

Human Resources Division

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January 31, 1989

The Honorable Lloyd Bentsen
Chairman, Committee on Finance
United State Senate

The Honorable John D. Dingell
Chairman, Committee on Energy and Commerce
House of Representatives

The Honorable Dan Rostenkowski
Chairman, Committee on Ways and Means
House of Representatives



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Section 4017 of the Omnibus Budget Reconciliation Act of 1987 (P.L. 100-203) requires us to analyze and assess the data and methods used to compute the monthly capitation payments made to risk-contract health maintenance organizations (HMOs) for Medicare beneficiaries who enroll in them. As called for in the act, this is an interim report on the progress of our study to assess the Medicare HMO rate-setting methodology.

Background

→ The Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) authorized prospective per capita payments to HMOs under risk contracts at a rate equal to 95 percent of the average per capita cost Medicare would pay for similar beneficiaries who receive services under the traditional fee-for-service system. This is known as the adjusted average per capita cost (AAPCC) method. The Health Care Financing Administration (HCFA) within the Department of Health and Human Services is responsible for computing AAPCC payment rates. HMOs must meet all of the requirements of the Social Security Act for Medicare participation and all of the requirements of the Public Health Services Act for federal certification as an HMO. (SIC) 80

The current AAPCC method computes payment rates for each county based on the projected United States per capita cost (USPCC) adjusted for geographic differences in fee-for-service costs and a set of risk factors, such as age and sex. HMOs are required to compute an adjusted community rate (ACR), which is an estimate of the premium the HMO would have charged Medicare enrollees for the Medicare benefit package based on its premium-setting policies for the non-Medicare portion of its business. HMOs must apply any excess of their AAPCC payments over their ACRs to additional benefits for Medicare enrollees or accept reduced Medicare payments.

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Section 4017 calls for us to make a comprehensive assessment and analysis of the rate-setting methodology for risk-contract HMOs. In particular, we are to study

- the current method of computing per capita rates (including the method for determining the USPCC);
- the method for establishing relative costs for geographic areas and the data used to establish age, sex, and other adjustment factors;
- ways to refine the calculation of adjusted per capita costs (including making adjustments for health status or prior utilization of services and improvements in the definition of geographic areas);
- the extent to which individuals enrolled in HMOs with risk contracts differ in utilization and cost from fee-for-service beneficiaries and ways for modifying enrollment patterns through program changes or for reflecting differences in rates through group experience rating or other means;
- approaches for limiting the liability of the contracting organizations in catastrophic cases;
- ways of establishing capitation rates on a basis other than Medicare fee-for-service costs in areas with high prepaid market penetration; and
- methods for providing the rate levels necessary to maintain access to quality prepaid services in rural or medically underserved areas while maintaining cost savings.

Main Issues Identified to Date

Our statutory mandate set forth in section 4017 covers a wide array of issues related to the implementation of the current rate-setting methodology, perceived problems with various aspects of the rate setting (e.g., biased selection), and possible alternative approaches to Medicare HMO rate-setting. Three broad areas of concern can be thought of encompassing all of these topics:

- The accuracy of the forecasted AAPCC rates.
- The appropriateness of tying HMO payment levels to county fee-for-service Medicare cost levels.
- The potential of the current capitation payment system to adversely affect Medicare, its beneficiaries, and HMOs.

This interim report provides an overview of these three areas and our planned approach for addressing them. Later reports will present the results of our analysis on selected topics.

Accuracy of Forecasted AAPCC Rates

Per capita payments to HMOs are directly tied to projected per capita Medicare expenditures in the fee-for-service sector. Because complete data on actual Medicare payments are generally not available until 3 years after a given time period, forecasts of future costs are made using relatively old data for the base period. Thus, the data must be inflated to account for price increases over time and adjusted for such factors as changes in utilization rates and patterns. Error can creep into the resulting forecasts because of error in the data inflation/adjustment factors. Such errors can occur at the national level, as well as at the county level. Errors in any forecasting scheme are, of course, to be expected, but improvements in the forecasting method may reduce their size. The search for improvements is important because of the potential consequences of inaccurate forecasts for the Medicare program. Overprediction of fee-for-service costs could result in losses to Medicare, while underprediction could reduce the level of participation by the HMO industry, thus limiting beneficiary access to the HMO alternative.

Specific issues we plan to address include the following:

1. How large a difference exists between the AAPCC payment levels based on forecasts of fee-for-service Medicare costs (using current methods) and the AAPCC payment levels that would have been set had fee-for-service costs been predicted with complete accuracy? If the current forecasting methodology produces estimates that are biased (systematic underprediction or overprediction) or have large variance, alternative approaches should be considered. Biased forecasts would result in losses to Medicare or the HMOs. Excessive variance increases HMO risk.
2. What is the relative contribution to the total error in county-level forecasts resulting from the USPCC forecast error and the errors in predicting county-to-county variations? Our analysis will be designed to show whether the USPCC forecast, the geographic adjustor, or both pose problems in rate setting.
3. Do forecast errors differ systematically among counties? In particular, does the pattern of errors for rural counties differ systematically from that of urban counties? Is forecast accuracy significantly different for counties with small populations than for counties with large populations? If so, HMOs operating in small counties would face excessive year-to-year fluctuations.

4. Do forecast errors persist from year to year? Persistent positive errors may magnify possible losses to Medicare. Persistent negative errors may result in reduced access to HMOs in the affected areas.

5. What are the possibilities for improving the accuracy of predictions? If substantial improvements in forecast accuracy were feasible, savings to Medicare and equitable payments to HMOs could be better achieved.

In seeking to answer these questions, we will compare projected fee-for-service sector per capita Medicare costs and information on actual fee-for-service per capita Medicare costs. Based on a review of the current methodology and related studies and our analysis of the accuracy of the forecasts, we will describe the magnitude of problems arising from inaccurate forecasts. We will also determine whether feasible alternatives exist to improve the accuracy of AAPC forecasts at both the national and county levels.

Appropriateness of Tying HMO Payment Levels to County Fee-for-Service Costs

Questions have been raised about whether the county is the appropriate unit of local rate setting, and whether there are alternatives to using local fee-for-service Medicare costs as the means of setting HMO payment rates. For example, using local fee-for-service rates may be problematic for rural or medically underserved areas. There is also concern that basing HMO capitation rates on local fee-for-service costs in areas with high HMO penetration may be inappropriate. One alternative would be to use the average fee-for-service cost for similar areas.

Specific issues we plan to address include the following:

1. Is the county the most appropriate geographical unit of rate setting? If not, what alternatives are appropriate?

Experts and industry representatives suggest that it is desirable to use a geographic adjustor that results in rate stability and is applied to an area with relatively uniform Medicare per capita cost in the fee-for-service sector. The choice of area size involves a tradeoff: a larger area should result in a reduction in the variation in rates from year to year, but this can come at the cost of less uniformity in Medicare cost across the area. For example, combining an urban and suburban county into one area may reduce variation over time, but might also result in increased differences in per capita cost levels within the area.

Specific concerns about using the county as the local unit of rate setting include:

- Some counties appear to include subareas with significantly different levels of per capita fee-for-service health care costs, such as inner city and suburban subunits. Such within-county differences could create undesirable incentives for HMOs to underserve high-cost submarkets of the county. As a result, costs to the Medicare program could be raised, and geographic access to beneficiaries could be restricted.
- In some cases differences in rates between neighboring counties appear excessive and are, moreover, counterintuitive in the view of some researchers and representatives of the HMO industry.
- The high degree of year-to-year variation in county AAPCC rates is undesirable from the perspective of HMO operations because it makes HMO planning more difficult.
- Excessive instability in rates for counties with small populations may exist as a result of random variation in fee-for-service costs from year to year; that is, a few, or the lack of any, extremely expensive cases in the fee-for-service sector in a given year can dramatically affect HMO payment rates.

While evaluating each of these concerns, attention will be paid to the trade-off between the desirable objectives of area uniformity in fee-for-service costs and low variation in projected AAPCC rates from year to year.

2. Is it desirable to base HMO payments on local fee-for-service Medicare costs?

Concerns about the use of local Medicare fee-for-service costs as the basis of HMO rates include the following:

- High HMO penetration in a particular area may have undesirable effects on local rate setting for two reasons. First, "favorable selection" by HMOs (the selection of relatively healthier enrollees from the AAPCC risk cells) would increasingly leave the less healthy enrollees in the fee-for-service sector. As a result local AAPCC rates would spiral upward, and Medicare would pay HMOs to care for the healthy portion of its beneficiaries based on the costs of the less healthy portion. Thus, overall Medicare costs would be higher than if all beneficiaries were in the fee-for-service sector. Conversely, if HMOs in the local area experience "adverse selection" (the selection of relatively sick enrollees), local fee-for-service rates would be based on an increasingly healthy beneficiary population. The

resulting rates would be too low due to a failure to account for the relatively high expected costs associated with the selection of relatively sick people by the HMOs. Second, high HMO penetration reduces the number of fee-for-service enrollees, thus shrinking the local base from which HMO rates are derived. This could lead to increased fluctuation in the rates.

- Local fee-for-service Medicare costs reflect a number of factors in addition to local input prices (wages, utility rates, rents, etc.) directly affecting the operating costs of HMOs. For example, geographic differences in utilization and other aspects of the intensity and pattern of medical care may affect local fee-for-service costs substantially.
- Fee-for-service costs may be inappropriate bases of rate setting for rural areas if HMOs improve access to care. In this case, HMO enrollees may have increased use of services in comparison to the fee-for-service sector.

Our examination of alternatives will consider their ability to address the above concerns. In order to provide a comprehensive view of the appropriate local unit of rate setting and the desirability of tying HMO rates to local fee-for-service reimbursement levels, we will review relevant data, consider trade-offs, and do a systematic review of alternative approaches.

Possible Adverse Effects of the Current Capitation Payment System

While capitation creates strong incentives for the efficient use of resources and cost containment, AAPCC capitation in a fee-for-service environment also creates incentives that may hamper the achievement of Medicare's cost containment and quality of care goals. Favorable selection within the AAPCC risk cells could reduce or eliminate Medicare's savings from the risk program, and may reduce access to the HMO alternative for less healthy beneficiaries. Capitation also creates incentives to underserve Medicare beneficiaries because in general the fewer services furnished, the more profit the HMO makes. Thus, the issue of whether HMO enrollees receive adequate quality of care arises.

The limited ability of the current payment system to deal with the possibility of biased selection is one of the central issues of HMO rate setting. The mix of HMO enrollees is influenced by both HMO decisions and self-selection among Medicare enrollees. Nonrandom selection does not cause a payment problem if the payment formula adequately reflects relative risks. However, if HMOs serve a healthier-than-average mix of enrollees within the AAPCC risk cells, the Medicare goal of 5 percent per capita savings from the HMO program may not materialize; extreme favorable selection may even result in Medicare losing money on the program. In

contrast, adverse selection where less healthy beneficiaries disproportionately elect to enroll would result in reduced HMO profits or even losses, thereby reducing the willingness of HMOs to participate in the program.

Specific issues we plan to address include the following:

1. What is the empirical evidence concerning the possible adverse payment and quality-of-care effects of the current rate-setting methodology?

While the AAPCC rate-setting methodology creates both desirable and undesirable economic incentives, the effect of these incentives on HMO behavior is an important empirical issue that needs to be addressed in order to judge the current rate setting and proposed alternatives. Therefore, we plan to review available data on the extent and direction of biased selection, relative utilization, and quality-of-care experience in risk-based HMOs compared to the fee-for-service sector. We will also assess the limitations of currently available data, and the potential benefits and costs of enhanced data collection and monitoring, in these areas.

2. What alternatives to the current risk-adjustment methodology have been proposed? What are the advantages and disadvantages of these alternative pricing strategies? Are HCFA research, demonstration, and management activities sufficient to move toward improvements in the system?

Health status and prior utilization adjustors have been proposed to improve rate setting by introducing new risk factors. Such adjustments are designed to reduce the adverse effects of biased selection on HMO payments by improving measurement of relative risk within the overall framework of a fully capitated pricing system. The Diagnostic Cost Group methodology,¹ which is being developed by HCFA-supported research and demonstration efforts, represents a major effort to refine rate setting.

Other proposed changes would deal with biased selection by limiting the role of capitation in the payment mechanism. Proposals that move away

¹This methodology attempts to refine the measurement of relative risk by defining new risk factors related to prior hospitalizations.

from a fully capitated payment system include methods to blend capitation payments and fee-for-service reimbursements, a reinsurance system for cases exceeding a cost limit, and a diagnosis-related-group-type approach in which HMOs would receive a prospective payment for each episode involving certain high-cost conditions. Alternatives to replace the current system include negotiating capitation rates and a voucher system for purchasing Medicare services.

We plan to examine these various approaches, looking at the potential for refinement, modification, or total change of the rate-setting methodology. Relevant criteria under consideration include the ability to deal with the adverse effects of biased selection, overall costs to the Medicare program, access to care among Medicare beneficiaries, economic efficiency, utilization and quality of care, effects on HMO risk, equity among HMOs, and operational feasibility.

We are sending copies of this report to interested congressional committees and subcommittees; the Director, Office of Management and Budget; the Secretary of Health and Human Services; and other interested parties.

Major contributors to this report are listed in appendix I.

A handwritten signature in black ink, appearing to read "Michael Zimmerman", with a stylized, flowing script.

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