
Bringing Managed Care Incentives to Medicare's Fee-for-Service Sector

Christopher P. Tompkins, Ph.D., Stanley S. Wallack, Ph.D., Sarita Bhalotra, M.B.,
Jon A. Chilingirian, Ph.D., Mitchell P.V. Glavin, M.Sc., M.A., Grant A. Ritter, Ph.D., and
Dominic Hodgkin, Ph.D.

The Health Care Financing Administration (HCFA) could work with eligible physician organizations to generate savings in total reimbursements for their Medicare patients. Medicare would continue to reimburse all providers according to standard payment policies and mechanisms, and beneficiaries would retain the freedom to choose providers. However, implementation of new financial incentives, based on meeting targets called Group-Specific Volume Performance Standards (GVPS), would encourage cost-effective service delivery patterns. HCFA could use new and existing data systems to monitor access, utilization patterns, cost outcomes and quality of care. In short, HCFA could manage providers, who, in turn, would manage their patients' care.

INTRODUCTION

There is pressure to reform the Medicare program and to devise ways of controlling the growth rate in spending. Consequently, Federal policymakers face a basic question: Can the Government retain the insurance function (i.e., pooling financial risk) and actively manage the delivery of services, or should it transfer both functions to other organizations (e.g., health maintenance organizations [HMOs])? In this article, we propose a new approach to managing care for Medicare beneficiaries

in the fee-for-service (FFS) sector, called GVPS, which could stand alongside enrollment options like HMOs. The Government would select and monitor providers on the basis of quality and other criteria, and would continue to reimburse providers on a FFS basis. In addition, Medicare would give incentive payments for efficiency to these selected providers by comparing actual reimbursement rates per patient with target reimbursement rates.

In the traditional Medicare program, HCFA reimburses providers largely on a FFS basis. Like most health care payers, HCFA is working hard to improve performance by lowering costs and increasing accountability and value. Many of the Medicare payment reforms have been rate-setting mechanisms within the provider sectors: Diagnosis-related groups (DRGs) for hospitals, the fee schedule for physicians, etc. However, physicians are the key decisionmakers for most of the health care system. HCFA needs to create opportunities for physicians to make efficient substitutions across a full range of services, and hold them accountable for the total health service needs of their patients.

In both the FFS and capitated sectors, HCFA and providers can work at cross-purposes because expenditures for Medicare translate into revenues for providers. Under FFS, providers can foil attempts to control Medicare costs through ratesetting by increasing the volume and intensity of services provided. Under capitation, health plans can drive up Medicare costs by

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enrolling (and selectively retaining) beneficiaries whose average expected costs in the FFS sector would have been less than 95 percent of the average adjusted per capita cost (AAPCC).

In order to control aggregate Medicare spending, innovations must involve beneficiaries accounting for most of the dollars. Over two-thirds of Medicare reimbursements are spent on behalf of about 10 percent of beneficiaries (Health Care Financing Administration, 1995). Unfortunately, when Medicare gives financial risk to HMOs as an incentive to control costs, it also gives them financial incentives to avoid having unhealthy members in the plan. The FFS sector has the opposite incentives: treat the beneficiaries with the greatest health care needs, and produce more services in order to get more revenues.

Fortunately, many large physician organizations are acquiring experience in managed care through arrangements with other payers. Hence, they are building expertise that can be transferable to Medicare FFS patients. Many providers in the FFS sector could be "natural" managed care organizations, if financial incentives from Medicare were aligned with those of other payers. Examples include physician groups with compensation systems that reward high quality and efficiency, and integrated health systems that give physicians critical supports such as information systems and quick access to subacute facilities.

In research sponsored by HCFA, we have developed such an approach, based on GVPS, whereby Medicare could work with eligible physician organizations to manage their patients' care. In planning a demonstration of GVPS, we have worked with an advisory committee comprised of physicians and other managers at several physician groups located in different parts of the country. In addition, we have gathered Medicare claims data for patients

seen by these groups in order to analyze resource consumption at the provider level. Groups were defined at the corporate level, encompassing all of a group's physicians and their patients' Medicare claims. We summarized all Medicare utilization, both inside and outside the groups' own integrated delivery systems.

In this article, we consider current approaches to cost control for Medicare, as well as the conceptual underpinnings of managed care and its potential application to the Medicare FFS population. We propose methods for operationalizing the GVPS approach. (HCFA has not finalized a design for a potential demonstration of GVPS.) In addition, we present simulation results, including some sensitivity analyses, of how implementation of GVPS could affect Medicare program expenditures and financial outcomes for providers.

CAPITATION AND FFS INNOVATION

There is pressure to slow the growth rate in total Medicare expenditures and thereby postpone or avert insolvency (Board of Trustees of the Federal Hospital Insurance Trust Fund, 1995). Historically, financial incentives under FFS have contributed to higher growth rates in Medicare expenditures. HCFA already has underway various strategies for controlling Medicare reimbursements per beneficiary:

- Paying HMOs a fixed capitation equal to 95 percent of local average Medicare reimbursements per beneficiary (i.e., the AAPCC), which is intended to save the Medicare program 5 percent per HMO enrollee.
- Setting fixed prices per unit of service for hospital episodes, physician visits, etc. The prices are supposed to reflect technically efficient production of services.

- Bundling payments for a variety of related services in order to control expenditures within an episode of care.
- Setting target expenditure levels, or Medicare Volume Performance Standard (MVPS) Rates of Increase, for national aggregate physician reimbursements.

Under MVPS, the Federal Government adjusts the update factors for physicians' fees depending on whether aggregate national expenditure growth rates for Medicare-covered physician services meet the targets. The Government could expand this budgeting approach to other types of Medicare-covered services, such as inpatient hospitals, outpatient facilities, etc.

FROM MVPS TO MANAGED CARE

In this section, we describe some weaknesses in the current implementation of MVPS. Also, we discuss issues related to bringing managed care principles to Medicare's FFS sector.

Impetus for Reform

When MVPS was enacted (as part of the Omnibus Budget Reconciliation Act [OBRA] of 1990 [Public Law 101-239]), Congress acknowledged that refinements to the basic approach could be warranted, and specifically called for the development of options that would allow qualified physician groups to elect separate performance standards. Our research was begun in response to this request.

The national MVPS gives physicians weak economic incentives to be efficient because individual performance is aggregated with the rest of the Nation. All physicians are subject to the blanket penalties regardless of their relative efficiency. Thus, there are at least three problems with the current national approach to MVPS:

- Relatively efficient physicians are penalized to the same extent as inefficient physicians, which raises questions about equity.
- Changes in relative efficiency by individual physicians do not significantly affect national expenditure levels, which points to a lack of incentives to control volume and intensity of services.
- MVPS applies only to physician services, which represent only about 30 percent of total Medicare expenditures, and are growing at a slower rate than other service categories.

Consequently, it is not likely that the Federal Government will achieve a satisfactory balance of cost, access, and quality via MVPS. Financial incentives continue to encourage inefficiency, and Medicare payment rates for physician services could shrink relative to other payers. In response to the Congressional mandate and these identified weaknesses in MVPS, we have developed models that HCFA may test in demonstrations.

The proposed refinements continue to focus on physicians, not so much as "cost centers," but as key decisionmakers for total patient care. Thus, we propose measuring performance and applying financial incentives on the basis of total Medicare reimbursements, not just physician reimbursements. This would encourage physicians and managers of provider organizations to develop and expand operating strategies that encompass the full service needs of their Medicare patients. In addition, we describe related eligibility criteria for providers operating under the new incentive program.

Guidelines for Modifying Financial Incentives

Physicians, not patients, are more often the key decisionmakers when it comes to

utilization of high-cost services. But what are appropriate incentives for physicians in the FFS sector? We think these are appropriate guidelines:

- Providers who successfully manage their patients' costs and generate Medicare savings should be rewarded, as long as quality and appropriate access are safeguarded.
- Providers should not be penalized for treating patients who are less healthy than average. As much as possible, providers should not get "windfalls" or suffer losses due to the underlying health needs of their patient populations.
- Economic performance should be measured for the full scope of Medicare-covered services, rather than only physician services. This will permit and reward efficient substitution of lower-cost services.
- Economic performance should consider services by all providers, not just services delivered directly by the provider organization. This will account for services denied by one provider, but ultimately delivered by another.
- The incentive structure ought to create positive financial opportunities for providers that successfully manage their patients' care.
- Providers need not be subject to losses for failing to achieve Medicare savings. By trying to lower utilization, they face potential lost FFS revenues and they incur near-term costs associated with managed care interventions (patient education, systems support, etc.).

Patient Management

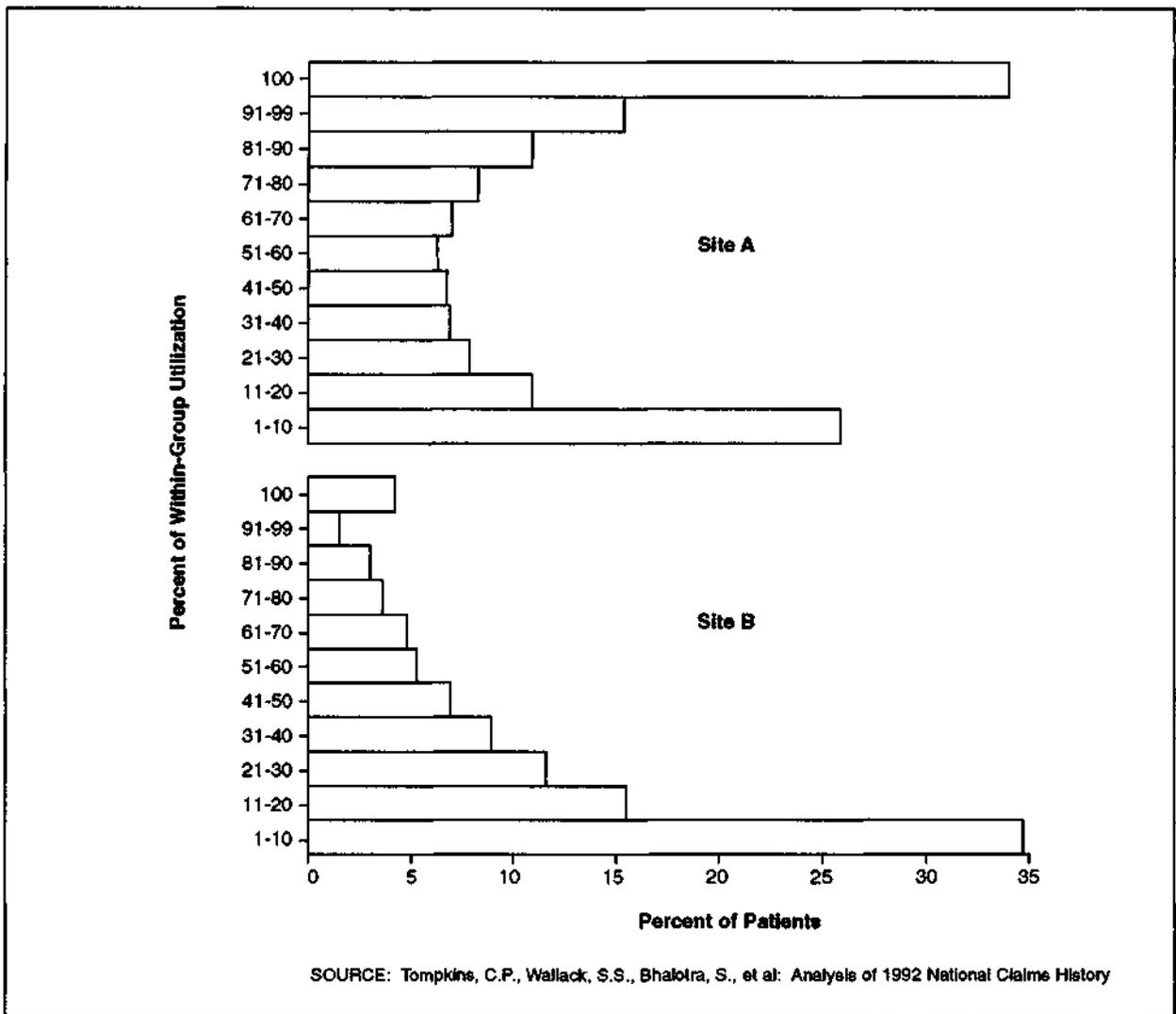
FFS providers are accustomed to managing their own practices, but FFS patients typically also receive services from multiple providers. In order to generate Medicare savings, physician organizations would have to control the volume and

intensity of their own services, and to influence the services their own patients receive from other providers.

For patients of a given physician organization who visit at least once during a year, we are able to observe the proportion of all Medicare reimbursements to that physician organization via Medicare's National Claims History file. Figure 1 shows two sample breakdowns of Medicare patients (horizontal axes) by the share of Medicare physician reimbursements that went to that particular physician organization (vertical axes). The provider on top (Site A) has a larger proportion of patients who received most of their Medicare services from that provider. In contrast, the provider depicted on the bottom (Site B) has relatively few patients with high proportions of Medicare reimbursements to the provider. These profiles can be affected by the composition of the organization (e.g., physicians, inpatient hospitals, home health, etc.), the numbers and types of physician specialties, the distance people travel for episodic care, and the level of competition in the area.

Table 1 shows several utilization statistics relevant to six physician organizations. The number of Medicare patients seen in 1992 by these sites ranged from about 25,000 to 75,000. The mean Reimbursements per Unique Patient Seen (RPUPS)—total Medicare reimbursements to all providers for care of a site's Medicare patients divided by the number of Medicare patients seen at that site—ranged from \$5,109 to \$9,660, and 95 percent confidence intervals ranged from ± 1.4 percent to 2.6 percent of the value of RPUPS. For five of the six sites, the value of RPUPS was higher than the estimated mean total Medicare reimbursements to all providers for a random sample of Medicare patients residing in the same areas served by the physician

Figure 1
Annual Within-Group Utilization of Physician and Supplier Services
by Medicare Patients



organization.¹ These differences, which range from 122 percent to 194 percent, confirm the financial hazards perceived by tertiary medical centers regarding enrolling their Medicare patients in risk contracts in which capitation rates are based on county AAPCC rates. The sixth organization had a

value of RPUPS similar to the local mean cost per Medicare patient (97 percent).²

The middle row of Table 1 shows values of the Patient Capture Ratio (PCR), which is defined as all Medicare reimbursements to the organization divided by all Medicare reimbursements to all providers for Medicare patients seen at least once by the organization's physician practice. Values of the

¹In conjunction with each of these organizations, we drew a sample of Medicare beneficiaries who received at least one Medicare-covered physician service during the calendar year, from among all beneficiaries who lived in any 3-digit ZIP Code area accounting for at least 5 percent of the organization's Medicare patients. These random samples each included between 10,000 and 15,000 beneficiaries.

²In most cases, a small percentage of patients in the random samples were also patients of the particular physician organization. The greatest overlap was for Site 6, with about 10 percent of the random sample also in that organization's patient population.

Table 1
Utilization Profiles of Six Physician Organizations (Sites)
and Local Comparison Beneficiary Samples

| Measure | Site 1 | Site 2 | Site 3 | Site 4 | Site 5 | Site 6 |
|---|---------|---------|---------|---------|---------|---------|
| RPUPS ¹ | \$6,763 | \$6,309 | \$7,065 | \$6,363 | \$9,660 | \$5,109 |
| 95 Percent Confidence Interval (Percent) ² | 2.5 | 2.6 | 1.6 | 1.4 | 1.7 | 1.6 |
| PCR ³ | 0.41 | 0.45 | 0.38 | 0.54 | 0.47 | 0.33 |
| Local Mean Cost ⁴ | \$5,566 | \$5,191 | \$5,231 | \$3,880 | \$4,976 | \$5,284 |
| RPUPS+ Local Mean Cost | 1.22 | 1.22 | 1.35 | 1.64 | 1.94 | 0.97 |

¹Reimbursements per Unique Patient Seen (RPUPS) measures the mean total Medicare reimbursements in 1992 to all providers for Medicare patients seen at least once that year by the physician organization (i.e., the site).

²This is the 95 percent confidence interval for the total Medicare RPUPS value for the site, which includes all aged, disabled, and end stage renal disease patients seen.

³The Patient Capture Ratio (PCR) is all Medicare reimbursements to the organization divided by all Medicare reimbursements to all providers for Medicare patients seen at least once by the organization. Each of these six organizations owned at least one hospital. The reimbursements to which are included in the numerator of the PCR, i.e., for Medicare patients seen at least once by the organization's physician group.

⁴The Local Mean Cost reflects mean total Medicare reimbursements per patient for a random sample of beneficiaries living in the geographic area served by the physician organization. This includes only beneficiaries who had a Medicare-covered physician service during 1992.

SOURCE: Medicare National Claims History file, 1992.

PCR ranged from 33 percent to 54 percent of Medicare reimbursements. Each of these six organizations owned at least one hospital. Medicare reimbursements to these facilities for patients of the physician organizations are included in the numerators of the PCR. Higher values of the PCR suggest greater control over patients' aggregate utilization, and therefore greater ability to manage patients' care. Organizations could increase the PCR by shifting utilization from outside to inside their systems, by expanding the scope of their networks to include providers already serving overlapping patient populations, or by focusing reductions in utilization outside their organization.

Provider Involvement

There are hundreds of thousands of physicians and physician practices in this country serving Medicare beneficiaries. All are accounted for under the national MVPS in two ways: reimbursements for all physician services are included in the national totals, and blanket fee penalties

affect national conversion factors for all physician practices. We propose that HCFA involve only qualified, selected physician organizations under GVPS, without varying the national conversion factors on a practice-specific basis. Rather, financial transactions related to GVPS, i.e., bonuses and penalties, would take the form of lump sum transfers between HCFA and each participating organization.

We have developed models to permit HCFA to differentiate among physician organizations in terms of relative efficiency and overall value for beneficiaries. In this section we address three factors related to this approach:

- Criteria for initially selecting providers to operate under GVPS.
- Terms of participation for qualified providers: voluntary versus mandatory.
- Rules affecting beneficiary involvement.

Criteria for Initial Selection

Along with financial incentives, managed care organizations often include approaches

to selecting and/or monitoring individual provider entities. This perspective has been largely lacking in the traditional Medicare program, with notable exceptions such as the "Centers of Excellence" demonstrations for procedure-based episodes of care. Under GVPS, physician organizations would be expected to manage the whole continuum of care for their patients, which presupposes certain types of expertise and attention to overall quality of care.

With the rise of managed care for the general population and for the Medicare population, many case-management and disease-management techniques have been developed. These include "upstream" prevention of disease, appropriate triaging and levels of care, efficient production of services, and followup for compliance and avoidance of subsequent acute episodes. More advanced organizations, clinically and managerially, are in a better-than-average position to implement managed care strategies for all of their patients, but they lack the resources and incentives to justify many of the changes.

The Federal Government could begin to assess the capabilities of individual physician organizations to serve FFS beneficiaries using managed care strategies. This will require explicit criteria for selecting providers that are best able to carry out this task. As part of the risk contracting process with HMOs, HCFA already has established criteria for evaluating and monitoring health care systems. Many of these criteria can be adapted to GVPS as well since the goals and methods are similar:

- Quality-assurance mechanisms to avoid, identify, document, and rectify problems associated with the process of care and/or patient outcomes.
- Utilization review systems, high-cost case management, and other relevant approaches to clinical management.

- A wide scope of services, permitting access to needed services and the opportunity to make efficient substitutions.

HCFA also requires a minimum enrollment size in an HMO before allowing a Medicare risk contract. Similarly, it would be necessary to specify minimum size thresholds for participating under GVPS—in terms of total Medicare reimbursements, number of Medicare patients, and/or number of physicians. Size thresholds would limit participation to providers with more reliable utilization performance measures, and limit the administrative burden associated with GVPS to a manageable number of practices with the greatest payoff for Medicare. From this perspective, it is noteworthy that over one-fifth (21 percent) of Medicare physician reimbursements are paid to only one percent of all physician practices, and the majority (57 percent) of Medicare physician reimbursements are paid to only 10 percent of all physician practices (Wallack et al., 1991).

An organization may meet criteria like these with existing systems and structural relationships, or by implementing new programs and strategic arrangements. Providers can pool their experiences and expertise to form larger systems that see more Medicare patients, provide a wider scope of services, and have better management systems. Since the goal is to focus incentives and responsibility on physicians, one or more physician practices must form the core of a qualified organization for GVPS. However, hospitals and other facilities may be included as components of a qualified organization.

Terms of Participation

If the demonstration under development is successful, the Federal Government may decide to "roll out" GVPS as a national program under Medicare at some point in the

future. The eventual broader application of GVPS could take either of two tracks: mandatory inclusion of all physician organizations that meet minimum criteria, or a voluntary opportunity for physician organizations that meet more stringent criteria.

Compared with the current national MVPS, mandatory inclusion under GVPS would likely represent a more focused and equitable application of financial rewards and penalties according to observed differential performance. Alternatively, opening GVPS to qualified organizations on a voluntary basis follows the congressional mandate to study ways for physician groups to elect separate performance standards, and would represent a transition for HCFA to work with selected providers in a manner similar to managed care organizations in the private sector. In either case, HCFA is likely to begin with a demonstration of GVPS, which presumably requires voluntary participation by providers.

An apparent advantage of mandatory participation is the ability to extract penalties directly from relatively inefficient providers. However, a mechanism would be needed for imposing the penalties, such as withholds on FFS payments, or differential conversion factors for organizations depending on past performance. There is also a more fundamental concern. Although we might expect providers to respond to the incentives by decreasing volume and intensity of services, there is little evidence or reason to believe these changes would be consistent with maintaining and improving high quality of care.

Interest in a voluntary program would have to be gauged for both providers and the Government. How interested would providers be to manage non-enrolled patients in the FFS sector? Although we have not posed that question formally to a representative sample of providers, the physician organizations on our advisory

committee generally support the concept and would accept the challenge. Presumably not all providers would have identical objectives or motivations, but we found the following reasons for their interest:

- FFS is attractive to many physicians. GVPS potentially creates a win/win/win situation for Government, providers, and beneficiaries, respectively; thereby potentially making FFS more competitive with other Medicare plans.
- Compensation for clinical efficiency. Many physician organizations are lowering their costs and the utilization rates of their patients, but often sacrifice revenues from FFS payers.
- Greater market share, by increasing the number of patients served and/or the scope of services provided. Demonstrated quality and value could help providers to attract new patients and keep current patients.
- Support for new strategic orientations. Many providers are adopting managed care mentalities. Medicare and other payers continue to reimburse on a FFS basis, and potentially impede this movement. For example, many organizations are involved in internal debates about how to reward physician performance through incentives in their compensation systems: should higher volumes of services lead to higher earnings, lower earnings, or neither?
- No requirement to bear insurance risk. Provider-sponsored organizations currently are prohibited from directly bearing full financial risk. Integrated provider organizations are looking for limited risk-bearing opportunities, and GVPS could be one such opportunity.

In summary, many providers are seeking ways to defend or increase their market share by efficiently managing the vol-

ume and intensity of services. HCFA could reinforce these initiatives and encourage similar efficiencies for Medicare FFS patients. Since a large majority of physician practices are relatively small (in terms of Medicare patient volume and number of physicians), most providers would have to pool their efforts in order to meet important criteria for GVPS relating to size and/or scope of services.

Voluntary participation could be desirable for the Government because HCFA and selected providers could work together to improve the cost-effectiveness of utilization patterns. As is common with PPOs, HCFA could initially select qualified physician organizations, monitor performance, and drop organizations that fail to demonstrate a track record of superior performance based on quality and efficiency. In addition, HCFA could encourage Medicare beneficiaries to use GVPS organizations. This would shift service volume away from average providers and toward more efficient organizations that are "preferred" or at least subject to separate monitoring under GVPS.

On an ongoing basis, HCFA could monitor and "re-qualify" provider organizations. Reports on groups would acknowledge economic outcomes, as well as quality and access measures. Examples of the latter include Health Plan and Employer Data Information System-type measures (e.g., the percentage of diabetic patients who receive eye exams each year), ambulatory-care-sensitive admissions (e.g., ruptured appendix, cellulitis, malignant hypertension, diabetic coma, and asthma), and referral-sensitive procedures (e.g., coronary angiography, non-invasive carotid imaging, and colonoscopy). In addition, organizations could report to HCFA other quality performance measures using their internal data systems.

It is possible that providers monitored separately under GVPS, individually

and/or collectively, would have outperformed average provider performance even without GVPS. This could happen with either mandatory or voluntary participation if eligibility criteria correlate positively with expected performance. The option to volunteer adds the potential for organizations to self-select according to their own expected performance. By doing nothing different, they could become eligible for extra payments.

Under a voluntary approach, selection criteria should include acceptable "action plans" by participating providers that describe the managed care interventions that will occur under GVPS. This would eliminate the "do nothing" scenario and, at the same time, cause organizations to incur implementation costs. Nevertheless, there are different potential sources of lower Medicare FFS billings: changes induced by new incentives under GVPS, and efficiencies due to other factors (e.g., competitive pressures). In practice, distinguishing between these sources would be difficult or impossible. However, giving bonus payments to providers based on their total observed Medicare savings is consistent with our objectives for GVPS. Specifically, we want to create new incentives for physicians to manage their patients' utilization. We also want to improve equity for providers by rewarding those contributing to lower growth rates in Medicare expenditures, and focusing penalties more on those contributing to higher growth rates. To avoid any possibility of overall Medicare expenditures becoming higher under GVPS, the Government could finance bonuses to GVPS groups through blanket reductions in payment rates for all providers.

Beneficiary Involvement

GVPS is a FFS innovation, and as such there is no enrollment process in which a

beneficiary accepts or rejects involvement. Beneficiaries seen by GVPS organizations would retain the right to receive services from the provider(s) of their choice. Under GVPS, the participating organizations would likely implement disease-management systems, enhance service integration, etc. A beneficiary would be free to reject any specific intervention, such as the efforts of a case manager or the advice of a coordinating physician. Under a demonstration, beneficiaries would be notified of the organization's participation.

GVPS could reduce patients' total costs because reducing the volume and intensity of services through prevention and clinical management also could reduce total out-of-pocket costs. In addition, organizations could elect to underwrite most or all of the cost of certain extra benefits in order to enhance patients' loyalty, treatment compliance and quality of care. As in some other payment demonstrations, HCFA might prefer to require providers to accept assignment, i.e., to not bill patients for revenues beyond Medicare's fees.

HMOs often have low deductibles and copayments within the network, but have substantial (often 100 percent) copayments for services outside the authorized network. GVPS need not affect the deductibles or copayment rates for Medicare-covered services. However, as part of a longer-run strategy to shift volume to more efficient providers, the Federal Government might decide to lower copayments for these selected providers, and possibly work through Medigap insurers to arrange reduced premiums for subscribers who use "preferred providers," i.e., GVPS sites.

THE PAYMENT INTERVENTION

We are proposing a hybrid system for Medicare that would use a novel approach

to simultaneously draw upon many of the strengths of FFS and managed care. The approach is named after a key component of the model, GVPS, which are reimbursement targets for providers that pertain to their Medicare FFS patients. Under GVPS:

- The Federal Government would retain the main function of insurance, i.e., pooling funds and risk across people within the entire insured population.
- Beneficiaries would retain the freedom to choose providers.
- Medicare would continue to reimburse providers for services they deliver, using applicable payment policies, including the fee schedule for physician services, the hospital prospective payment system, etc.
- Similar to PPOs, HCFA would select organizations using criteria related to quality and efficiency. Participating providers would be at limited financial risk.
- Similar to HMOs, Medicare would give qualified providers positive financial incentives, in the form of bonus payments, for managing patients' utilization. There would be no bonus payments unless there were demonstrated Medicare savings.
- HCFA would work actively with qualified physician organizations to manage utilization patterns and improve the quality of care for their Medicare patients.

This section describes the important steps for implementing an approach based on GVPS:

- Measuring utilization at the organizational level.
- Measuring Medicare savings.
- Calculating rewards and penalties.

The Utilization Measure (RPUPS)

To estimate expected costs for HMO risk enrollees, HCFA begins with county average

reimbursement rates (i.e., the AAPCC). Under GVPS, we instead would begin with a measure of historical average reimbursement rates for Medicare patients seen by the physician components of the GVPS organization. This reflects all the unique circumstances for that organization and its patient population, including relative efficiency and health status. The specific measure, called RPUPS, is defined as follows:

$$RPUPS_{j,y} = (MR_{j,y} + ED_{j,y}) \times 365$$

where:

$$MR_{j,y} = \sum_i^N mr_{i,y}$$

and

$$ED_{j,y} = \sum_i^N ed_{i,y}$$

where N is the number of unique beneficiaries i involved in GVPS at the organization j during calendar year y ; $mr_{i,y}$ is the sum of Medicare reimbursements to all providers for beneficiary i during year y ; and $ed_{i,y}$ is the number of days in year y that beneficiary i is eligible for services under the Medicare FFS program.

Thus, RPUPS is the annualized mean Medicare reimbursements, per patient-day of Medicare eligibility, for beneficiaries seen by an organization during a particular year. This will account for circumstances during the course of a year where a beneficiary was not eligible for Medicare or was a member of an HMO. During such periods of Medicare FFS ineligibility, the GVPS organization could not be generating savings in the Medicare FFS sector. Thus, these periods are excluded.

One pertinent question is whether an organization's RPUPS changes so much from 1 year to the next that its value for any given year appears unreliable and therefore unusable. We operationalized this question by comparing the rate of change

in RPUPS between consecutive years for a sample of physician practices to market-wide rates of change in reimbursements per Medicare beneficiary.

We found that reimbursements to a physician practice can be unstable from year to year for randomly selected small and medium-sized practices, but that changes may average less than 5 percent for practices providing services to more than 1,400 Medicare patients per year (Wallack et al., 1991).³ Using all Medicare reimbursements for patients seen, more than one-half of selected primary-care medical practices—with an average of 500 Medicare patients per practice—had changes in RPUPS from 1 year to the next that were 10 percent or lower (Tompkins et al., 1992). These results were not adjusted for year-to-year differences in case mix.

Performance Standards

Setting performance standards or targets involves the following steps:

- For a GVPS organization j , measure RPUPS for the base year b ($RPUPS_{j,b}$).
- Adjust the base-year RPUPS to reflect the geographic distribution and health status distribution of Medicare patients seen in the relevant performance year p . This is the base ($BASE_{j,p}$) for the target.
- Inflate the adjusted base-year RPUPS (i.e., $BASE$) to the performance year p using a population-wide Standard Growth Rate ($SGR_{j,p}$) in Medicare spending per beneficiary, based on beneficiaries' residence locations. Computation of SGRs could depend in part on county level statistics used by HCFA to generate AAPCC rates, or trends calculated from selected beneficiary samples.

³The majority of physicians see smaller numbers of Medicare patients in a year. Large group practices often see thousands or tens of thousands of Medicare patients in a year.

Thus, an organization's target for a performance year is determined as:

$$TARGET_{j,p} = BASE_{j,p} \times SGR_{j,p}$$

The following sections describe the adjustments to RPUPS, and the standard growth rates.

Adjustments to the Base-Year RPUPS

The observed RPUPS for each year would be compared with the performance standard. To enhance the validity of the comparisons, we would alter the performance standard by adjusting the value of RPUPS in the base year. Three types of adjustments could be useful:

- Changes in the average health status of patients seen by the provider.
- Changes in the geographic distribution of patients' residences.
- New Medicare payment policies that disproportionately affect that provider.

There should be adjustments for differences in the health status distributions of patients seen in the base year and performance year because patient mix is an important determinant of RPUPS. One factor is any change in the relative proportions of aged, disabled, and end stage renal disease (ESRD) patients, which is readily observable. Another factor is any change in the mix of illnesses in the patient population. There are several diagnosis-based risk classification systems being developed for Medicare capitation that could be applied under GVPS. The value of RPUPS in the base year, and hence the current performance standard, would be adjusted to reflect expected Medicare costs if the provider had seen the same case mix in the base year as occurred in the performance year.

Although perhaps less critical, we propose additional adjustments for differences

in the geographic residence distributions of patients in the base year and performance year. RPUPS includes reimbursements to all providers, and over time an organization might serve changing proportions of patients from high-cost or low-cost areas, which in itself could affect observed levels of RPUPS. As patient populations tended to come from higher (lower) cost areas, we would inflate (or deflate) the performance standard to reflect the different expected Medicare costs.

Finally, there might be adjustments for any changes in Medicare payment policy that affect the organization's circumstances substantially compared with the comparison populations. Examples could include the elimination of special procedure codes, or changing a provider's official geographic area from urban to rural status. These adjustments could be accomplished by simulating their effects on the value of RPUPS in the base year.

Comparison Growth Rates

For each performance year, we would calculate targets or volume performance standards for each organization. As with the AAPCC, we would inflate the value of RPUPS in the base year to reflect average growth rates using actual observed growth rates for comparison Medicare FFS populations. Performance standards would be updated cumulatively from the level of RPUPS observed in the base year, without regard to actual intermediate values of RPUPS for an organization. Applying updates to actual RPUPS in the previous (performance) year would effectively "rebase" the target, forcing an organization to compete against its own earlier successes under GVPS. Cumulative targets also act as a deterrent to participation among poor performers because we would require them to overcome earlier failures

as well as beat the annual update, in order to qualify for any bonuses.

The national growth rate in Medicare expenditures is an average across all regional and local rates of increase, which can vary substantially. Simply ignoring regional differences could result in “artificial” savings estimates for organizations in low-growth areas, and relatively difficult performance standards in high-growth areas. Accordingly, we would calculate the weighted average of mean Medicare per capita reimbursement rates for the locations represented by each organization’s patient population. This would be carried out for the base year and again for each performance year, using the proportion of dollars in RPUPS as the weighting factor. The ratio of the weighted means for the relevant performance year to the base year is the standard growth rate, i.e., the average performance to which an organization would be compared.

For example, the Medicare patient population of a GVPS organization might live in a combination of counties and States that have an average total Medicare reimbursement rate of \$5,000 in the base year. Those same areas might have an average total Medicare reimbursement rate of \$5,250 in the performance year. This results in an SGR of 5 percent ($5,250 \div 5,000 = 1.05$). The organization’s target would be 1.05 times its own adjusted base-year RPUPS (i.e., the BASE).

Medicare Savings

We would determine the Medicare Savings (MS) generated by each organization participating under GVPS by comparing the actual total reimbursements for patients in the performance year to target levels. We would multiply the difference per patient times the number of Medicare patients seen by the organization in the performance year, weighted by the fraction

of the year each beneficiary was eligible for Medicare under FFS.

$$MS_{j,p} = (TARGET_{j,p} - RPUPS_{j,p}) \times BY_{j,p}$$

where $BY_{j,p}$ is the number of beneficiary-years of Medicare eligibility in organization j ’s patient population in year p , that is:

$$BY_{j,p} = \sum_i^N (ed_{i,p} + 365)$$

For each organization, we also would calculate Cumulative Medicare Savings (CMS), which is the sum of positive and negative values of yearly Medicare savings since the onset of the organization’s involvement under GVPS.

If the value of Medicare savings is positive, the organization has demonstrated improvement in relative efficiency. If the value is negative, the organization has performed worse than average in terms of growth in reimbursement rates. A value of zero means the organization exactly met its target; in other words, the growth rate in reimbursements per Medicare patient seen by the organization corresponds to the average. These outcomes are important for determining potential rewards and penalties for each organization.

Rewards and Penalties

The GVPS approach would reward successful organizations by giving lump sum payments based on the level of Medicare savings. We wish to guard against giving unjustifiable reward payments, which could arise, for example, from occasional fortuitous years in a pattern that otherwise does not exhibit success. Therefore, the value of rewards will be affected by an organization’s particular circumstances:

- We would recommend that reward payments to a GVPS organization be accrued

only in years in that it has demonstrated positive Medicare savings. One-half of the reward amount would be paid at that time, and half deferred for 1 year, with payment pending performance outcomes the following year.

- For any year in which RPUPS exceeds the performance standard, the organization would accrue a penalty. Specifically, any deferred reward payment from the previous year would be reduced or eliminated, and any accumulated deficit would be charged against future rewards.

Each year, the value of the accrued reward (+) or penalty (-) would be:

$$REWARD_{j,p} = MS_{j,p} \times PCR_{j,p} \times SR_{j,p}$$

where *MS* is as defined previously; *PCR* is the Patient Capture Ratio, which is the sum of all Medicare reimbursements to organization *j* during the year *p* for Medicare beneficiaries *i* included in RPUPS (*mrorg*), divided by the sum of all Medicare reimbursements to all providers for those beneficiaries, *mr*:

$$PCR_{j,p} = \left(\sum_i^N mrorg_{j,p} \right) + \left(\sum_i^N mr_{j,p} \right)$$

SR is the Sharing Rate that further specifies how much of the Medicare Savings in year *p* accrue to organization *j* as a reward. The following example illustrates these concepts and steps. Assume a constant PCR of 0.4 and an SR of 0.75:

- An organization has positive Medicare savings of \$100,000 in Year 1, negative savings of \$200,000 in Year 2, and positive savings of \$300,000 in Year 3.
- After calculating results for Year 1, HCFA would pay the organization the first installment (i.e., one-half) of the reward, that is valued in total at

\$30,000 ($\$100,000 \times 0.4 \times 0.75$). The same amount (i.e., \$15,000) is deferred for a year.

- After calculating results for Year 2, HCFA would not owe any reward for that year. Moreover, the second installment from Year 1 would be lost because the negative reward (i.e., the penalty) would equal -\$60,000 ($-\$200,000 \times 0.4 \times 0.75$). This would reduce the net accrued penalty to -\$45,000, which would then be carried forward.
- After Year 3, the annual formula would suggest a reward of \$90,000 ($\$300,000 \times 0.4 \times 0.75$). However, the organization still owes \$45,000 after Year 2. Therefore, HCFA would pay one-half of \$45,000 ($\$90,000 - \$45,000$) and defer an equal amount (\$22,500) for 1 year.

Furthermore, the reward payment to any GVPS organization in 1 year will not exceed 5 percent of the total Medicare reimbursements paid to that organization that year, including all its components under GVPS. For example, if Medicare pays a total of \$100 million for beneficiaries involved in GVPS at a particular site, and that organization accounts for half those Medicare reimbursements (i.e., PCR = 0.50), the reward payment to that organization cannot exceed \$5 million, regardless of the level of Medicare Savings. This is analogous to safeguards HCFA places on other managed care arrangements, such as the Adjusted Community Rate (ACR) for risk contractors. Organizations would simply forgo reward payments in excess of this limit.

The approach of GVPS is intended to encourage long-term managed care strategies by physician organizations. This financial incentive structure would allow Medicare to build lasting relationships with providers and reward long-term success, without undue effects from yearly variations in savings amounts. In this example,

after Year 3 the Cumulative Medicare Savings was \$200,000. If it had been negative, HCFA might require the organization to re-engineer its managed care interventions, or might drop the organization from eligibility for GVPS. If an organization is dropped or voluntarily withdraws from GVPS, HCFA may refuse or impose waiting periods or financial penalties for re-entrance in order to avoid simply rebasing an organization for higher targets.

Patient Capture Ratio (PCR)

The PCR is an important aspect of GVPS because it is included in the reward payment formula. One effect of the PCR is to prorate the rewards in accordance with the organization's share of its patients' Medicare reimbursements, and prevent HCFA from paying rewards more than once when multiple GVPS organizations serve overlapping Medicare patient populations. In addition, organizations have incentives to expand their definition to include institutional providers because this would increase the rewards paid to the organization and decrease the savings retained by Medicare. Such a strategic response should bolster coordination of services and enhance quality. Therefore, the Government could allow alliances, but specify conditions that should exist, such as:

- A physician component owns or shares a controlling interest in the particular facility.
- Another entity owns or shares a controlling interest in the particular facility and physician component(s) of the organization.
- A physician component has exclusive admitting privileges, or otherwise dominant influence with the particular facility.
- Including a facility is important to the community (e.g., sole sources in rural

areas), or for the coordination of services for Medicare patients.

When a provider is named as part of the GVPS organization, the organization must agree to monitor the quality and appropriateness of services received by their Medicare patients. Moreover, the organization must have financial arrangements in place with the subprovider that include the sharing of bonuses paid by Medicare under GVPS.

Sharing Rate (SR)

The other factor used in the reward and penalty formula is the SR, which determines what fraction of the prorated Medicare Savings is payable to the GVPS organization. Generally, an organization lowers its own costs when the volume and intensity of services are reduced. Hence, paying a fraction of the forgone revenues can lead to neutral outcomes with respect to net income. This break-even point will vary across organizations depending on their service mix and cost structures, and the source of the savings. For example, organizations with hospitals may differ from group practices alone. Further, hospitals would forgo Graduate Medical Education payments and Disproportionate Share revenues when hospital admissions are avoided.

Consequently, the value of SR might be negotiable. Ideally, HCFA could specify or negotiate values that balance the competing interests of Government and participating GVPS organizations. The illustrative value of 0.75 used in the example above and the simulations to follow might be higher than necessary for some organizations to participate and invest in cost-effective clinical management of their patients. However, through the application of the PCR and an SR of 0.75 to Medicare savings estimates, the Medicare pro-

gram would retain the large majority of Medicare savings.

Financing Reward Payments

It is important that GVPS does not increase overall Medicare spending. The Federal Government could set aggregate budgets for the Medicare program as a whole and implement methods for staying within those budgets, analogous to the current MVPS. We believe that GVPS could lead to lower aggregate Medicare expenditures, but the magnitude of savings would depend in part on the methods used to finance bonus payments to participating organizations. We have considered two basic options for financing rewards:

- The Federal Government could finance rewards by reducing its retained savings. For aggregate budget purposes, all providers would be credited with the aggregate savings attributable to GVPS. In other words, the Government would decide fee updates based on the actual national expenditures. All providers would benefit to some degree from the successes of GVPS organizations.
- The Federal Government could finance rewards by lowering fee updates to all providers. This would allow Medicare and the GVPS organizations to benefit from the savings, but the remainder of the provider population would bear the brunt of any penalties imposed if national expenditures exceeded aggregate performance standards, or reductions imposed to finance the bonus payments.

The simulation results that follow assume the latter approach. That is, Medicare would reduce updates for PPS payments, physicians' fees, etc., in order to stay within aggregate budget levels. For budget and rate-setting purposes, the

Federal Government would act as if GVPS organizations had exactly met their targets. Actual Medicare savings would be shared by Medicare and the organizations according to the formulas described above.

SIMULATIONS OF GVPS

We simulate the economic consequences of implementing GVPS on three parties: Medicare, GVPS organizations, and other providers. Economic consequences result from changes in total Medicare reimbursements for applicable services, plus any reward payments. The simulation model concerns the specific effects of GVPS on reimbursements for all Medicare services (Parts A and B) over a time frame of 5 years.

The simulation approach required a base GVPS scenario, that could then be varied to analyze sensitivity of the results. The base case GVPS scenario includes assumptions about the Medicare environment (including its broad dimensions and trends), GVPS policy parameters, and factors related to providers. Granted, some assumptions are necessarily speculative since they involve future Medicare trends, policy decisions that are not final, and typical characteristics and behavioral responses of eventual GVPS providers. Nevertheless, we conducted simulations to help facilitate understanding how GVPS might unfold as a policy option. The assumptions are as follows:

Medicare Environment

- 30 million beneficiaries use services each year.
- GVPS groups see 10 percent of all Medicare patients.
- \$156 billion in Medicare spending for all services.
- Cost inflation factor grows 5 percent annually for the 5 years.

- Volume performance standard for all services allows for 10 percent growth in service volume annually.

GVPS Policy Parameters

- Medicare Savings under GVPS are the difference between actual payments for services to patients seen by GVPS groups and projected payments in the absence of GVPS.
- Sharing Rate: GVPS groups get rewards equal to 75 percent of their share of the savings (i.e., Medicare Savings \times Patient Capture Ratio \times 0.75).
- Target rebasing: none over the 5-year period.
- The fee update factor is equal to the cost inflation growth rate, less the cost of GVPS reward payments.

Provider Characteristics

- For patients seen by GVPS groups, the base year RPUPS = \$7,000. For patients never seen by GVPS groups, the base year RPUPS = \$5,000. Large, multispecialty group practices that are part of integrated systems are likely candidates for GVPS. Because of the tertiary and subspecialty services they provide, their patients are likely to be sicker and more expensive than average.
- GVPS groups provide directly 40 percent (in dollars) of all Medicare-covered services that their patients receive. This is representative of many provider organizations we have studied.
- The volume of services provided to patients never seen by GVPS groups grows 10 percent annually, with and without GVPS. Therefore, providers outside of GVPS will match the expected growth rate. In large part, this defines the year-to-year targets for GVPS providers.⁴
- In the absence of GVPS, the volume of

services provided to patients seen by GVPS groups would have grown 7.5 percent annually, for utilization within the organizations' own systems, and 8 percent annually, for utilization outside the organizations' own systems. Thus, we assume a tendency for HCFA to select GVPS providers that manifest somewhat lower growth rates than others. Lower growth rates could result from spillover effects of these groups' managed care strategies that are focused on other patient populations, or characteristics that make them attractive as GVPS sites (strong clinical management, internal incentives for cost-effective utilization patterns, etc.) This assumption is not necessary, but serves to illustrate potential multiple causes of observed Medicare savings. Furthermore, it provides a context for the assumptions about actual growth rates under GVPS.

- With GVPS, the volume of services provided to patients seen by GVPS groups would have grown 6.5 percent annually, for utilization within the organizations' own systems, and 7.6 percent annually, for utilization outside the organizations' own systems. This is an assumption that reflects a GVPS-induced lowering of the growth rate.
- Under GVPS, groups realize a one-time, 7 percent reduction in RPUPS that continues to manifest in each performance year. Strategic behavioral responses to the new incentives under GVPS should result in immediate, not just longitudinal, effects on reimbursements per patient. This assumes that GVPS creates a new environment that reflects more of a managed care mentality; thus, results could reflect immediate but lasting changes in the structure or process of care.

⁴We mention for comparison purposes that the national average Medicare capitation rates increased by 10.1 percent between 1995 and 1996.

Table 2 presents results of the simulation for a base case scenario, and contrasts them with projected results in the absence of GVPS. We assume that GVPS groups see 10 percent of beneficiaries that use services, realize lower utilization rates, and experience a slower-than-average rate of growth. Under GVPS, participating groups lose \$1.988 billion in FFS reimbursements in Year 5 (12.92 percent of what they would have received without GVPS). This loss is more than offset by a reward of \$2.509 billion for their success in meeting targets. With the reward, the groups are 3.38 percent better off with GVPS than without. The non-GVPS providers also face lower reimbursements under GVPS, but the losses are spread over a much larger base, and therefore only account for 2.73 percent of their Year 5 reimbursements without GVPS. Finally, Medicare saves 2.44 percent of total program reimbursements for Year 5 with GVPS (\$7.709 billion), since higher payments to groups under GVPS are more than offset by lower payments to many other providers.

Table 3 examines the sensitivity of our

results to various changes in the policy parameters. It may be seen that increasing the sharing rule from 75 percent to 95 percent reduces slightly the total payments by Medicare in Year 5. However, it increases the groups' gain from implementation of GVPS, from 3.38 percent to 7.18 percent above their reimbursement total without GVPS.

Of greater importance is the rebasing rule, i.e., whether growth rates are applied to last year's actual value of RPUPS or to last year's target level. The use of annual rebasing would make GVPS a money-loser for the groups, reducing their revenues 9.64 percent below the GVPS base case fifth year amount of \$15.912 billion. This reflects the ratchet effect of continually adjusting targets based on actual performance. However, the groups' loss in this case is not a gain for Medicare. Instead, the benefits accrue to non-GVPS providers, who receive higher updates (and therefore smaller revenue losses) than they would otherwise. This is because rebasing reduces measured savings, and therefore reduces the rewards to GVPS groups that would otherwise be

Table 2
Distribution of Payments With and Without GVPS Scenario: GVPS Base Case¹

| Payments in Year 5 | Scenario | | Difference (Percent Change) With GVPS |
|--------------------------------------|-----------------------|----------|--|
| | GVPS | No GVPS | |
| | (Millions of Dollars) | | |
| Reimbursements to GVPS Groups | \$13,403 | \$15,391 | -1,988 (-12.92) |
| Reward Payments to GVPS Groups | 2,509 | 0 | 2,509 |
| Total Group Income | 15,912 | 15,391 | 521 (+3.38) |
| Reimbursements to Non-GVPS Providers | 292,887 | 301,116 | -8,230 (-2.73) |
| Total Payments by Medicare | 308,798 | 316,507 | -7,709 (-2.44) |

¹GVPS groups see 10 percent of beneficiaries that use services in every year.

NOTE: GVPS is group-specific volume performance standards.

SOURCES: Medicare National Claims History file, 1992; additional research by Tompkins, C.P., Wallack, S.S., Bhalotra, S., et al.

Table 3
Effect of Varying Program Impacts on Payments Under GVPS

| Scenario | Varying Assumptions | | | | Payments in Year 5 | | | Percent Change From No GVPS | | |
|-------------------------|---------------------------------|----------------------------|--------------------------|----------------------------------|-----------------------|-----------|-----------|-----------------------------|--------|-------|
| | Groups' Utilization Growth Rate | Annual Increase in Capture | Groups' Share of Savings | Annually Rebase Groups' Targets? | To | To Others | Total | Groups | Others | Total |
| | | | | | Groups | To Others | Total | Groups | Others | Total |
| | Percent | | | | (Millions of Dollars) | | | | | |
| No GVPS | — | — | — | — | \$15,391 | \$301,116 | \$316,507 | — | — | — |
| GVPS Base Case | 6.5 | 0 | 75 | No | 15,912 | 292,887 | 308,798 | 3.38 | -2.73 | -2.44 |
| Variants | | | | | | | | | | |
| Vary Savings Share | 6.5 | 0 | 95 | No | 16,497 | 291,401 | 307,898 | 7.18 | -3.23 | -2.72 |
| Vary Rebasing Rule | 6.5 | 0 | 75 | Yes | 13,907 | 296,665 | 310,572 | -9.64 | -1.48 | -1.88 |
| Vary Utilization Growth | 4.5 | 0 | 75 | No | 15,648 | 291,570 | 307,218 | 1.67 | -3.17 | -2.93 |
| Vary Capture Growth | 6.5 | 2 | 75 | No | 19,900 | 288,593 | 308,494 | 29.30 | -4.16 | -2.53 |

NOTE: GVPS is group-specific volume performance standards.

SOURCES: Medicare National Claims History file, 1992; additional research by Tompkins, C.P., Wallack, S.S., Bhalotra, S., et al.

financed through lower updates.

If the groups reduced their volume growth to 4.5 percent instead of 6.5 percent used in the base case, they would increase their income in Year 5 by 1.67 percent of the level the groups would receive if there were no GVPS. The income gain is smaller than the 3.38 percent achieved in the GVPS base case scenario. This suggests that the additional rewards for curbing utilization more tightly are ultimately outweighed by the loss of FFS reimbursements. Using the 4.5 percent growth assumption, Medicare would save 2.93 percent of Year 5 payments without GVPS, compared with 2.44 percent savings in the GVPS base case with 6.5 percent utilization growth.

Alternatively, if the GVPS groups increased their PCR by 2 percent per year in addition to achieving the baseline utilization savings for Medicare, they would greatly increase their FFS reimbursements. In this variation, the groups' revenues in Year 5 would be 29.3 percent higher than without GVPS. For Medicare, this scenario results in a 0.09 percentage point larger payment reduction than the GVPS base case because care is being transferred from non-GVPS to GVPS group providers, who are presumed to better control utilization growth. Furthermore, if GVPS groups were to see 25 percent of all beneficiaries, Medicare payments in Year 5 would be approximately \$19.8 billion below their projected level with no GVPS program. This would represent a 6.38 percent savings for Medicare overall.

CONCLUSIONS

Federal policymakers are grappling with how to reduce the rate of growth in Medicare expenditures. One option is to

put Medicare beneficiaries into restricted systems like HMOs and transfer financial risk and responsibility to private health plans. If that does not happen, we will continue to have a sizable Medicare FFS population with free choice of provider. Our hybrid approach, based on GVPS, would encourage providers to develop and implement managed care techniques for their aged, disabled, and ESRD patients. GVPS providers would have financial incentives to take responsibility for coordinating the care for their patient populations.

We hypothesize that Medicare could achieve greater savings from GVPS than from the capitation system:

- First, the chances of Medicare losing money are less under GVPS because the performance standards are based on the experience of the group. In contrast, capitation embodies "performance standards" that may have little correspondence to actual enrollees. Although there is always error associated with estimating expected costs, the experience of a group's own patients may be a more valid basis than the experience of other providers' patients.
- Second, the financial benefits of managing care can be shared more evenly under GVPS. The formulas for sharing the savings can give ample incentives and rewards to groups, yet still allow Medicare to benefit substantially. Under capitation, any savings to Medicare are capped at 5 percent of mean reimbursement levels. Under GVPS, Medicare can keep the majority of savings for patients seen by most groups.
- Third, under GVPS, groups have incentives to serve and manage expensive Medicare patients. Providers paid under FFS are encouraged to seek and retain patients most in need of services.

Capitated health plans have incentives to seek and retain relatively healthy members, not patients.

We believe physician groups are the optimal focal points for comprehensive and coherent Medicare payment policies, i.e., that link appropriate incentives to the responsible decisionmakers. Based on what we found, there are physician groups willing to accept the challenge. Accordingly, physician organizations should be given incentives for improving efficiency. These incentives could be in the form of rewards and/or penalties. Although penalties may strengthen incentives for efficiency, we believe that both initial and continuing interest in participation would be greatly reduced by the prospect of losing money. Failure to capitalize on an opportunity to manage care and earn rewards is itself a sufficient penalty. Similarly, rising above a cumulative target and thereby diminishing chances for future rewards is a form of penalty. Giving positive incentives similar to capitation, and allowing HCFA to share in the savings, could reap significant benefits for Medicare and participating groups. At the same time, beneficiaries will be at less risk of underservice than under capitation.

Our simulations and sensitivity analyses suggest that it would be useful for HCFA to test GVPS in demonstrations. Savings and rewards are highly variable depending on the final parameters of GVPS and provider behavioral responses. The first demonstrations will provide important experience with the many steps required to implement GVPS. Also, the demonstrations will allow HCFA to evaluate the determinants of appropriate rates of sharing the savings with GVPS organizations. There will be several sites participating, and HCFA will be able to study the aggregate savings amounts for each site (actual RPUPS versus the target), and the success or failure of specific interventions as delineated in each site's action plan.

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Reprint Requests: Christopher P. Tompkins, Ph.D., Institute for Health Policy, Heller Graduate School, Brandeis University, 415 South Street, Waltham, Massachusetts 02254-9110.