
Medicare's Challenges in Paying Providers

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Medicare uses a variety of administered price systems to pay health care providers. In setting the amounts it pays, it faces significant challenges both to avoid distorting the care patients receive and not to overpay. This article describes issues in paying physicians, post-acute care providers, and health plans, all areas of recent ferment that are likely to see continued change. The conclusion remarks on the prescription drug benefit and the possibility of paying higher quality providers additional amounts.

INTRODUCTION

Medicare uses a variety of administered price methods to pay hospitals, physicians, and other health care providers. Many of its methods, such as diagnostic related groups for hospital payment and the resource based relative value scale (RBRVS) for physician payment, have been widely emulated, both by private insurers and by other countries. But because providers alter the services they deliver in response to how and how much Medicare pays (Newhouse, 2002b), it is an ongoing challenge for Medicare to keep its prices from affecting the care its beneficiaries receive in undesired ways. And, because Medicare generally cannot observe the equivalent of a market price, it is also an ongoing challenge not to overpay.

These issues are illustrated by recent changes in two reimbursement systems of traditional Medicare, physician payment

and post-acute services, as well as in the payment system for health plans, Medicare Advantage (formerly Medicare+Choice). Most recent public attention has focused on Part D, the drug benefit, enacted in the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003, but there has not yet been sufficient experience to analyze how well its payment methods are functioning. As a result, there are only a few closing comments on the drug benefit, as well as on recent pay-for-performance initiatives. Newhouse (2002a) has considerably more detail on many of these topics as of mid-2001.

Traditional Medicare's Reimbursement Methods

Physician Reimbursement

When it began in 1966, Medicare patterned its reimbursement of physicians after the method used by contemporary Blue Shield® plans by paying a usual, customary, and reasonable fee. In practice, this usually meant paying the physician's billed fee up to a constraint at some percentile of the distribution of fees in a community. By the mid-1980s, Part B of Medicare, roughly 75 percent of which is for physician services, had become the largest single domestic program of the Federal Government financed from general revenues, and it was growing at double digit percentage rates. The mid-1980s were also a time of historically large deficits because of the Reagan tax cuts and defense buildup. In an effort to contain the deficit, Congress set out to reform how Medicare reimbursed physicians.

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In the Omnibus Budget and Reconciliation Act of 1989, Congress instituted two important changes. First, it implemented a change in relative fees, the RBRVS, intended to increase fees for evaluation and management services and decrease them for procedures (Hsiao et al., 1988). Second, it enacted an explicit formula to cap increases in spending on physician services. Because this formula is a current issue, the article focuses on it. Although more complicated in practice, the basic idea was to set the increase in unit price (fees) inversely proportional to the past increase in the quantity of services such that spending would be at a desired level. Notably there was not—and still is not—such a cap for other providers, although the annual congressional update process for other providers undoubtedly takes implicit account of past rates of increase in spending as well as overall budget stringency.

The central problem in setting a spending level for physician services has been specifying a formula for determining how much the cap should increase each year. Given the past increase in the volume (quantity) of physician services, the increase in the cap determines the contemporary increase in physician fees, which, in turn, can affect the care beneficiaries receive. Three of the five elements in the formula are relatively non-controversial: the increase in input prices (the Medicare economic index [MEI]), the change in the number of Part B enrollees, and the change in spending from legislated changes in the benefit package.

The principal problems have arisen in two other elements: specifying how costly scientific advances that result in new or more intensive physician services are to be incorporated into the formula, and accounting for increases in the productivity of physicians, although to conserve

space productivity is not discussed here.¹ Initially the cap was set by a method called the volume performance standard (VPS), which assumed that scientific advances would occur at a reasonably steady rate and that Medicare should pay for them. This was operationalized by increasing the cap by a 5-year moving average of past percentage increases in the quantity of physician services.

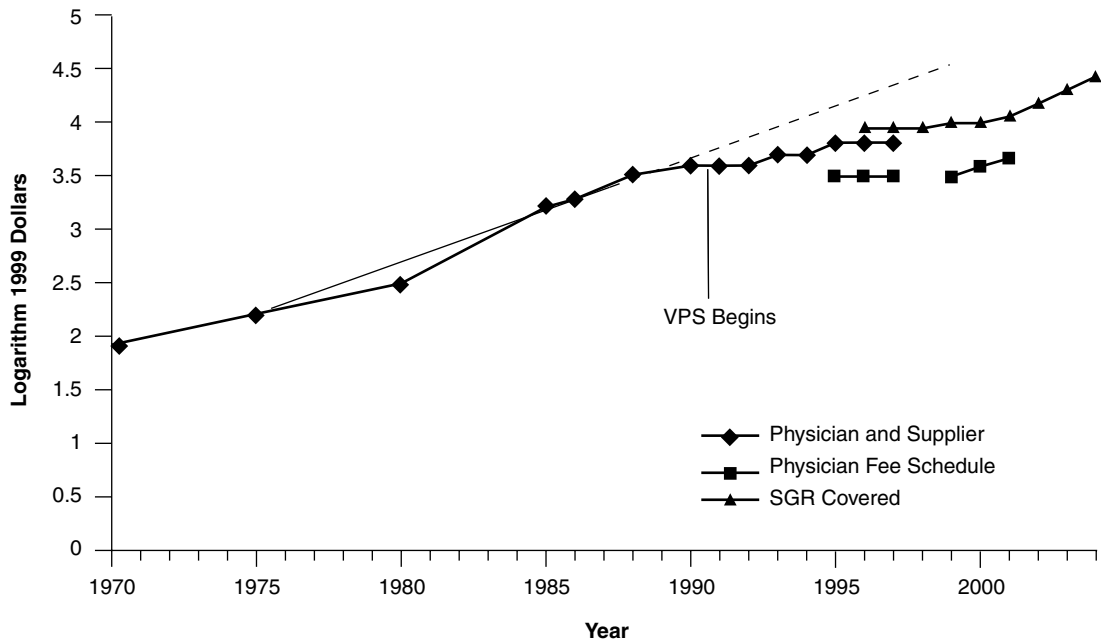
Figure 1 shows that, after the cap was enacted in 1990, the rate of growth of spending on physician services fell sharply. Had the 1975-1990 rate of growth continued, spending would have increased along the straight line. Despite the fall in spending, no material access problems for Medicare beneficiaries arose (Physician Payment Review Commission, 1997). As a result, members of Congress believed the cap on spending was a successful and important intervention.

The reduction in spending was disproportionately in the quantity or volume of services, especially surgical services, although the reasons for this are not well understood. The fall in surgical volume led surgeons to lobby for a separate cap, which Congress granted them. Low surgical rates of increase in volume meant double digit percentage fee increases for surgeons for a few years. Primary care practitioners then also asked for a separate cap for evaluation and management services, which Congress also granted. But the differing caps on different types of services was breaking apart the carefully constructed relative prices across various services that the RBRVS created. As a result, Congress re-established one scale for all services in the Balanced Budget Act of 1997 (BBA).

More importantly, by 1997 the temporarily low increase in volume was feeding into and lowering the 5-year moving average

¹ The CMS treat productivity changes as part of the MEI, but it is conceptually distinct from input prices.

Figure 1
Spending on Physician Services¹, Selected Years: 1970-2002



¹ In 1999 dollars.

NOTES: Three different historical definitions of spending on physician services are displayed because a consistent time series has not been maintained. The early years use a definition of physician and other supplier spending; the higher line for the later years includes all spending covered by the cap. In addition to physician services, this includes payment for durable medical equipment, ambulatory surgery centers, physician administered drugs, and quality improvement organizations. The lower line for the later years includes only physician services. Line is hand-fitted trend line, assuming spending would have continued to grow at a constant percentage rate. Sustainable growth rate (SGR) covered includes durable medical equipment, ambulatory surgical center facility payments, physician administered drugs, and quality improvement organizations. VPS is volume performance standard.

SOURCE: Centers for Medicare & Medicaid Services: *Health Care Financing Review, Statistical Supplement, 2003*. U.S. Government Printing Office. Washington, DC. February 2005.

of volume increase. In effect, it appeared to the formula as if the rate of scientific advance was slowing, thereby lowering the increase in the monies the formula was allowing for physician services. With volume picking up again by 1997, the projection was for fee cuts for many years into the future. Concerned that such fee cuts would impair access, Congress in the BBA abandoned the VPS system in favor of the sustainable growth rate (SGR) system.

The SGR was a philosophic departure from the earlier notion that Medicare should pay for all advances deemed clinically necessary by physicians. Instead, at a time in which the growth in Medicare

spending appeared too high, Congress decided to relate the increase in spending for physician services to the rate of growth of real gross domestic product, a measure of ability to pay. Congress did, however, include bounds on the permissible fee change in any given year; fees could not increase 3 percentage points more than the MEI, the measure of changes in input prices, nor decrease 7 percentage points more than the MEI. Any changes exceeding these bounds were to be recouped in a subsequent year.

During the late 1990s, robust gross domestic product growth gave physicians healthy fee increases. But, in mid-2000,

the economy slowed, while the increase in the volume of physician services started to accelerate. As a result, in 2002, the formula indicated that fees should be cut by the maximum 4.8 percent (the MEI increase was 2.2 percent, so 4.8 percent was the maximum cut allowed by the 7 percentage point limit), and fees were in fact cut 4.8 percent. But growth in the volume of services has continued substantially above the growth in the economy, while the MEI has continued to grow in the 2 to 3 percent range, so the formula has continued to indicate fee cuts somewhat in excess of 4 percent. Fearing access problems, Congress overrode the formula and legislated modest ad hoc fee increases of 1.7 percent in 2003 and 1.5 percent in each of 2004 and 2005. De facto it seems to have abandoned the SGR.

Although the SGR is continuing to call for 4 to 5 percent annual cut in fees for the next several years, such cuts are unlikely to happen because of potential access problems for beneficiaries. In short, the SGR doesn't appear sustainable. As of this writing, it appears Congress will deal with this problem by trying to link future nominal increases to quality improvement measures, including so called pay-for-performance measures. But final decisions have not been made.

Post-Acute Services

In October 1983, Medicare implemented the prospective payment system (PPS) for inpatient services. It paid hospitals a flat amount for each patient, save for a small number of outlier patients. Importantly, post-acute services, notably services of skilled nursing facilities (SNF), home health agencies (HHAs), rehabilitation hospitals and units, and long-term care (LTC) hospitals were still reimbursed on the basis of costs with limits.

This arrangement gave hospitals an incentive to shift (unbundle) what would have been the last days of an inpatient stay to a post-acute facility, thereby saving the costs of the final day(s) of the stay. Although HHA coverage regulations that were held illegal in 1988 delayed hospitals' acting on these incentives, between 1990 and 1997 the average length of stay for Medicare beneficiaries fell 28 percent, from 8.8 to 6.3 days. At the same time, the use of post-acute facilities exploded. Over the same period, SNF days per thousand beneficiaries rose by a factor of 2.3 and home health visits per thousand beneficiaries rose by a factor of 3.8. Spending on post-acute care services, which had been less than 5 percent of Part A spending in 1988, grew to over 25 percent of Part A spending by 1996 (Health Care Financing Administration, 1999).

Congress decided that cost-based reimbursement of these services was not working and in the 1997 BBA mandated that PPSs be developed for each post-acute provider on a tight time schedule. A SNF PPS was implemented in 1998 and a home health PPS in 2000. PPSs for rehabilitation and LTC hospitals went into effect in 2001 and 2002, respectively.

Reimbursement for post-acute services, however, remains a work-in-progress for at least two reasons. First, the tight deadlines did not allow adequate time for developing the systems, and many of them exhibit important imperfections. By contrast, the inpatient hospital PPS was under development for more than a decade and a form of it was already used by some States before it was introduced into Medicare. CMS had only a few months to introduce a SNF system and chose to adapt a method used for chronic LTC patients, but this system is not well suited to many Medicare patients recovering from an acute illness (Medicare Payment Advisory Commission, 2005). In

2000, Congress mandated that CMS study alternative PPS systems for SNFs, but as of March 2005 no report had been released.

The home health PPS changed the basis of payment from per visit to a 60-day episode (provided there were 5 or more visits in the episode). Patients were classified into one of 80 different home health resource groups, but of the 80, 42 have coefficients of variation in minutes of treatment per episode over 1.0, and the smallest coefficient of variation is 0.67 (Medicare Payment Advisory Commission, 2005). These values mean considerable heterogeneity within each home health resource group. Because payment is the same for each patient, HHAs have incentives to favor low-cost patients and reject high-cost patients. Moreover, both the SNF and home health providers have enjoyed double digit margins for the past several years, while spending between 2000 and 2005 has shot up 50 percent. In short, the payment systems for SNF and home health, the two largest post-acute care categories, appear to pay too much overall, as well as too much for certain patients and too little for others.

A second reason why reimbursement remains a work-in-progress is inherent in the architecture of separate payment systems for each type of post-acute provider. Many post-acute patients can potentially be served by several types of providers. A stroke patient, for example, could get speech or physical therapy in a rehabilitation hospital or unit, in a SNF, in a hospital outpatient department, or at home through a HHA. But the payment system is not neutral among these sites because reimbursement for the same patient receiving the same service at different sites can be markedly different.

The difference in payment arises for two reasons. First, the bases of payment differ. Rehabilitation facilities are paid per stay,

SNFs per day, and HHAs per 60-day episode. The financial incentives, therefore, favor putting short-stay patients in rehabilitation facilities and long-stay patients in SNFs. Second, each type of facility's payment is a function of the average cost of patients in that type of facility. Average cost varies substantially because the characteristics of patients and the intensity of treatment vary, with rehabilitation facilities generally providing the most intense treatment and hence having the highest reimbursement.

Regulation somewhat constrains the ability to shift patients among providers, especially in the case of rehabilitation facilities. Nonetheless, the incentive to move patients to more highly reimbursed facilities remains.

At this time, the methods used to pay for post-acute care do not appear stable and future changes seem likely. Unfortunately, no simple solution for the problems described appears available.

Medicare Advantage

The Medicare Advantage program has had a difficult past several years, but major changes have been made for 2006, and the program looks potentially poised to grow again. The program has traditionally been almost entirely a health maintenance organization (HMO) option, but the MMA has considerably expanded the preferred provider organization (PPO) option. (Although formally part of Medicare Advantage, categories of private fee-for-service, medical savings accounts, and special population options such as the program of all-inclusive care for the elderly because of their small enrollment are ignored.) The HMO option is discussed first and then the PPO option.

Prior to the 1997 BBA, the Medicare Advantage program was growing smartly, from a 5.2-percent share of all Medicare

beneficiaries in 1990 to a 16.1-percent share in 1999 (Centers for Medicare & Medicaid Services, 2003). At the time of the BBA, the U.S. Congressional Budget Office was projecting that around one-third of Medicare beneficiaries would choose to enroll in the program by 2006. For more information, refer to U.S. Congressional Budget Office Testimony (1997).

In reality, however, 1999 was to be the high water mark; by 2002, the percentage of beneficiaries in HMOs had fallen to 12.5, and since then it has remained at roughly that figure. For more information, refer to The Henry J. Kaiser Family Foundation (2005). Although scarcely any beneficiaries had been affected by plan terminations before 1999, 45 plans terminated their contracts in 1999, and another 41 plans terminated in 2000. As a result, more than 400,000 beneficiaries were forced to change health plans in 1999, and another 327,000 in 2000 (Medicare Payment Advisory Commission, 2000).

This downdraft was largely attributable to changes made by the BBA in health plan reimbursement. Prior to the BBA, plans were paid 95 percent of what traditional Medicare paid in a given county for an average enrollee, adjusted for certain demographic characteristics of health plan enrollees, such as age and sex. The large geographic variation in the use of services across counties, however, translated into a similarly large variation in payment (Dartmouth Medical School, 1999). Counties with high payment rates were, of course, more attractive to HMOs, and, typically, several HMOs entered them. Rural areas, with generally lower payment rates, attracted few plans. As a result, in 1998, 22.5 percent of beneficiaries who lived in central urban areas had joined an HMO, whereas only 3 percent of beneficiaries in rural-urban fringe areas and a scant 0.6 percent in other rural areas had joined,

reflecting the unavailability of plans in those areas (Medicare Payment Advisory Commission, 1998).

Medicare Advantage plans were allowed to offer their enrollees additional benefits, as well as lower copayments and premiums, and they generally did so. But the generosity of the additional benefits varied markedly with the generosity of Medicare reimbursement, suggesting that competitive pressure led plans to pass through any excess reimbursement from Medicare to beneficiaries (Prospective Payment Assessment Commission, 1997). In particular, HMOs frequently offered their members a drug benefit, especially in the more highly reimbursed counties. Members of Congress from areas with lower reimbursement began to ask why their constituents should also not be offered the option of an HMO with a drug benefit. Their answer was that a floor should be placed under what plans were paid in the lower paid counties. Thus, in counties where a floor was binding, payment to a plan rose above what traditional Medicare paid in that county.

Floors began in 1998, and were binding only in rural counties with about 12 percent of all beneficiaries. For the most part, however, HMOs still did not enter these counties, probably because the delivery system there was not competitive. For example, suppose HMO reimbursement were increased. There might be a single hospital that would then ask for higher reimbursement, and the HMO would have little alternative, but to grant it. Thus, any increase in reimbursement would not accrue to the HMO, but would pass through to local providers. Probably anticipating such an outcome, HMOs did not enter. The congressional response to the lack of entry, however, was to increase the floors further and apply them to metropolitan counties as well.

Ironically, the effect of the floors was mostly felt in the high reimbursement areas. Because the overall aim of the BBA was to save money, the floors were financed by limiting payment increases in higher rate areas to 2 percent per year. The 2 percent limit, however, was not sufficient to cover cost increases that the plans faced. Plans in the high rate areas therefore limited their service areas or pulled out of the program entirely, resulting in the fall in enrollment.

Beneficiaries who were forced to leave health plans frequently faced difficulties. Some who returned to traditional Medicare had difficulty reacquiring Medigap insurance. Some who changed to another health plan had to change physicians or go on a new drug formulary. As a result of the publicity given to these problems, the HMO option began to appear less attractive.

The MMA partly remedied this by allowing reimbursement to equal at least 100 percent of traditional Medicare, thus leveling the playing field in the high rate areas and stabilizing the program in those areas. The floors, however, remain in place in the low rate areas, so reimbursement policy favors Medicare Advantage there.

The MMA made another important change in the Medicare Advantage program. Instead of Congress setting a take-it-or-leave-it price, as of 2006 HMOs—now referred to as local Medicare Advantage plans—will bid for enrollees, in a process somewhat similar to employees who have a choice among multiple health plans with the employer paying a fixed premium. Medicare, however, will differ in certain respects from this arrangement.

The process will work as follows. The HMOs' bid will be compared against a benchmark, a weighted average of the 2005 administratively determined HMO payment rate for the counties in the HMOs'

service area, updated for inflation (weights are proportional to the number of enrollees in the county). If the chosen plan's bid is less than the benchmark, enrollees keep 75 percent of the difference, but, if it exceeds the benchmark, the beneficiary pays 100 percent of the excess. The floors and certain other non-neutral features of 2005 payment rates remain in the benchmark calculation, so HMOs continue to have an advantage vis-à-vis traditional Medicare. Whether this will induce additional entry remains to be seen.

Traditional Medicare will remain outside the bidding. There was a sharp partisan split in Congress on whether traditional Medicare should be treated as just another plan for the purposes of bidding. Proponents, largely Republicans, argued this would level the playing field; opponents, largely Democrats, feared that traditional Medicare would be selected against and potentially go into a death spiral (Cutler and Reber, 1998). The MMA resolved this issue by not treating traditional Medicare as another plan, but by mandating a demonstration project in which it would be treated as another plan starting in 2010.

As a further effort to reduce the disparity in benefits available to residents of different areas, the MMA mandated an additional regional PPO program beginning in 2006. Although the earlier Medicare+Choice program had a county-level PPO option, it attracted relatively few entrants. Congress, still desirous that plans with supplemental benefits would enter areas previously served only by traditional Medicare, required that regional PPOs serve rather large areas. Specifically, the legislation gave CMS the authority to specify between 10 and 50 areas which regional PPOs would have to serve; CMS settled on 26 areas, some of which are single States and others of which are multiple States.

To entice plans into offering a regional PPO option, the MMA made a number of changes. To deal with the monopoly provider problem, it specified that the plan could pay traditional Medicare rates to providers with whom it did not contract and that it had to meet the usual network adequacy requirements for HMOs for only 85 percent of the region. For out-of-network providers, PPOs can charge beneficiaries higher cost sharing than in traditional Medicare, but cost sharing for in-network providers cannot be greater than in traditional Medicare (except where PPOs do not have an adequate network, cost sharing for an out-of-network provider is limited to the amount of cost sharing in traditional Medicare.) Furthermore, the cost sharing of traditional Medicare was rationalized by requiring that PPOs have a combined Part A and B deductible, which can be waived for preventive services, and a stop loss limit.

Additionally, Congress tried to promote entry by risk sharing with the plan in 2006 and 2007 if costs and reimbursement differ by more than 3 percentage points in either direction. Further, Congress set aside \$10 billion that could be used starting in 2007 to encourage plans to enter or remain in markets. Reimbursement to regional PPOs would be set in a bidding process similar to that described for local Medicare Advantage plans, except the PPO bids are accounted for in setting the benchmark.

In sum, Congress has tried to remedy the inequality in payment and resulting benefits in different parts of the country by instituting a floor under Medicare payments to health plans. In areas where the floor is binding, this has resulted in Medicare's paying more than it would have paid for the same beneficiary in traditional Medicare. But the bidding process speci-

fied in the MMA may cause the excess payments to pass through to beneficiaries in the form of lower premiums.

CONCLUSIONS

As is evident from the foregoing description of Medicare Advantage, Medicare on its 40th anniversary is striking out in new directions. Two others that have attracted much comment are the drug benefit and paying higher rates for providers that meet or exceed certain quality or quality improvement standards.

The drug benefit has two problematic provisions (Huskamp et al., 2000; Newhouse, 2004). Medicare adopted the commercial model of pharmacy benefit managers (PBMs) or similar entities that obtain lower prices from competing drugs through the adoption of formularies. The MMA, however, gave the Federal Government rather than the PBM authority over the formulary, but prohibited the government from negotiating over price. Competition cannot work when there are clinically important drugs with no close substitutes, and because such drugs de facto must be on the formulary, the law leaves PBMs and ultimately the government close to a position of paying whatever price the manufacturer names. If important drugs lacking competition are sufficiently rare, the problem may be manageable, but that seems doubtful since any drug that is a marked improvement on existing therapy will fall into this category until there is a competitor.

Second, Congress structured the market such that plans would compete for individual business. This leaves open the possibility for selection. Stand alone drug plans are not generally found in the private market, probably because those with high spending

in one year tend to have high spending the next, making such plans particularly vulnerable to selection (Pauly and Zeng, 2004). This vulnerability could have been remedied by having plans compete for temporary franchises for specified areas such as States. This is, in effect, the commercial market structure, because employers and health plans that carve out drug benefits contract with one PBM for a specified time and may periodically rebid the contract.

Pay-for-performance has been suggested by many analysts (Medicare Payment Advisory Commission, 2004, 2005; Cutler, 2004) in response to the observations that quality standards are only met a little over one-half the time and that better quality care may often not result in additional payment (Leatherman et al., 2003; McGlynn et al., 2003). The MMA took a step in this direction by imposing a small penalty on hospitals that failed to report certain measures of quality. Despite its size, the penalty of 0.4 percent was sufficient to generate near universal reporting.

Although it seems clear that paying no more—and sometimes paying less—for higher quality care is not good policy, how to achieve the best results from paying for quality will likely require experience and perhaps some controlled experiments. For starters, there are potentially important design issues. How much more money should be paid for higher quality? Should the basis of payment be absolute; for example, is a measure at a given provider above a certain standard? Or should it be relative; for example, is the provider in the upper percentiles of the distribution?

And there are a number of potential pitfalls. Process measures of care are more developed for certain conditions than others. If those are the conditions that are measured and rewarded, providers may

reallocate resources toward those measures, a form of teaching to the test. Who will update process measures? How frequently? Outcome measures require risk adjustment to avoid penalizing providers who treat more difficult cases, but risk adjustment is often incomplete. Even what is arguably the most developed risk-adjustment program, the New York State cardiac surgery system, did not appear good enough to convince some surgeons who reduced the number of high-risk cases and increased the number of low-risk cases (Dranove et al., 2003). How will measures be audited, and what will be the cost of doing so? Will the sample of cases at any given provider be sufficient to form a reliable measure of quality (Hofer et al., 1999; Dimick, Welch, and Birkmeyer, 2004)? Quality at a provider may change over time. How frequently will quality be assessed?

An important impetus for the Medicare Program in 1965 was the difficulty the elderly experienced in obtaining health insurance and their resulting exposure to potential financial devastation. Over time, the program has evolved to balance the needs of beneficiaries and the burden on the taxpayers. In 1972, benefits were added for the disabled and those afflicted with end stage renal disease. In the 1980s, Medicare began contracting with health plans that were at risk and introduced the PPS and RBRVS. Most recently the program has added a drug benefit and a regional PPO program. No doubt there will be additional changes in this program that serves over 40 million people and accounts for 15 percent of Federal outlays in 2006 (U.S. Congressional Budget Office, 2005) in an effort to keep from distorting the care its beneficiaries receive and to keep from overpaying.

REFERENCES

- Centers for Medicare & Medicaid Services: *Health Care Financing Review, Statistical Supplement, 2001*. U.S. Government Printing Office. Washington, DC. 2003.
- Cutler, D.M.: *Your Money or Your Life: Strong Medicine for America's Health Care System*. Oxford University Press. New York. 2004.
- Cutler, D.M. and Reber, S.J.: Paying for Health Insurance: The Tradeoff Between Competition and Adverse Selection. *Quarterly Journal of Economics* 113(2):433-466, 1998.
- Dartmouth Medical School: *The Dartmouth Atlas of Health Care, 1999*. American Hospital Association Press. Chicago, IL. 1999.
- Dimick, J.B., Welch, H.G., and Birkmeyer, J.D.: Surgical Mortality As An Indicator of Hospital Quality: The Problem of Small Sample Size. *Journal of the American Medical Association* 292(7):847-851, August 18, 2004.
- Dranove, D., Kessler, D.P., McClellan, M., et al.: Is More Information Better? The Effects of 'Report Cards' on Health Care Providers. *Journal of Political Economy* 111(3):555-588, 2003.
- Health Care Financing Administration: *Health Care Financing Review, Statistical Supplement, 1999*. U.S. Government Printing Office. Washington, DC. 1999.
- Hofer, T.P., Hayward, R.A., Greenfield, S., et al.: The Unreliability of Individual Physician "Report Cards" for Assessing the Costs and Quality of Care of a Chronic Disease. *Journal of the American Medical Association*, 281(22):2098-2105, June 9, 1999.
- Hsiao, W.C., Braun, P., Dunn, D.L., et al.: Resource-Based Relative Values: An Overview. *Journal of the American Medical Association*, 260(16):2347-2353, October 28, 1988.
- Huskamp, H.A., Rosenthal, M.B., Frank, R.G., et al.: The Medicare Prescription Drug Benefit: How Will the Game Be Played? *Health Affairs* 19(2):8-23, March/April 2000.
- Leatherman, S., Berwick, D., Iles, D., et al.: Making the Business Case for Quality. *Health Affairs* 22(2):17-30, March/April 2003.
- McGlynn, E., Asch, S.M., Adams, J., et al.: The Quality of Health Care Delivered to Adults in the United States. *New England Journal of Medicine* 348(26):2635-2645, 2003.
- Medicare Payment Advisory Commission: *Health Care Spending and the Medicare Program: A Data Book*. Washington, DC. 1998.
- Medicare Payment Advisory Commission: *Medicare Payment Policy*. Report to the Congress. March 2000.
- Medicare Payment Advisory Commission: *Medicare Payment Policy*. Report to the Congress. 2004.
- Medicare Payment Advisory Commission: *Medicare Payment Policy*. Report to the Congress. 2005.
- Newhouse, J.P.: *Medicare. American Economic Policy in the 1990s*. Massachusetts Institute of Technology Press. Cambridge, MA. 2002a.
- Newhouse, J.P.: *Pricing the Priceless: A Health Care Conundrum*. Massachusetts Institute of Technology Press. Cambridge, MA. 2002b.
- Newhouse, J.P.: How Much Should Medicare Pay for Drugs? *Health Affairs* 23(1):89-102, January/February 2004.
- Pauly, M.V. and Zeng, Y.: Adverse Selection and Challenges to Stand-Alone Prescription Drug Insurance. In Cutler, D.M., and Garber, A.M. (eds.): *Frontiers in Health Policy Research*. Massachusetts Institute of Technology Press. Cambridge, MA. 2004.
- Physician Payment Review Commission: *Annual Report to Congress, 1997*. Washington, DC. 1997.
- Prospective Payment Assessment Commission: *Medicare and the American Health Care System: Report to the Congress, June 1997*. Washington, DC. 1997.
- The Henry J. Kaiser Family Foundation: Medicare Advantage Fact Sheet. Internet address: [http://www.kff.org/medicare/upload/Medicare-Advantage-April 2005-Fact-Sheet.pdf](http://www.kff.org/medicare/upload/Medicare-Advantage-April%2005-Fact-Sheet.pdf). (Accessed 2005.)
- U.S. Congressional Budget Office: *The Budget and Economic Outlook: An Update*. Washington, DC. 2005.
- U.S. Congressional Budget Office Testimony: Presented February 25, 1997. Internet address: <http://www.cbo.gov/showdoc.cfm?index=852&sequence=0>. (Accessed 2005.)

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