip.

The model coefficients and algorithms can be found at: http://www.cms.gov/MedicareAdvtgSpecRateStats/Downloads/HCCsoftware07.zip.

County benchmarks are published annually in the Medicare Advantage "ratebooks" and ratebooks from 1990 to 2011 are all available at: http://www.cms.gov/MedicareAdvtgSpecRateStats/RSD/list.asp.

Initially, the HCC model was blended with the demographic model, with the HCC model accounting for 30, 50 and 75 percent of the total risk score in 2004, 2005, and 2006, respectively. From 2007 onward, risk scores were based entirely on the HCC model. CMS found that when FFS data is used to calculate HCC scores, the HCC score explains eleven percent of FFS costs the following year (Pope et al., 2004). Newhouse et al. (1997) and Van de ven and Ellis (2000) survey the literature and conclude that the lower bound on the percent of cost variation plans are able to predict is between 20 and 25 percent, suggesting there is still potential room for risk-selection even if the model were to perform as well on the MA population as it does on the FFS population. Moreover, both prospective reports commissioned by CMS in 2000 (Pope et al., 2000) and more recent work using data from 2004 to 2006 (Frogner et al., 2011) have found that the formula systematically under-predicts costs for those with above-average costs, and over-predicts costs for those with below-average costs.

Lack of Claims Data

The PIP-DCG and HCC models evaluation and application are complicated by the lack of any cost or claims data from MA plans. Whether the model performs as well on the FFS population as it does on the MA population depends on at least two key assumptions: first, that that the coding practices MA plans use in generating encounter data to record the conditions used in the formula are the same as those used by FFS providers on claims data; second, that differences in the MA and FFS populations can be fully accounted for by these conditions.

CMS has done extensive research related to the first assumption. They have found that MA plans exhibit greater \coding intensity" in documenting disease conditions, so that an MA enrollee's risk score grows substantially faster than an FFS enrollee's risk score (Center for Medicare and Medicaid Services, 2008). The CMS study focuses the difference in growth rates between those who stay in FFS at least two years in a row to those who stay in MA at least two years in a row, to eliminate the effect of compositional changes. One reason that MA risk scores might grow faster is that the health of MA "stayers" is deteriorating faster than their FFS counterparts. However, CMS explicitly

dismisses this possibility: "... it is possible that beneficiaries enrolled in MA plans may be getting sicker faster than beneficiaries in FFS and this could be driving faster risk score growth for MA enrollees. Given the care coordination and disease management activities of MA plans it cannot be assumed that MA stayers underlying health status is getting worse at a faster rate than stayers in FFS. CMS analysis has found that MA mortality rates during the study period do not explain rising risk scores."

As risk scores are based on disease conditions the previous year, the year after an enrollee switches from FFS to MA, his risk score is based on FFS provider claims data and is thus free of intensive coding. However, any year after that, risk scores are based on MA plans' coding practices, which are far more aggressive than those assumed when the model was calibrated. The HCC model will also offer an upwardly biased estimate of the counterfactual FFS costs of MA enrollees if these enrollees are positively selected along dimensions not included in the model. In fact, the introduction of risk adjustment will incentivize firms to selectively target individuals who they expect to have low costs conditional on their risk score. The next section presents a model of the risk adjustment process from a different perspective.

Risk Adjustment Model

Risk adjustment models developed for the purpose of explaining/predicting resource use have a number of common elements. They are generally **ordinary least square regression models** designed to predict total expenditures for an individual (most commonly in the following year, though same year, or concurrent models are also available). Models of this type also generally incorporate some demographic information, such as age and sex. Where models differ is in the factors (or independent variables) used to explain differences in individuals' health expenditures, and how this information is organized in the classification system. **For example, most current risk adjustment models use clinical diagnoses (in the form of the** *International Classification of Diseases, 9th Revision, Clinical Modification* codes) as the basis **for a clinical classification system**. Such models depend upon the relationship between more severe and in some cases more numerous clinical diagnoses and higher health care expenditures.⁷

Given that there are more than 10,000 such codes, developers of risk adjustment models must define some way of grouping these codes in a way that makes sense to the users of the model, while maximizing predictive power and minimizing sensitivity to coding anomalies. Some developers base their classification systems on clinical or disease-specific groupings, combining codes, for example, that pertain to various heart disorders or diabetes. Often, even these basic groups must be combined further in order to improve model performance; a common approach is to combine multiple clinical groups that have similar costs. Others base their groupings on major body systems, persistence of illness, or likelihood of recurrence. But while clinical disease codes are a common basis for risk adjustment classification systems, they are not the

⁷"*Medicare Risk Adjusted Capitation Payments*" Leslie Greenwald Health Care Financing Review V. 20 n. 3

only possibility. Currently, there are a number of risk adjustment models that explain/predict individuals' health expenditures using measures of functional status. The theory behind this approach is that individuals with increasing numbers of limitations in activities of daily living (ADL) are also higher users of health care services.

Instead of using diagnosis codes as the basis for classifying, ADL limitation information (gathered from all individuals or a sample population) is used. In some cases, specific ADL limitations are used as independent variables, while in other models of this type counts or hierarchies of ADL limitations are developed. In understanding risk adjustment models developed for payment applications, the information not used in the models is almost as significant as what is. In most risk adjustment models, the development process includes decisions about the exclusion of some information. Sometimes those decisions are driven by the desire to improve model performance or robustness. For example, if the goal of the risk adjustment model is to predict next-year expenditures using current-year diagnoses, some diagnostic information has no predictive power or is too vague and non-specific clinically to add much to the overall models' performance. On the other hand, information which may be highly predictive of future re source use may be considered inappropriate because of incentives created, or problematic for payment purposes (for example, prior expenditures or the use of an individual's race). Therefore, as risk adjustment models continue to be developed, part of the refinement process may include changes in the weight given to some information.

Value of Risk Adjustment

Risk adjustment is important to ensure that payments to MA plans adequately account for differences in beneficiaries' health status and to maintain plans' financial incentive to enroll and care for beneficiaries regardless of their health status or the resources they are likely to consume. For CMS's risk adjustment model to adjust payments to MA plans appropriately, diagnostic coding patterns must be similar among both MA plans and Medicare FFS. It was confirmed that CMS's finding that differences in diagnostic coding caused risk scores for MA beneficiaries to be higher than those for comparable Medicare FFS beneficiaries in 2010. This finding underscores the importance of continuing to adjust MA risk scores to account for coding differences and ensuring that these adjustments are as accurate as possible. If an adjustment for coding differences is too low, CMS would pay MA plans more than it would pay providers in Medicare FFS to provide health care for the same beneficiaries. It was found that CMS's 3.41 percent adjustment for coding differences in 2010 was too low, resulting in \$1.2 billion to \$3.1 billion in payments to MA plans for coding differences. By not updating its methodology in 2011 or in 2012, CMS likely underestimated the impact of coding differences on MA risk scores to a greater extent in these years, resulting in excess payments to MA plans. If CMS does not update its methodology, excess payments due to differences in coding practices are likely to increase.

MEDICARE ADVANTAGE

Relationship between Benefit Package Designs and Plans' Average Beneficiary Health Status

Millions of beneficiaries are enrolled in Medicare Advantage (MA), Medicare's private health insurance option. Medicare Advantage enrollment grew by 10% in 2012. The total enrollment exceeds 13 million; that is 27% of the total Medicare population. The \$35 average premium paid by Medicare Advantage enrollees in 2012 was \$4 lower than that paid in 2011. Although CMS shows reductions in premiums from 2011 to 2012, it is not possible to compare estimates because CMS does not provide documentation on the definition of plans included in their estimates.

Benefits vary by MA plan and may include coverage for services not available in traditional Medicare. To ensure MA plan benefit package designs do not discriminate against beneficiaries in poor health with high expected health care costs, the Centers for Medicare & Medicaid Services (CMS) reviews and approves all benefit packages yearly.

The plan benefit packages were examined using the following metrics:

(1) average health status of plans' enrolled beneficiaries,

(2) distribution and characteristics of MA plans by average beneficiary health status, and

(3) CMS's process for ensuring that benefit packages do not discriminate with respect to health status.

Using 2008 data on beneficiaries' expected health care costs, a total of 2,899 plans enrolling 7.5 million beneficiaries were sorted into three groups:

- Good health (below-average expected costs)
- Average health
- Poor health (above-average expected costs)

Researchers then analyzed MA plan benefit packages by health group and reviewed CMS documentation and interviewed agency officials on CMS's benefit package review process.⁸ The report did not determine whether plans structured benefit packages in response to enrolled beneficiaries' health status or beneficiaries in particular health groups chose plans because of the benefits.

Premium Particulars

In 2008, plans in the good health group generally had lower premiums, higher cost sharing for certain services, and fewer additional benefits than plans in the poor health group. Almost half of the plans in the good health group did not have an MA premium for medical or drug coverage, while about one-fifth of plans in the poor health group had no MA premium. Plans in the good health group had higher cost sharing, weighted by

⁸ Information in this section drawn from General Accounting Office report GAO-10-403

enrollment, for inpatient hospital care, skilled nursing facility stays, and renal dialysis than plans in the poor health group. Plans in the good health group were more likely to have an out-of-pocket (OOP) maximum, but the average OOP maximum for plans in that group, weighted by enrollment, was 55 percent higher than that for plans in the poor health group. Comprehensive dental and hearing aid benefits were more likely to be included in the benefit packages for beneficiaries in the poor health group of plans whereas fitness benefits were more likely to be included in the benefit packages for beneficiaries in the good health group of plans.

Forty-three percent of plans were in the good health group, 37 percent in the average health group, and 20 percent in the poor health group. Twenty-nine percent of MA beneficiaries were in plans in the good health group, 55 percent in plans in the average health group, and 16 percent in plans in the poor health group. Among the five largest companies sponsoring MA plans, beneficiary health varied: one sponsor had 17 percent of its beneficiaries in plans in the good health group and 17 percent in plans in the good health group and 17 percent in plans in the good health group and 17 percent in plans in the good health group and 17 percent in plans in the good health group and 17 percent in plans in the good health group and 17 percent in plans in the good health group and 17 percent in plans in the good health group and less than 1 percent in plans in the poor health group. Average beneficiary health status varied by other factors, such as plan type and plan size.

CMS has revised its process for reviewing MA plans for the likelihood of discrimination. It developed a new methodology for setting cost-sharing thresholds- criteria used to identify benefit packages likely to discriminate against certain beneficiaries. For contract year 2010, CMS contacted all MA plans with benefit packages identified as likely to discriminate, and all plans subsequently met cost-sharing thresholds. The new methodology for setting cost-sharing thresholds allowed higher cost sharing for some services relative to 2009. For example, among plans without an OOP maximum or one above \$3,400 for 2010, allowed cost sharing for a typical inpatient mental health stay doubled, from \$61 per day to \$130 per day, and allowed cost sharing for a typical skilled nursing facility stay increased from \$53 to \$70 per day, compared to 2009.

Cost Sharing

CMS has previously stated that, prior to contract year 2010, it targeted for cost-sharing reductions plans with the most egregious cost sharing and often reduced cost-sharing amounts, but to amounts that were still above the thresholds.

Nearly one out of every four Medicare beneficiaries is enrolled in a Medicare Advantage (MA) plan- an alternative to original Medicare fee-for-service (FFS) - in which private insurance plans offer health care coverage to Medicare beneficiaries. As of December 2009, nearly 11 million Medicare beneficiaries were enrolled in approximately 4,700 plans offered by 188 Medicare Advantage Organizations (MAO).MAOs may offer multiple MA plans with different combinations of authorization requirements, non-Medicare benefits, cost sharing, and premiums. MA plans must cover Medicare-covered benefits except hospice care.

Medicare payments to MA plans were approximately \$109.7 billion in fiscal year 2009. (Centers for Medicare & Medicaid Services (CMS), *CMS Financial Report Fiscal Year*

2009 (Baltimore, Md.: November 2009)). In addition to covering services paid for under Medicare FFS, many MA plans offer additional benefits, such as vision, hearing, or dental care and MA plans typically have premiums lower than those of Medicare supplemental policies purchased by FFS beneficiaries (known as Medigap). Medicare FFS beneficiaries can purchase Medigap insurance policies, offered by private insurers, which help cover cost-sharing amounts for Medicare-covered services. MA beneficiaries generally have an array of plans to choose from, each with different coverage, premiums, and cost sharing- the portion of medical expenses that the beneficiary is responsible for paying out-of-pocket (OOP).

The Centers for Medicare & Medicaid Services (CMS) - the agency that administers the Medicare program- pays MA plans a fixed amount to cover each beneficiary and oversees plan benefit designs. CMS adjusts payments to plans using risk scores, which estimate the expected health care costs of the beneficiaries enrolled in a plan. Medicare spending is concentrated among a small proportion of beneficiaries. The most expensive 5 percent of Medicare beneficiaries account for roughly half of all spending in the Medicare FFS program. (See MedPAC, *Report to the Congress: New Approaches in Medicare* (Washington, D.C.: June 2004)). Risk scores are developed from data on individuals' demographics and diagnoses. As a result, MA plans receive relatively lower payments for beneficiaries who are healthier than average, and relatively higher payments for beneficiaries who are sicker than average.

Risk Adjustment Methodology

The Medicare Payment Advisory Commission (MedPAC) reported that Medicare's riskadjustment methodology may tend to set payments too low for beneficiaries in poor health, who tend to have high expected health care costs, and set payments too high for the healthiest beneficiaries who tend to have low expected health care costs. (Medicare Payment Advisory Commission (MedPAC), *Report to the Congress: Issues in a Modernized Medicare Program* (Washington, D.C.: June 2005)). As a result, MAOs may have a financial incentive to discourage new or continued enrollment of beneficiaries in poor health. It is possible that some MAOs could do this through the design of their plan benefit packages. For example, a plan that charges relatively high cost-sharing amounts for certain services commonly used by beneficiaries in poor health may prove particularly undesirable to them. MA plans have flexibility in designing their benefit packages, but;

- (1) they must provide all Medicare-covered services except hospice care,
- (2) their overall cost-sharing requirements must be actuarially equivalent or lower than those under Medicare FFS. Actuarial equivalence is demonstrated by a qualified actuary's certification that overall cost sharing in an MA plan is no more than the overall cost sharing in Medicare FFS. and
- (3) they cannot discriminate on the basis of health status. By law, CMS may not approve MA plan benefit packages if their designs are likely to substantially discourage enrollment of certain beneficiaries.7 742 U.S.C. § 1395w-22(b)(1)(A).

To determine whether an MA plan benefit package is likely to substantially discourage enrollment of certain beneficiaries, CMS reviews cost sharing for certain services for

which excessively high cost sharing could be considered discriminatory. Cost sharing for certain services, such as home health and inpatient hospital stays, was higher in some MA plans than in Medicare FFS (*Medicare Advantage: Increased Spending Relative to Medicare Fee-for-Service May Not Always Reduce Beneficiary Out-of-Pocket Costs,* GAO-08-359).

Not much attention had been given, however, as to how plan benefit design varied among MA plans by average beneficiary health status. The information in this section reviews MA plan benefit designs, enrollment patterns, and related CMS oversight. This report examines (1) benefit packages of MA plans by average health status of plans' enrolled beneficiaries, (2) the distribution and characteristics of MA plans by average beneficiary health status, and (3) CMS's process for ensuring that MA plan benefit packages are not discriminatory with respect to health status.

To address these issues, data gathering and analysis focuses on four types of MA plans that together accounted for nearly all of MA enrollment in 2009- health maintenance organizations (HMO), private fee-for-service (PFFS) plans, local preferred provider organizations (PPO), and regional PPOs. Beneficiaries in HMOs are generally restricted to seeing providers within a network, while PFFS beneficiaries can see any provider authorized to provide Medicare services that accepts the plan's payment terms. Beneficiaries in PPOs can see both in-network and out-of-network providers but may pay higher cost-sharing amounts if they use out-of-network services. A regional PPO serves an entire state or multiple states, whereas local PPOs may serve a county, partial county, or multiple counties.

Special needs plans (SNP), which are allowed to limit enrollment to a targeted beneficiary population; SNPs can be HMOs, local PPOs, or regional PPOs. SNPs are permitted to target enrollment to;

- (1) beneficiaries entitled to Medicare and Medicaid (dual-eligible beneficiaries),
- (2) beneficiaries with severe or disabling chronic conditions, and
- (3) institutionalized beneficiaries.

They may either exclusively or disproportionately enroll beneficiaries from one of these three categories.

Plan Analysis

After certain exclusions, data was analyzed for 2,899 plans (including 621 SNPs), offered by 192 MAOs that enrolled 74 percent of all MA beneficiaries- 7.5 million- as of July 2008. Excluded from the analysis are employer plans, religious fraternal benefit plans, Part B only plans, CMS demonstrations, programs of all-inclusive care for the elderly, cost plans, provider sponsored organizations (as they constituted less than 1 percent of MA enrollment), medical savings accounts, beneficiaries with end-stage renal disease, beneficiaries located in areas outside the 50 states and the District of Columbia, and MA plans with fewer than 10 beneficiaries.

Of the 973,923 beneficiaries enrolled in SNPs, over two-thirds were in plans that targeted enrollment to dual-eligible beneficiaries- those entitled to both Medicare and

Medicaid. In some of the analyses, reports of results for SNPs are done separately in order to highlight the distinct characteristics of such plans. Using CMS's 2008 plan-level risk score data by county, the most recent data available, the average health status of MA plans is categorized as good, average, or poor in the areas that they served. Risk scores are based on beneficiaries' projected health care costs, which CMS develops using demographic information and diagnosis codes. Diagnosis codes are assigned by providers and reported for FFS beneficiaries in Medicare claims data. MA plans are responsible for providing CMS with the appropriate diagnosis codes for their enrolled beneficiaries as the Medicare program does not have claims data for these beneficiaries.

Plan Grouping for Analysis

At the plan level, risk scores indicate the average health status of the plans' beneficiaries. Because the overall Medicare population may be healthier in some geographic areas than in others, an indexed (relative) health risk score was calculated for each plan as the ratio of an MA plan's risk score to the overall Medicare average risk score in each county. Then each plan's indexed risk score was averaged across the counties that comprised the plan's service area, weighted by July 2008 enrollment. With 1.00 as the average risk score for all Medicare beneficiaries- in FFS and MA- the MA plans were placed in one of three groups.

Good health group: MA plans with an average indexed risk score less than 0.90, meaning the projected health care costs for the average beneficiary in the plan were at least 10 percent lower than those for an average Medicare beneficiary living in the plan's service area.

Average health group: MA plans with an average indexed risk score between 0.90 and 1.10, meaning the projected health care costs for the average beneficiary in the plan were within 10 percent of those for an average Medicare beneficiary living in the plan's service area.

Poor health group: MA plans with an average indexed risk score greater than 1.10, meaning the projected health care costs for the average beneficiary in the plan were at least 10 percent higher than those for an average Medicare beneficiary living in the plan's service area.

To compare the benefit packages of MA plans by the average health status of plans' enrolled beneficiaries, CMS plan benefit package (PBP) data was analyzed for contract year 2008 (as the risk score data used in this analysis is based on MA plan enrollment as of July 2008). CMS's PBP data contain each MA plan's premiums, cost-sharing requirements, and additional benefits. Cost sharing was analyzed for eight services for which CMS considers high cost sharing to be potentially discriminatory because these services typically are used by Medicare beneficiaries in poor health and are usually associated with acute and chronic conditions, high utilization, and high cost. Services typically used by sicker beneficiaries, for whom CMS considers high cost sharing to be potentially discriminatory, include: inpatient hospital acute care, inpatient mental health care, renal dialysis, chemotherapy drugs and other part B drugs, skilled nursing facility stays, home health visits, and durable medical equipment (DME).

For several services, beneficiary OOP costs were simulated using average beneficiary utilization profiles developed by CMS and accounted for plans that charged service-specific deductibles or had service-specific OOP maximums- dollar limits on the amount a beneficiary must pay in cost sharing in a period of coverage (typically 1 year). A deductible is an amount (typically annual) that a beneficiary is responsible for before an insurer will make payments. It was also determined whether MA plans provided additional coverage for dental, vision, or hearing services; and fitness benefits. Dental, vision, hearing, and fitness benefits (which may include gym memberships and fitness classes) are not provided under Medicare FFS but may be offered by MA plans as mandatory or optional supplemental benefits. Mandatory benefits must be provided for every person enrolled in the plan, whereas optional supplemental benefits are available to those enrollees who elect and pay for them.

No effort was made to determine whether MAOs structured their plan benefit packages in response to enrolled beneficiaries' health status or whether beneficiaries of a given health status chose certain MA plans specifically because of their benefit package designs. To examine the distribution and characteristics of MA plans by beneficiary health status, an analysis was done of 2008 MA plan-level risk score data, the most recent data available, and calculated the number of MA plans and the percentage of plan beneficiaries in each health group. Also examined were the differences across the health groups;

- (1) among the five largest MAOs,
- (2) by plan type,
- (3) by plan size,
- (4) by the percentage difference between the MA payment benchmarks and estimated FFS spending across a plan's service area.

To describe CMS's process for ensuring that MA plan benefit packages are not discriminatory with respect to health status, CMS officials were interviewed, including staff responsible for reviewing and approving plan benefit packages; and reviewed relevant laws and regulations, CMS standard operating procedures, and other agency documentation on the review process. The outcome of CMS's review process was determined by analyzing data for contract years 2008 and 2009 on MA plans that CMS initially identified as having potentially discriminatory cost sharing and data on MA plans' final cost-sharing requirements for contract years 2008 through 2010.

Officials were queried about reliability of the CMS data used in the analysis. Data documentation was also reviewed and certain data checks performed to ensure the data were reasonable and consistent. For example, the results of cost sharing analysis using PBP data were compared with information from the Medicare Options Compare Web site. Medicare Options Compare (available at www.medicare.gov) provides information, using CMS PBP data, to beneficiaries so they can find and compare MA plans available in the area where they live.

Background

Most Medicare beneficiaries can choose to receive covered services through Medicare FFS or through an MA plan- which operates under Medicare Part C- if one is offered where they live. Individuals with end-stage renal disease are not eligible to enroll in most MA plans. However, if these individuals develop the disease while enrolled in an MA plan, they may remain enrolled in their plan or move to a different MA plan if their plan is terminated. 42 U.S.C. § 1395w-21(a)(3)(B). MAOs are allowed flexibility in designing their plan benefit packages and cost sharing for certain services can vary widely by MA plan.

MA plans operate under annual contracts between MAOs and CMS and must offer benefits that are covered under Medicare FFS. The exception is hospice care, which FFS covers and MA plans do not. These benefits consist of Part A hospital insurance, which covers inpatient stays, care in skilled nursing facilities, and some home health care; and Part B medical insurance, which covers certain physician, outpatient hospital, and laboratory services, among other services. All beneficiaries enrolled in Part B are charged a Part B premium. In general, in order to enroll in a MA plan, beneficiaries must be entitled to benefits under Part A and enrolled in Part B.

Regardless of their source of coverage, all Medicare beneficiaries have the option of receiving prescription drug coverage through Medicare Part D. Medicare FFS beneficiaries can enroll in stand-alone prescription drug plans, which are operated by private plan sponsors, and they generally must pay an additional premium to receive Part D coverage. MA beneficiaries who also want prescription drug coverage generally receive that coverage through their MA plans, which may or may not charge an additional premium for Part D coverage. In addition to monthly premiums, beneficiaries in Medicare FFS or in MA plans typically are responsible for cost sharing, which can be in the form of a deductible, coinsurance, or a copayment. Coinsurance is a percentage payment for a given service that a beneficiary must pay, such as 20 percent of the total payment for Part B drugs. A copayment is a standard amount that a beneficiary must pay for a given service, such as \$200 per day for days 1 through 6 of an inpatient acute hospital stay.

To help provide financial protection to beneficiaries who might otherwise have high costsharing expenses for Part A and Part B services, MAOs may voluntarily establish OOP maximums, or dollar limits on the amount a beneficiary must pay in cost sharing in a period of coverage (typically one year). Regional PPOs are required to have OOP maximums, and Medicare FFS has no OOP maximum. Beginning January 1, 2011, CMS requires local MA plans to have an OOP maximum, the amount of which would be set annually by CMS. See 75 *Fed. Reg.* 19678, 19709-19711 (2010).

For contract year 2010, CMS sought to allow MA plans with an OOP maximum at or below \$3,400 greater flexibility in establishing cost-sharing amounts. Each year CMS publishes the OOP maximum threshold in its annual Call Letter to MA plans. This value represents the maximum amount that 85 percent of Medicare FFS beneficiaries are expected to incur in Parts A and B deductibles and coinsurance in a given year. For calendar years 2008 and 2009 the OOP maximum thresholds were \$3,250 and \$3,350, respectively.

For each MA beneficiary, CMS pays MA plans a monthly amount determined by the plan bid- the plan's estimated cost of providing Medicare Part A and Part B benefits- in relation to a benchmark, which is the maximum amount the Medicare program will pay MA plans in a given locality. If a plan's bid is less than the benchmark, the difference is partially rebated to the MA plan and must be used to reduce premiums, reduce cost sharing, or provide additional benefits for plan beneficiaries.

If a plan's bid exceeds the benchmark, the plan will charge each of its beneficiaries an additional premium to make up the difference. MA plans offering prescription drug coverage have a separate payment benchmark for Part D prescription drug benefits. CMS risk-adjusts the monthly payments to MA plans to take into account the health status of the plan's beneficiaries.

MA Plan Benefit Package Designs

As previously reported, cost sharing can vary widely among MA plans for particular categories of services as a result of the flexibility given MAOs in designing their plan benefit packages.(*Medicare Advantage: Increased Spending Relative to Medicare Fee-for-Service May Not Always Reduce Beneficiary Out-of-Pocket Costs,* GAO-08-359).

For example, in 2007, 9 percent of beneficiaries were enrolled in MA plans that had no cost sharing for inpatient services, whereas 16 percent of beneficiaries were enrolled in MA plans with cost sharing for inpatient services that was higher than that of Medicare FFS. Similarly, an AARP study reported that in 2008 the average MA beneficiary with a 10-day inpatient hospital stay would incur \$823 in cost sharing, less than the \$1,068 incurred for beneficiaries in Medicare FFS, but 12 percent of beneficiaries would incur cost sharing of \$2,000 or more (Gold, M. and Hudson, M.C., *Medicare Advantage Benefit Design: What Does It Provide, What Doesn't It Provide, and Should Standards Apply?*, A report for AARP Public Policy Institute (Washington, D.C.: March 2009)).

The Secretary of Health and Human Services is obliged by statute to not contract with a MAO if its plan benefit design is likely to substantially discourage enrollment in the MA plan by certain individuals (42 U.S.C. § 1395w-22(b)(1)(A)). Regulations provide that CMS shall review and approve MA plan benefit packages to ensure MAOs are not designing benefits to discriminate against beneficiaries, promote discrimination, discourage enrollment or encourage enrollment, steer subsets of particular beneficiaries, or inhibit access to services (42 CFR § 422.100(f)). To implement this provision of the statute, CMS identified in the Medicare Managed Care Manual certain services for which high cost sharing could be considered potentially discriminatory and provides further guidance in its annual MA Call Letter to MA plans on how it will review benefit packages for the likelihood of discrimination. CMS has never barred a plan from participation in the MA program because of cost sharing that was likely to substantially discourage enrollment.

Certain aspects of MA cost-sharing requirements and payment will change as a result of the Patient Protection and Affordable Care Act. Beginning with bids submitted for contract year 2011, the Secretary of Health and Human Services has the authority to not contract with an MAO if it proposes significant increases in cost sharing or decreases benefits offered by a plan (Pub. L. No. 111-148, § 3209, _Stat._ (2010)). In addition, for plan years beginning January 1, 2011, the cost sharing required for chemotherapy services, renal dialysis, skilled nursing care, and any other service that the Secretary determines appropriate can be no more than the cost sharing required in Medicare FFS (Pub. L. No. 111-148, § 3202, _Stat._ (2010)).

Good Health Group of Plans Generally Charged Lower Premiums Higher Cost Sharing for Certain Benefits, and Offered Fewer Additional Benefits

The good health group of plans- MA plans in which the average beneficiary had projected health care costs at least 10 percent below those for an average Medicare beneficiary within the plan's service area- generally charged lower premiums and had higher cost sharing for certain services compared with the poor health group of plans. Plans in the good health group also were less likely to include additional benefits, such as vision and dental care coverage.

Lower Premiums or None at All

Generally Charged by the Good Health Group of Plans

The good health group of plans generally charged lower premiums relative to the poor health group of plans. (See fig. 8.) For example, in 2008,

- almost half of the good health group of plans- 46 percent- did not have a premium for Part C (medical) or Part D (prescription drug) coverage, while about one-fifth of the poor health group of plans had no premium.
- for MA plans that included prescription drug coverage as part of their benefit package, the combined (Part C and Part D) monthly premium for the good health group of plans- \$24- was lower than that for the poor health group, which was \$31.

Taken separately, Part C and Part D premiums for the good health group of plans also were lower than the corresponding premiums for the poor health group.

Figure 8: Average Combined, Part C, and Part D MA Plan Premiums by Health Group, 2008



Notes: Dollar amounts are weighted by July 2008 enrollment and include zero-premium MA plans. Using CMS's 2008 plan-level risk score data by county, the health status of MA plans was categorized as good, average, or poor based on the average health status of their enrolled beneficiaries in the areas that they served. This analysis included 2,899 MA plans that enrolled a total of 7,553,600 beneficiaries. The combined Part C and D premium reflects the premium for plans that included the Part D prescription drug coverage as part of their MA plan benefit package.

In 2008, 12 percent of plans in the good health group reduced beneficiaries' Part B premium, while 4 percent of plans in the poor health group did so. Among plans that reduced the Part B premium, plans in the good health group reduced it by a larger amount than plans in the poor health group- averaging \$48 and \$36, respectively. Results weighted by July 2008 enrollment.

Higher Cost Sharing for Certain Services

Were Generally Found for the Good Health Group of Plans

The good health group of plans tended to have higher cost sharing for the services that were reviewed- which included inpatient hospital acute stays, inpatient mental health stays, skilled nursing facility (SNF) stays, and renal dialysis- than the poor health group of plans. Of the 2,899 plans in this analysis, 5 percent required enrollees to pay a deductible before plan coverage began. An MA plan was considered to have a deductible if the plan had either an in-network deductible or a deductible for both in-network and out-of-network services. (See fig. 9.) For example, in 2008,

 the average plan in the good health group charged about \$100 more in cost sharing for a typical inpatient hospital stay (6 days) (For a 6-day inpatient hospital stay, 15 percent of MA plans in this analysis did not charge cost sharing) and about \$150 more for a typical inpatient mental health stay (21 days) (For inpatient mental health stays, CMS does not calculate an average cost per day. As a result, the analysis was only able to estimate the average OOP cost for a 21-day inpatient mental health stay for plans that charged a copayment. Approximately 14 percent of MA plans in the analysis did not charge cost sharing for a 21-day stay) than the average plan in the poor health group.

- the average plan in the good health group charged about \$500 more in cost sharing for a typical SNF stay (35 days) than the average plan in the poor health group. For a 35-day SNF stay, 16 percent of MA plans in this analysis did not charge cost sharing.
- the average plan in the good health group charged over \$300 more in cost sharing for a year of renal dialysis (156 sessions)32 than the average plan in the poor health group. For 156 renal dialysis sessions, 37 percent of MA plans in this analysis did not charge cost sharing.



Figure 9: Average MA Plan Cost Sharing for Selected Services by Health Group, 2008

Notes: Dollar amounts are weighted by July 2008 enrollment and include MA plans that did not charge cost sharing for the indicated services. Using CMS's 2008 plan-level risk score data by county, the health status of MA plans was categorized as good, average, or poor based on the average health status of their enrolled beneficiaries in the areas that they served. This analysis included 2,899 MA plans that enrolled 7,553,600 beneficiaries.

CMS does not calculate an average cost per day for an inpatient mental health stay. As a result, the analysis was only able to estimate the average OOP cost for a 21-day inpatient mental health stay for plans that charged a copayment. Of the 2,899 plans in this analysis, approximately 90 percent indicated that they charged a copayment for an inpatient mental health stay.

The good health group of plans had similar cost sharing for Part B chemotherapy drugs, other Part B drugs, DME, and home health compared with the poor health group of plans. Among the plans in this analysis that charged cost sharing for Part B chemotherapy drugs, other Part B drugs, and DME, 85 percent charged coinsurance for Part B chemotherapy drugs, 84 percent charged coinsurance for other Part B drugs, and 99 percent charged coinsurance for DME. For 27 home health visits, 75 percent of

plans in the analysis did not charge cost sharing. Among the plans that charged cost sharing for home health, 62 percent charged a copayment. For example, in 2008;

- an average plan in both the good health group and the poor health group charged 20 percent coinsurance for Part B chemotherapy drugs and charged 20 and 19 percent coinsurance, respectively, for other Part B drugs.
- an average plan in the good health group charged 23 percent coinsurance for DME, compared with 21 percent for the average plan in the poor health group.
- for the relatively small share of plans that charged cost sharing for home health care, an average plan in the good health group charged \$568 for 27 home health visits compared to \$597 for the average plan in the poor health group.

OOP Maximum

In 2008, a greater share of plans in the good health group had an OOP maximum that limited their beneficiaries' overall financial risk compared to plans in the poor health group- 63 percent compared with 40 percent, respectively. A plan is considered to have an OOP maximum if the plan had either an in-network OOP maximum or an OOP maximum for both in-network and out-of-network services. If a plan had two OOP maximums- one for in-network services and one for combined in- and out-of-network services, then the in-network value was used for this analysis. However, the OOP maximum for the good health group of plans averaged 55 percent higher than the OOP maximum for the poor health group (\$3,515 compared with \$2,262). Results were weighted by July 2008 enrollment.

In designing their benefit packages, some plans excluded cost sharing incurred for certain services from expenses that counted toward the OOP maximum. A plan was considered to have excluded a service category from the OOP maximum if the OOP maximum did not cover that service category and if the plan had no service-specific maximum for that category. Plans that excluded a certain service category from the OOP maximum did not necessarily exclude all services from that category. Approximately 14 percent of plans in the good health group had an OOP maximum and excluded one or more services for which they required cost sharing, compared with 13 percent of plans in the average health and poor health groups. An examination was done of whether a plan charged cost sharing and excluded the following services from their OOP maximum: inpatient hospital acute care, inpatient mental health care, skilled nursing facility stays, home health visits, renal dialysis, Part B drugs, and DME.

Plans were most likely to exclude Part B drugs (15 percent of plans), renal dialysis (6 percent of plans), and DME (6 percent of plans) from their OOP maximum. In determining whether plans charged cost sharing for services excluded from the OOP maximum, plan cost sharing was examined for a 6-day inpatient hospital acute stay, a 21-day inpatient mental health stay, a 35-day skilled nursing facility stay, 27 home health visits, one year of dialysis (156 sessions), Part B drugs, and DME.

The Good Health Group of Plans Generally Had Fewer Additional Benefits

Plans in the good health group were less likely to include certain additional benefits in their benefit packages, such as vision and dental care coverage, but were more likely to include a fitness benefit than plans in the poor health group. Results include MA plans that provided dental, vision, hearing, and fitness benefits as mandatory supplemental benefits. (See fig. 10.) For example, in 2008;

- seventy-three percent of plans in the good health group included coverage for eye exams and 60 percent included coverage for eyewear compared with 78 percent and 74 percent, respectively, of plans that covered these benefits in the poor health group.
- twenty-three percent of plans in the good health group included coverage for comprehensive dental benefits compared with 33 percent of plans in the poor health group. Comprehensive dental benefits may include restorative services (e.g., fillings), root canals, oral surgery, extractions, and dentures.
- while plans in the good health group were more likely to cover hearing tests, they were less likely than plans in the poor health group to cover hearing aids- 36 percent versus 48 percent.
- the percentage of plans in the good health group that included fitness benefits was approximately twice that of plans in the poor health group- 55 percent compared with 28 percent.

Figure 10: Percentage of Beneficiaries in MA Plans with Selected Additional Benefits by Health Group, 2008



Source: GAO analysis of 2008 CMS Plan Benefit Package data

Notes: Percentages are weighed by July 2008 enrollment. Results include MA plans that provided dental, vision, hearing, and fitness benefits as mandatory supplemental benefits. Using CMS's 2008 plan-level risk score data by county, the health status of MA plans was categorized as good, average, or poor based on the average health status of their enrolled beneficiaries in the areas that they served. This analysis included 2,899 MA plans that enrolled 7,553,600 beneficiaries.

More MA Plans and Beneficiaries Were in the Good Health Group Than in the Poor Health Group of Plans

In 2008, the plans in the good health group differed with those in the poor health group by plan type, plan size, and, for HMOs, by the difference between MA payment benchmarks and estimated FFS spending. The analysis of MA plans' average indexed risk scores, including SNPs, by health group showed that 1,254 plans (43 percent) were in the good health group, 1,068 plans (37 percent) were in the average health group, and 577 plans (20 percent) were in the poor health group. (See fig. 11.) Across all 2,899 MA plans in this review, the average indexed risk scores- adjusted for geographic variations in the average health of all Medicare beneficiaries- ranged from 0.38 to 2.65.





Source: GAO analysis of 2008 CMS risk score data.

Notes: Using CMS's 2008 plan-level risk score data by county, the health status of MA plans was categorized as good, average, or poor based on the average health status of their enrolled beneficiaries in the areas that they served. This analysis included 2,899 MA plans, of which 621 were SNPs that are allowed to limit enrollment to a targeted beneficiary population.

The analysis of the percentage of beneficiaries, including those enrolled in SNPs, by health group showed that 29 percent were in the good health group of plans, 55 percent in the average health group of plans, and 16 percent in the poor health group of plans. (See fig. 12.)





Notes: Using CMS's 2008 plan-level risk score data by county, the health status of MA plans was categorized as good, average, or poor based on the average health status of their enrolled beneficiaries in the areas that they served. This analysis included 7,553,600 MA beneficiaries, of which 973,923 were enrolled in SNPs as of July 2008. SNPs are allowed to limit enrollment to a targeted beneficiary population. Source: GAO analysis of 2008 CMS risk score data.

Average indexed risk scores ranged from 0.90 to 1.03 for the five largest organizations in the MA program, which together accounted for nearly 50 percent of MA enrollment in 2008. The five MAOs varied in the extent to which their plans fell into the good, average, and poor beneficiary health status groups. (See fig. 13.) For example, one MAO had 17 percent of its beneficiaries in plans in the good health group and 17 percent in plans in the poor health group, while another had 49 percent of its beneficiaries in plans in the good health group and less than 1 percent in plans in the poor health group.



Figure 13: Percentage of Beneficiaries in MA Plans, by Plan Health Group For the Five Largest MA Organizations, 2008 Percentage of beneficiaries

Source: GAO analysis of 2008 CMS risk score data

Notes: Using CMS's 2008 plan-level risk score data by county, the health status of MA plans was categorized as good, average, or poor based on the average health status of their enrolled beneficiaries in the areas that they served. These five MA organizations accounted for 48 percent (3,656,396 beneficiaries) of MA enrollment, including enrollment in SNPs, as of July 2008. SNPs are allowed to limit enrollment to a targeted beneficiary population.

Group Dispersion

The four types of plans reviewed differed as to the average health status of their beneficiaries. Excluding SNPs, regional PPOs and local PPOs had the largest percentage of beneficiaries in plans in the good health group- 95 percent and 66 percent, respectively. Regional PPOs did not have any beneficiaries in the poor health group of plans and local PPOs had 1 percent of their beneficiaries in the poor health group of plans. HMOs and PFFS plans had the largest share of beneficiaries in the average health group of plans- 68 percent and 48 percent of beneficiaries, respectively- and each had less than 10 percent of their beneficiaries in the poor health group of plans (See fig. 14.). In 2008, it was reported that beneficiaries in PFFS plans tended to be healthier than beneficiaries in other MA plans and Medicare FFS. Specifically, projected health care expenditures for PFFS beneficiaries were 7 percent less than the projected average for beneficiaries in Medicare FFS (*Medicare Advantage: Characteristics, Financial Risks, and Disenrollment Rates of Beneficiaries in Private Fee-for-Service Plans*, GAO-09-25). SNPs, by definition, had the largest percentage of

beneficiaries (71 percent) in the poor health group of plans and had nearly all of their remaining beneficiaries in the average health group of plans.



Figure 14: Percentage of Beneficiaries in MA Plans, by Plan Health Group and Plan Type Year 2008

Source: GAO analysis of 2008 CMS risk score data.

Notes: Results are based on MA enrollment as of July 2008. Using CMS's 2008 plan-level risk score data by county, the health status of MA plans was categorized as good, average, or poor based on the average health status of their enrolled beneficiaries in the areas that they served. SNPs are allowed to limit enrollment to a targeted beneficiary population.

Excluding SNPs, MA plans with lower enrollment were more likely to be in the good health group than plans with higher enrollment. (See fig. 15.) About two-thirds of MA plans with 10 to 75 beneficiaries were in the good health group of plans, while roughly one-third of MA plans with the largest enrollment (2,863 to 92,950 beneficiaries) were in the good health group.



Figure 15: Percentage of MA Plans, by Plan Health Group and Plan Size (excluding SNPs) Year 2008

Source: GAO analysis of 2008 CMS risk score data.

Notes: Results are based on MA enrollment as of July 2008. Using CMS's 2008 plan-level risk score data by county, the health status of MA plans was categorized as good, average, or poor based on the average health status of their enrolled beneficiaries in the areas that they served. SNPs are allowed to limit enrollment to a targeted beneficiary population.

While SNPs of any plan size were most likely to have beneficiaries in the poor health group, 58 percent of the smallest SNPs were in the poor health group and 73 percent of the largest SNPs were in the poor health group (See fig. 16.).



Figure 16: Percentage of SNPs, by Plan Health Group and Plan Size Year 2008

Source: GAO analysis of 2008 CMS risk score data.

Notes: Results are based on MA enrollment as of July 2008. Using CMS's 2008 plan-level risk score data by county, the health status of MA plans was categorized as good, average, or poor based on the average health status of their enrolled beneficiaries in the areas that they served. SNPs are allowed to limit enrollment to a targeted beneficiary population.

Payment Benchmarks

HMOs, including SNPs, in the good health group of plans tended to be located in areas where the percentage difference between the 2008 MA payment benchmarks and estimated 2008 FFS spending was smaller. To calculate the extent to which MA payment benchmarks exceeded estimated FFS spending, the 2008 FFS spending by county was first projected using 2007 estimates in the 2008 MA ratebook updated by the CMS estimate of growth in national spending for 2008. Then spending related to the double payment for indirect medical education payments made to teaching hospitals was discounted. The statutory benchmarks were used in analysis of regional PPOs and the competitively set benchmark amounts were not examined.

MA payment benchmarks averaged 13 percent higher than estimated FFS spending in areas where HMOs in the good health group of plans were located, but benchmarks were 16 percent higher where HMOs in the poor health group were located. No relationship was found between an MA plan's average indexed risk score and the percent difference between MA payment benchmarks and estimated FFS spending in 2008 for the other types of MA plans included in this analysis (local PPOs, regional PPOs, or PFFS plans).

CMS Revised the Way It Identifies Benefit Packages Likely to be Discriminatory, and Some New Review Thresholds Allowed Higher Cost Sharing

For contract year 2010, CMS modified the benefit package review process used in previous years. CMS developed a new methodology to determine cost-sharing thresholds and included actuarial equivalence tests as part of the review process. Under the new process for reviewing MA plans for the likelihood of discrimination, CMS examined plans' 2010 OOP maximums and identified MA plans with comparatively high cost-sharing amounts. Plans' OOP maximums determined the level of scrutiny the benefit packages received, with greater scrutiny given to plans with no OOP maximum or with an OOP maximum above CMS's OOP maximum threshold. For contract years 2011 and later, CMS will require local MA plans to have an OOP maximum, the amount of which would be set annually by CMS. If plans establish OOP maximums lower than the mandatory amount, they will be allowed more flexibility in establishing cost-sharing amounts for individual services. See *Fed. Reg.* 19678, 19709-19711 (2010).

Plan Cost Sharing

For selected services- those typically used by sicker beneficiaries- CMS compared plans' cost-sharing amounts with threshold amounts set relative to cost sharing for all MA plans. Benefit packages were considered likely to be discriminatory if the cost sharing for one or more of the selected services exceeded the threshold and was higher than cost sharing for Medicare FFS. CMS annually determines the length of stay or number of visits or sessions and the cost of certain services in order to determine whether the cost-sharing amount charged by an MA plan is potentially discriminatory. For contract year 2010, the process was as follow;

- If a plan had an OOP maximum at or below the amount specified in the annual Call Letter (\$3,400 for 2010), According to CMS, if a plan with a qualifying OOP maximum excluded any Medicare service from its OOP maximum, it was evaluated based on more stringent standards. CMS limited its benefit package review to cost sharing for five selected services: renal dialysis (156 sessions), Part B drugs, home health (37 visits), inpatient mental health stays (15 days), and SNF stays (42 days). MA plans were considered likely to discriminate if their cost sharing for any of these services was at or above the 95th percentile relative to the other MA plans and was greater than the cost sharing under Medicare FFS. For 2010, beneficiaries in Medicare FFS are charged 20 percent coinsurance for renal dialysis and Part B drugs; nothing per home health visit; \$1,100 for a 15-day inpatient mental health stay; and \$3,025 for a 42-day SNF stay.
- If a plan did not have an OOP maximum or if the OOP maximum exceeded the amount specified in the Call Letter, CMS reviewed cost sharing for 14 selected services: the 5 listed above plus inpatient hospital stays (10 days), inpatient hospital catastrophic stays (90 days), physician mental health visits, Part B chemotherapy drugs, Part B radiology, and 4 DME services- equipment, prosthetics, supplies, and diabetes tests. MA plans were considered likely to discriminate if cost sharing for any of the 14 services was at or above the 75th percentile relative to other MA plans and was greater than the cost sharing under

Medicare FFS. For 2010, beneficiaries in Medicare FFS are charged \$1,100 for a 10-day inpatient hospital stay; \$9,350 for a 90-day inpatient hospital catastrophic stay; 45 percent coinsurance for a physician mental health visit; and 20 percent coinsurance for Part B chemotherapy drugs, Part B radiology, and DME (including equipment, prosthetics, supplies, and diabetes tests).

As part of the revised review process, in addition to determining whether MA plans' benefit packages were actuarially equivalent to Medicare FFS, CMS began reviewing MA plans' pricing data for the likelihood of discriminatory cost sharing. CMS reviewed MA plans' cost sharing for five selected services. For inpatient hospital care (including mental health), SNF stays, home health visits, DME, and Part B drugs, CMS calculated the difference between the plans' cost sharing and an amount that was actuarially equivalent to cost sharing under Medicare FFS. If the difference was higher than a tolerance amount- the greater of 50 cents or 5 percent of FFS cost sharing- the benefit package was identified as likely to be discriminatory and plans were instructed to modify the cost sharing in the bid pricing tool submitted to CMS.

Different Process

The 2010 contract year process differs from the process for previous years in key ways. For contract years 2008 and 2009, a plan with cost sharing that exceeded CMS thresholds for one or more selected services but with an OOP maximum at or below the amount specified in CMS's Call Letter was not considered likely to be discriminatory because the OOP maximum would limit beneficiaries' OOP costs. If a plan had cost sharing for one or more selected services that exceeded the CMS thresholds and did not have an OOP maximum or if the OOP maximum was above the amount specified in the Call Letter, CMS considered the plan likely to be discriminatory. In prior years, CMS also considered MA plan stability grades that assessed whether plan cost sharing amounts differed substantially from one year to the next. According to CMS officials, these grades were implemented because beneficiaries were often unaware of plan benefit changes from one year to the next and CMS wanted to identify plans that were making significant changes to their benefit packages. However, CMS did not use the stability grades to determine if a plan was likely to be discriminatory and is not using plan stability grades in the new review process.

In contract years 2008 and 2009, CMS generally set thresholds based on cost sharing under Medicare FFS, not at amounts that were relative to all MA plans' cost-sharing amounts. For example, for contract year 2008 CMS set the MA cost-sharing threshold for Part B drugs at 20 percent coinsurance, equivalent to that under Medicare FFS. The methodology CMS used in contract year 2010 resulted in thresholds that allowed higher cost-sharing amounts for some services than those applicable in contract year 2009. For example, among plans without an OOP maximum or one above the amount specified in the 2010 Call Letter, the copayment allowed for a typical inpatient mental health stay doubled from \$61 to \$130 per day and the copayment allowed for a typical SNF stay increased from \$53 to \$70 per day. For other services that CMS reviewed for discriminatory cost sharing, new thresholds allowed cost-sharing amounts in contract year 2010 that were comparable or lower than those in contract year 2009. For plan

years beginning January 1, 2011, cost sharing for chemotherapy services, renal dialysis, and skilled nursing care may be no more than cost sharing in Medicare FFS (Pub. L. No. 111-148, § 3202, _Stat._ (2010)). The Part B chemotherapy drugs and renal dialysis cost-sharing thresholds for contract year 2010 were equal to the cost sharing charged in Medicare FFS. For MA plans without an OOP maximum, or with an OOP maximum above the amount specified in the 2010 Call Letter, the cost-sharing threshold for a 42-day SNF stay was less than the cost sharing charged in Medicare FFS for a Part A SNF stay. For MA plans with an OOP maximum at or below the amount specified in the 2010 Call Letter, the cost-sharing threshold for a 42-day SNF stay. For MA plans with an OOP maximum at or below the amount specified in the 2010 Call Letter, the cost-sharing threshold for a 42-day SNF stay. For MA plans with an OOP maximum at or below the amount specified in the 2010 Call Letter, the cost-sharing threshold for a 42-day SNF stay was \$359 more than the cost sharing charged in Medicare FFS for a Part A SNF stay. For example, the copayment allowed for a typical inpatient hospital stay was reduced from \$213 to \$175 per day and the cost sharing allowed for home health visits was reduced to zero.

Selection Process Revised

CMS Revised How It Selects Plans to Contact for Benefit Package Modifications; All Plans Met New Cost-Sharing Thresholds

Under the revised process, for contract year 2010 CMS contacted all MA plans identified as having benefit packages likely to be discriminatory- those that exceeded agency thresholds. In addition, all plans contacted subsequently reduced cost-sharing amounts to at or below agency thresholds. In contrast, in previous years, CMS did not contact all plans exceeding the thresholds and not all plans contacted reduced their cost-sharing amounts to equal to or below agency thresholds. In previous years, CMS's policy did not require disapproval of a plan benefit package if cost sharing was above CMS's cost-sharing thresholds.

CMS's new selection process is intended to ensure that all MA plans identified as likely to be discriminatory are contacted regarding lowering their cost sharing to meet the new thresholds. According to agency officials, of the 2,930 MA plan benefit packages submitted for contract year 2010, about 40 percent were identified as likely to be discriminatory. CMS staff contacted all of those plans about complying with cost-sharing thresholds, and all plans subsequently reduced cost-sharing amounts to at or below the new thresholds. Of the 1,719 MA plans included in this analysis for contract year 2010, 35 had cost sharing that appeared to exceed CMS's thresholds. Agency officials commented that these plans had extenuating circumstances or other financial protections for beneficiaries enrolled in those plans.

However, if CMS had applied the contract year 2009 review methodology- with its lower thresholds for certain services- to the plans submitted for contract year 2010, approximately 38 percent of the plans in the analysis would have exceeded cost-sharing thresholds. Data were analyzed for 2,899 MA plans that were offered in contract year 2008, 2,482 MA plans that were offered again in 2009, and 1,719 MA plans that were offered again in 2010 and they were maintained in their 2008 health groups. Some plans withdrew from the MA program, were terminated, consolidated, or split into multiple plans between contract years 2008, 2009, and 2010.

Cost Sharing Thresholds

In previous years, CMS approved some MA plans that did not meet its cost-sharing thresholds. For contract years 2008 and 2009, over one in four and nearly one in three plans, respectively, had cost sharing that exceeded one or more CMS thresholds. (See table 1.) The analysis indicated that the percentage of plans initially exceeding and remaining above one or more cost-sharing thresholds in those 2 years varied by plans' average beneficiary health status, as follows:

- Among the good health group of plans reviewed for contract year 2008, 39
 percent were initially identified as having cost sharing that exceeded CMS's costsharing thresholds and 33 percent were approved with cost sharing that
 exceeded CMS's cost-sharing thresholds, a decrease of 6 percentage points.
 The percentage of plans in the poor health group that exceeded CMS's
 thresholds prior to and after plans were approved also decreased by 6
 percentage points, from 20 percent to 14 percent.
- Among the good health group of plans reviewed for contract year 2009, 35 percent were initially identified as having cost sharing that exceeded CMS's cost-sharing thresholds and 29 percent were approved with cost sharing that exceeded CMS's cost-sharing thresholds, a decrease of 6 percentage points. The percentage of plans in the poor health group that exceeded CMS's thresholds prior to and after plans were approved decreased by 1 percentage point, from 38 percent to 37 percent.

Table 1: Percentage of MA Plans that Exceeded	CMS Cost-Sharing Thresholds
Contract Years 2008 and 2009	-

Contract year 2008	Percentage of plans that initially exceeded one or more CMS thresholds	Percentage of approved plans that exceeded one or more CMS thresholds
All plans (n=2,899)	34	28
Good health plans (n=1,254)	39	33
Average health plans (n=1,068)	35	30
Poor health plans (n=577)	20	14
Contract year 2009		
All plans (n=2,482)	37	30
Good health plans (n=1,050)	35	29
Average health plans (n=912)	38	29
Poor health plans (n=520)	38	37

Source: GAO analysis of CMS data.

Notes: Using CMS's 2008 plan-level risk score data by county, the health status of MA plans were categorized as good, average, or poor based on the average health status of their enrolled beneficiaries in the areas that they served. The services analyzed for contract years 2008 and 2009 included inpatient hospital stays, inpatient mental health stays, SNF stays, home health visits, renal dialysis, Part B drugs, Part B chemotherapy drugs, Part C premium, and Part C deductible. This analysis included 2,899 MA plans that were offered in 2008 and 2,482 MA plans that were offered again in 2009 and the plans were maintained in their 2008 health groups.

In contract years 2008 and 2009, CMS did not contact all plans initially found to have cost sharing that exceeded one or more thresholds. CMS primarily selected plans to contact for cost-sharing reductions from among those identified as likely to be discriminatory by considering (1) the number of services for which cost sharing exceeded the CMS threshold (2) how much the plan exceeded the cost-sharing threshold, and (3) how the plan's cost sharing compared with that of other MA plans within the same service area. In addition, CMS officials told researchers the process used to select plans for cost-sharing discussions in these years had the potential to be subjective: decisions were based on individual reviewers' evaluations of cost sharing and judgments about how much the cost sharing exceeded CMS's thresholds. Among the plans contacted for cost-sharing reductions in these years, CMS reported that some reduced their cost-sharing amounts, but they remained above the thresholds. For example, for contract year 2008, CMS reported that nearly half of the MA plans initially identified as likely to be discriminatory reduced cost sharing as a result of being contacted by CMS. Figures 17 and 18 show the review process for contract year 2010 and for contract years 2008 and 2009, respectively.

Figure 17: CMS's Process for Identifying Plans, 2010 With Cost Sharing Likely to Be Discriminatory and Contacting Plans for Cost-Sharing Reductions, Contract Year 2010



Source: GAO analysis of CMS documents and interviews

^aCMS reviews cost sharing for renal dialysis, Part B drugs, home health visits, inpatient mental health stays, and SNF stays if the plan has an OOP maximum at or below the amount specified in the annual Call Letter (\$3,400 for contract year 2010). If the plan does not have an OOP maximum or it is above the amount specified in the annual Call Letter, CMS reviews cost sharing for the five services listed above and for inpatient hospital stays, inpatient hospital catastrophic stays, physician mental health visits, Part B chemotherapy drugs, Part B radiology, DME equipment, DME prosthetics, DME supplies, and DME diabetes tests.

^bCMS does not consider an MA plan with cost sharing above the 75th or 95th percentile, but below Medicare FFS cost sharing, as likely to be discriminatory.

^cCMS analyzes MA plan bid pricing data on cost sharing for inpatient hospital care (including mental health), skilled nursing facility, home health, DME, and Part B drugs,

Figure 18: CMS's Process for Identifying Plans 2008 & 2009 With Cost Sharing Likely to be Discriminatory and Selecting Plans for Cost-Sharing Reductions, Contract Years 2008 and 2009



Source: GAO analysis of CMS documents and interviews

^aHigh-risk services where high cost sharing could be considered likely to be discriminatory include inpatient hospital stays, inpatient hospital catastrophic stays, inpatient mental health stays, SNF stays, home health visits, physician mental health visits, Part B drugs, Part B chemotherapy, renal dialysis, and DME cost sharing as reported in the bid pricing tool.