Defective Design: Regional Competition In Medicare

An inconsistent approach to regional competition in the Medicare Modernization Act will be very costly for taxpayers.

by Steven D. Pizer, Roger Feldman, and Austin B. Frakt

ABSTRACT: The Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003 creates several new types of private insurance plans in Medicare. The most familiar of these is the preferred provider organization (PPO). Uneven application of regional bidding requirements will place new PPOs at a competitive disadvantage relative to established health maintenance organizations (HMOs). A little-notice section of the regulations implementing MMA offsets this disadvantage and gives PPOs a strong incentive to bid in some regions, but costs to the taxpayer will be high: up to $60 billion over ten years.

In June 2005 the Centers for Medicare and Medicaid Services (CMS) began accepting bids from private insurance plans to provide drug and nondrug coverage to Medicare beneficiaries as provided in the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003. The intent of the law was to improve access to Medicare-financed outpatient prescription drug coverage and to expand the role of private plans in Medicare. Such plans existed before MMA was passed, but their availability was limited, and most plans were health maintenance organizations (HMOs), a type of plan many beneficiaries find too restrictive. MMA encourages the participation of several types of plans that are new to Medicare, the most familiar of which is the preferred provider organization (PPO). If all goes as planned, new plans will offer coverage to beneficiaries starting in January 2006—the first time many beneficiaries will have access to Medicare outpatient prescription drug coverage.

Although MMA has the potential to work as intended, a key inconsistency in the legislation threatens the viability of plans in rural areas, potentially leaving little accomplished at great cost. MMA requires new plans to participate in Medicare on a regional basis but permits existing HMOs to continue to operate locally (county by county). As a result, established local HMOs will have a competitive advantage.
advantage over new regional PPOs in the areas where these HMOs operate. This adds to already substantial challenges facing PPOs as they try to adapt their insurance model to a Medicare market in which their ability to contain costs is in serious doubt. Perhaps in part to offset these problems, the CMS included a little-noticed section in the Final Rule implementing MMA that will dramatically increase payment rates to some regional PPOs.²

We show that MMA’s inconsistent approach to regional competition makes regional PPOs unsustainable in many areas without large overpayments (relative to local historical costs) from the Medicare Trust Funds. Our findings indicate that regional PPOs will avoid competing with HMOs, focusing instead on traditionally underserved areas that will be profitable only because of overpayments. We estimate that these overpayments could support enrollment in PPOs of up to four million Medicare beneficiaries per year. However, that enrollment will be very costly to the taxpayers—reducing the Medicare Trust Funds by approximately $60 billion (in 2001 dollars) over ten years.³ We question whether these overpayments will be maintained once the cost is widely known.

Background

For historical reasons, Medicare has not covered outpatient prescription drugs, leaving beneficiaries to acquire coverage from their former employers or from individually purchased (and very costly) supplemental policies.⁴ Starting in the early 1990s, beneficiaries began to take advantage of the more affordable option of obtaining drug coverage through a Medicare HMO, initially under the Medicare risk program authorized by the Tax Equity and Fiscal Responsibility Act (TEFRA) of 1982 and later under the Medicare+Choice (M+C) program established by the Balanced Budget Act (BBA) of 1997.⁵ However, even at the height of M+C enrollment in the late 1990s, premiums and benefits varied widely across the country, and beneficiaries in rural areas typically lacked access to an HMO.⁶

Another frequently criticized feature of M+C was that HMOs were known to experience favorable selection (that is, they enrolled disproportionately healthy beneficiaries who used fewer services), and the administrative systems for establishing payment rates were inadequate to adjust for it.⁷ Partly in response, the BBA began to reduce the growth of payments to plans. Plans responded by cutting benefits, increasing premiums, and withdrawing from selected markets.⁸

As M+C enrollment declined and as retiree drug coverage became less available, political support for legislative action grew, culminating in MMA’s passage in 2003.⁹ Through MMA, Congress attempted to make drug coverage available in areas not traditionally served by M+C plans by raising payment rates overall and by creating two new types of private plans in Medicare: stand-alone prescription drug plans (PDPs) and PPOs. PPOs and HMOs (which will continue to function under MMA) will operate under the successor to M+C, Medicare Advantage (MA).
**PPOs in Medicare.** PPOs have been successful in the commercial market, reaching 112 million participants by 2005 according to the American Association of Preferred Provider Organizations (AAPPO).\(^{10}\) They represent a less restrictive alternative to HMOs for both enrollees and employers. They typically do not attempt to manage care, instead reducing costs by organizing networks of credentialed providers who offer discounted rates. Despite some efforts by the CMS to involve PPOs in M+C (principally through a demonstration), enrollment to date has been small. Nevertheless, in 2003 former CMS administrator Tom Scully testified before the Senate Finance Committee that “the President’s plan is based on combining the best of Medicare—a community-rated social insurance health plan—with the option chosen by...130 million Americans, the flexible PPO benefit model.”\(^{11}\)

The intent of MMA was to improve beneficiaries’ access to private plans by requiring that PPOs and PDPs enter markets regionally in 2006.\(^{12}\) To this end, the CMS established twenty-six regions for PPOs and thirty-four regions for PDPs, each designed to combine traditionally underserved areas with urban markets typically served by HMOs.\(^{13}\) Regional plans will be constrained to offer uniform benefits and charge the same premium within each region they enter. In addition, MMA was intended to rectify inequities in benefits by replacing administratively determined payment rates with a competitive bidding structure designed to more accurately reflect the costs of providing coverage.\(^{14}\)

MMA’s authors also accommodated the HMOs already serving Medicare, most of which do not have the capacity to serve entire regions, by permitting existing MA plans to define their markets “locally,” county by county, as in M+C. To ensure that coverage will be available in traditionally underserved areas, new local plans may not enter the market between 2006 and 2008, but existing HMOs can continue to operate in their current service areas. Thus, to accommodate existing HMOs, MMA’s commitment to regions is unevenly applied among plan types, placing regional PPOs at a competitive disadvantage.

In addition to this competitive imbalance, there are two reasons why the PPO model may not be adaptable to the Medicare market.\(^{15}\) First and foremost, even with discounts, PPOs typically pay providers more than the payment rates set by fee-for-service (FFS) Medicare, which has tremendous market power. Consequently, unless payment rates to plans greatly exceed average FFS costs per beneficiary, PPOs will have to charge a typical beneficiary a higher premium for the same benefits available through traditional Medicare, with provider-choice restrictions not found in traditional Medicare. Second, PPOs’ commercial success is partly attributable to their popularity with self-insured employers who want help administering their plans; FFS Medicare needs no such help.

**Help for PPOs.** Potentially offsetting these obstacles for PPOs, the CMS included a little-noticed section in the Final Rule implementing the MA program. Intended or not, Section 422.258 profoundly affects how regional PPOs will be paid for nondrug benefits, allowing them to collect payments from Medicare that greatly
Section 422 specifies that payments for regional PPOs will be calculated by comparing their bids with a regional benchmark. If plans bid below the benchmark, they will be paid the sum of their bid and 75 percent of the difference between the bid and the benchmark. If plans bid above the benchmark, they will be paid the benchmark and will charge the difference as a premium. Regional benchmarks will be constructed from two components: a statutory component and a plan bid component. The statutory component will be a weighted average of county-level capitation rates (that is, M+C payment rates), and the plan bid component will be a weighted average of the regional plan bids. The two components will be blended by weighting the statutory component by the national market share of MA-eligible beneficiaries not enrolled in MA plans and the plan bid component by the national market share of MA-eligible beneficiaries enrolled in MA plans. Thus, as MA increases its market share, the regional benchmarks will move toward the weighted average of plan bids.

The major impact on payment rates comes from Section 422.258, Paragraph (c)(3), which specifies the weights that will be used to construct the statutory component. Instead of using projected county-level enrollments or actual enrollments from prior years (“enrollment weighting”), the CMS will use county-level shares of the MA-eligible population to combine county-level payment rates into regional benchmarks (“population weighting”). Consequently, the regional benchmarks are calculated as if regional plans will attract enrollment at a constant rate throughout the region. If regional PPOs attract enrollment disproportionately from low-payment parts of the region instead, the impact on the Medicare Trust Funds can be profound.

To illustrate, consider the example of two counties in Florida. Dade County (containing Miami) is a densely populated area (7 percent of Florida’s elderly population reside there) with high payment rates and average FFS costs: $818 and $843, respectively, in 2001. In contrast, Okaloosa County (in the Panhandle) is less densely populated (1 percent of Florida’s elderly reside there) with lower 2001 payment rates and average FFS costs of $510 and $475, respectively. Population weighting means that Dade County will get seven times the weight of Okaloosa County when the regional benchmark is calculated, regardless of where PPO enrollment actually occurs. If these were the only two counties in Florida, the benchmark would be $780. If a PPO offered a product that appealed only to Okaloosa County beneficiaries, the impact on the Trust Funds would be $305 per enrollee ($780–$475), which could be divided between plan profits and supplemental benefits or rebates for enrollees.16

**Cream skimming.** This is a variant on the familiar “cream-skimming” problem in health insurance.17 In general, profits can be made any time an insurer can collect payments based on average costs for a population while attracting enrollment from a subset of the population that tends to have lower costs. In this case, PPOs will have
to comply with regulations that require them to make their product available throughout the region, but they can minimize enrollment in high-cost areas by failing to match HMO benefits, failing to offer a desirable panel of providers, and failing to market their product aggressively. In what follows, we predict the consequences for enrollment and Medicare costs when this occurs on a large scale.

**Analytic Goals And Methods**

Our goal is to predict the consequences for the Medicare Trust Funds of MMA’s inconsistent approach to competition under population weighting. We show that population weighting and uneven competition reinforce each other, encouraging cream skimming by PPOs. For this analysis, we made a variety of assumptions to adapt historical data to regional PPOs under MMA. As a result, our estimates should be considered approximations, intended to illustrate the main features of the problem and give a general sense of its scale.

Several steps were needed. First, economic theory tells us that PPOs make strategic decisions based on opportunities for profit, which we computed as the difference between payments and costs and expressed as premiums needed when costs exceed payments and as potential rebates otherwise. Payments are straightforward, so we needed estimates of PPO costs in each region. Because costs depend on benefits, we needed to determine the level of benefits PPOs must offer to compete in each market, recognizing that they might choose not to compete everywhere. Once we knew how benefits (and therefore costs and profits) vary by competitive strategy, we could choose the strategy that maximizes profits, calculate potential enrollment that goes with that strategy, and compute the impact on the Medicare Trust Funds.

**Predicting PPO Costs**

In an analysis conducted before the Final Rule was issued, the Congressional Budget Office (CBO) tried to estimate future PPO costs by starting with HMO costs. Using confidential adjusted community rate (ACR) filings from HMOs and making assumptions about PPO costs relative to HMO costs, the CBO predicted that existing payment rates would not be adequate to cover PPO costs, except in highly paid urban counties. Consequently, it predicted that PPOs would be attracted to these counties but not to lower-paid areas of the region. However, the CBO did not attempt to account for the fact that many of these urban counties are occupied by HMOs that will compete with the PPOs.

We took a different approach, relying on directly observable plan decisions to enter or exit a market instead of plan-reported cost data. Economic theory tells us that plans will not do business for long if their costs exceed their revenues, so we can infer plans’ costs by observing the relationship between payment rates and market entry and exit. Although many of our conclusions are similar in spirit to those of the CBO, competition with local HMOs—which the CBO study could not
address—poses a central challenge for regional PPOs. Consideration of competition leads us to new predictions about plans' geographic market entry strategy, which will be reinforced by the incentives implicit in population weighting.

The literature on plan participation or entry in M+C typically uses either an explicit or an implicit model of profit maximization, where a firm will enter the market if it is profitable to do so. According to this theory, a plan compares expected revenue in a given market with expected costs, entering the market if expected revenue exceeds costs and exiting if costs exceed revenue. In the M+C market, the government publicly sets payment rates and plans announce premiums, so expected revenue per enrollee is easily observed. By contrast, expected costs are generally unobservable to researchers, although we believe that they are affected by several factors. For example, the availability of lower numbers of providers per beneficiary is thought to increase costs by making selective contracting more difficult. Likewise, a larger number of competing plans ought to increase costs by intensifying the need to offer enhanced benefits to attract enrollees. Several studies of M+C market participation have tried to explain plans' behavior using the payment rate to reflect differences in revenue and variables such as providers per beneficiary and the number of competing plans to reflect differences in cost. 19

In a recent example, John Cawley and colleagues used county-level data from the Area Resource File and the CMS Web site to study how the number of HMOs participating in a county in each year from 1993 to 2001 varied with the level of the capitation payment. 20 Based on the results, Cawley and colleagues calculated that to support at least one M+C plan in every county in 2001, Medicare would have had to pay $1,008.25 per enrollee per month in the marginal county, much more than the highest actual monthly payment at the time ($833.55).

In a later and more complete analysis, Cawley and colleagues found that 381 counties were paid more than necessary to induce participation by one plan, while 1,463 counties were paid less than the one-plan threshold. 21 The one-plan threshold payment for the median county was $682 per month, compared with the average monthly payment level of $401. 22

Here we build on the work of Cawley and colleagues to estimate the break-even (zero-profit) premiums needed to support participation by one plan in each region under alternative assumptions about competitive strategy (and therefore benefits). To determine the need for premiums, we first estimated what plans will bid; then we compared our results with the regional benchmarks.

**Estimating Future Bids From Past Entry**

We found it convenient to think about the drug and nondrug components of benefits separately, in part because their network, contracting, and payment issues are so different for drug and nondrug benefits. In particular, although HMOs have cost advantages that arise from more restrictive networks on the nondrug side, there is little reason to believe that this advantage extends to the drug side.
Consequently, we assumed that competition for the drug component of benefits would be roughly even, and we set out to estimate bids for the nondrug component. This approach has the added advantage of avoiding the need to predict the cost of drug benefits under MMA, a task for which we lacked data needed to make accurate predictions. MMA makes relatively transparent changes to the determination of benefits and payments for the nondrug component, but it makes much more extensive changes for the drug component.

We first applied the methods of Cawley and colleagues to estimate the payment rate needed to attract different numbers of HMOs to each county, using data from 1993–2001. Next we applied the coefficients from the estimated model to predict the payments that would have been necessary to attract exactly one HMO to each county in 2001. In the calculations that follow, we refer to this payment as the “entry payment.” Assuming that plans bid their costs and (for the moment) that HMOs and PPOs have equal costs, these entry payment rates provide an estimate of the PPO’s cost of offering minimal benefits in each county.

Next we estimated the cost of additional benefits as follows. Where local HMOs are present, competition will force new entrants to roughly match the HMOs’ benefits. To determine the value of such additional benefits, we calculated the difference between the actual payment rate in 2001 (“actual payment”) and the entry payment, dubbing the result the “value of extra benefits” (VEB = AP – EP). Under M+C, the VEB typically represented drugs and some nondrug benefits beyond the statutory minimum. Under MMA, the standard drug benefit will be part of the minimum benefit package, but competing plans could use the VEB for additional benefits or rebates.

Finally, we asked what would have happened if MMA’s regional competitive bidding structure had been implemented in 2001. We began by calculating results under two strategies: one that assumed that PPOs choose to compete with HMOs everywhere, and one that assumed that they choose not to compete anywhere. We selected these “pure” strategies for clarity, acknowledging that PPOs could in fact pursue a mixture of strategies.

**Strategy 1: regional PPOs compete with local HMOs.** We assumed that regional PPOs attempt to compete throughout the region with existing local HMOs and that PPOs match the additional benefits offered by HMOs. In the terms defined above, this implies that PPOs offer a VEB throughout the region that is equal to the maximum county-level VEB—that is, regional VEB = max[county-level VEB].

We also assumed that because competition for enrollees will be more intense in counties with active HMOs, the regional PPO attracts enrollment in these counties equal to the average of the enrollment percentages for the HMOs in the county. In counties without any HMOs, the PPO attracts enrollment at a rate equal to the average HMO market penetration in the region.

Because the entry payment covers only the cost of minimal benefits, the sum of entry payment and the regional VEB gives us the estimated cost for a competitive
PPO. Plans will have to cover their costs with a combination of payments and premiums. Where costs are greater than payments (always the case in Strategy 1), PPOs will charge a premium equal to the difference between regional benchmarks and estimated costs, weighted by the expected enrollment in each county.

**Strategy 2: regional PPOs avoid competition with local HMOs.** We assumed that regional PPOs avoid competing with existing HMOs, instead targeting counties where HMOs do not do business. We also assumed that PPOs do not have to match HMO benefits anywhere and will therefore offer minimal benefits. Consequently, the regional VEB is zero. Finally, we assumed that PPOs attract a constant rate of enrollment in non-HMO counties and no enrollment in HMO counties.

The assumption of a constant enrollment rate in non-HMO counties permitted us to estimate the regional PPO's cost under Strategy 2 by aggregating entry payments across non-HMO counties. Assuming that plans bid their costs, premiums (where positive) will be the difference between regional cost and the benchmark. When this difference is negative, plans will be paid their bid plus 75 percent of the difference, which may be used for supplemental benefits, rebates, and profit.

Structured this way, Strategy 2 will have lower premiums than Strategy 1. But PPOs could have entered non-HMO markets before MMA, and they never did. Perhaps PPOs felt that payment rates were inadequate to support the premiums they would have to charge to avoid crippling adverse selection vis-à-vis FFS Medicare. The difference under MMA is that the population-weighted benchmark dramatically increases payments under Strategy 2.

**Predicted Regional Premiums**

Under Strategy 1, predicted out-of-pocket PPO premiums are highest in California, Florida, Pennsylvania–West Virginia, Alabama–Tennessee, and Louisiana–Mississippi (dashes indicate multistate regions; see Exhibit 1). Most of these regions have richly paid urban counties that drive up benefits, coupled with rural counties that have much lower payment rates. In Alabama–Tennessee and Louisiana–Mississippi this effect is combined with the fact that payments are generally low, relative to the estimated entry payment.

Under Strategy 2, predicted premiums are reduced overall from a national average of $158 to $34. In particular, predicted premiums change from highly positive to negative in California, New York, Pennsylvania–West Virginia, and Florida, where PPOs no longer must offer benefits to compete in the richly paid cities. Alabama–Tennessee and Louisiana–Mississippi have lower predicted premiums, but they are still relatively high ($108 and $95, respectively) because of the low payment rates in those regions.

Given the much lower and frequently negative premiums under Strategy 2, we predict that PPOs will adopt this strategy. This implies that PPOs will attract negligible enrollment in counties where HMOs operate. Furthermore, PPOs might choose not to enter regions where they will have to charge positive premi-
EXHIBIT 1
Estimated Monthly Preferred Provider Organization (PPO) Premium Needed, In 2001 Dollars, By Region, Strategy, And Benchmark Weighting Method

<table>
<thead>
<tr>
<th>Region</th>
<th>Compete</th>
<th>Don’t compete</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Population weighting ($)</td>
<td>Population weighting ($)</td>
</tr>
<tr>
<td>National</td>
<td>158.22</td>
<td>34.13</td>
</tr>
<tr>
<td>1. ME, NH</td>
<td>101.51</td>
<td>28.94</td>
</tr>
<tr>
<td>2. CT, MA, RI, VT</td>
<td>116.70</td>
<td>-38.27</td>
</tr>
<tr>
<td>3. NY</td>
<td>164.64</td>
<td>-94.68</td>
</tr>
<tr>
<td>4. NJ</td>
<td>35.40</td>
<td>-a</td>
</tr>
<tr>
<td>5. DE, DC, MD</td>
<td>92.66</td>
<td>-26.99</td>
</tr>
<tr>
<td>6. PA, WV</td>
<td>200.03</td>
<td>-2.26</td>
</tr>
<tr>
<td>7. NC, VA</td>
<td>179.93</td>
<td>61.45</td>
</tr>
<tr>
<td>8. GA, SC</td>
<td>148.91</td>
<td>68.43</td>
</tr>
<tr>
<td>9. FL</td>
<td>235.87</td>
<td>-71.55</td>
</tr>
<tr>
<td>10. AL, TN</td>
<td>194.95</td>
<td>107.90</td>
</tr>
<tr>
<td>11. MI</td>
<td>118.45</td>
<td>-28.53</td>
</tr>
<tr>
<td>12. OH</td>
<td>89.36</td>
<td>34.69</td>
</tr>
<tr>
<td>13. IN, KY</td>
<td>147.80</td>
<td>69.03</td>
</tr>
<tr>
<td>14. IL, WI</td>
<td>134.25</td>
<td>-4.86</td>
</tr>
<tr>
<td>15. AR, MO</td>
<td>164.41</td>
<td>106.61</td>
</tr>
<tr>
<td>16. LA, MS</td>
<td>197.65</td>
<td>95.49</td>
</tr>
<tr>
<td>17. TX</td>
<td>150.93</td>
<td>20.54</td>
</tr>
<tr>
<td>18. KS, OK</td>
<td>107.04</td>
<td>81.82</td>
</tr>
<tr>
<td>19. IA, MN, MT, NE, NE, SD, WY</td>
<td>164.96</td>
<td>60.03</td>
</tr>
<tr>
<td>20. CO, NM</td>
<td>77.86</td>
<td>21.49</td>
</tr>
<tr>
<td>21. AZ</td>
<td>45.69</td>
<td>-35.17</td>
</tr>
<tr>
<td>22. NV</td>
<td>17.93</td>
<td>-13.32</td>
</tr>
<tr>
<td>23. ID, OR, UT, WA</td>
<td>74.10</td>
<td>-10.65</td>
</tr>
<tr>
<td>24. CA</td>
<td>254.28</td>
<td>-57.89</td>
</tr>
<tr>
<td>25. HI</td>
<td>14.98</td>
<td>-b</td>
</tr>
<tr>
<td>26. AK</td>
<td>-c</td>
<td>-c</td>
</tr>
</tbody>
</table>


1 All counties in New Jersey had health maintenance organization (HMO) plans.
2 The only county in Hawaii without an HMO plan had missing ARF data.
3 ARF data for 1999 were not available by county for Alaska.

ums for nondrug benefits that are available through traditional Medicare. If we assume that PPOs will enter only the regions with negative predicted premiums—meaning that they will be able to afford some combination of supplemental benefits, rebates, and profits—then Strategy 2 implies that PPOs will enter only eleven regions. The question remains: How much will it cost the Trust Funds to achieve this?
Impact On The Medicare Trust Funds

To estimate the impact of Strategy 2 on the Trust Funds, we subtracted average FFS costs from estimated PPO payments in each non-HMO county in one of the eleven regions with negative predicted premiums (Exhibit 1). This difference is the average amount the government will pay for each beneficiary who switches from traditional Medicare to a PPO. Multiplying by the entire Medicare population in these counties (3.9 million) gave an annual estimate of $6.2 billion in the first year ($1,598 per enrollee). This represents the maximum cost; if only a fraction of beneficiaries in these counties enroll, the cost would be reduced accordingly. After the first year, the regional benchmarks will be adjusted to blend the statutory component and the plan bid component according to MA plans’ national market share. Adjusting the benchmarks accordingly, we estimated the maximum cost of PPO enrollment at $5.9 billion in the second and all subsequent years. Thus, the total maximum cost estimate over ten years would be $59.3 billion in 2001 dollars.

At this point, it is instructive to clarify the impact of the population weighting section of the Final Rule. To do so, we recalculated our estimates under Strategy 2, changing the calculation of regional benchmarks from population weighting to enrollment weighting. The results indicate that only two regions (Florida and Arizona) would have negative predicted premiums (Exhibit 1). Assuming, as above, that PPOs enter only those regions where they do not have to charge a premium, the maximum Trust Fund impact under enrollment weighting would be small—$35 million in each year ($350 million over ten years)—but only 800,000 beneficiaries would switch to PPOs. The per enrollee cost of enrollment weighting is much lower ($534), principally because estimated premiums in Florida are much less negative under this approach.

The above analysis assumes that there is no adverse selection into PPOs, no cost advantage for HMOs, and no product differentiation between HMOs and PPOs. Adverse selection into PPOs means that HMOs will be able to offer better benefits than PPOs, and a cost advantage reinforces this effect. Product differentiation means that PPOs will attract enrollment without having to match HMO benefits exactly. These effects offset each other, with the balance probably in favor of HMOs. If PPOs choose not to compete with HMOs (as we assume under Strategy 2), adverse selection and product differentiation become less important, but a PPO cost disadvantage would mean that our estimated premiums would be higher.

Policy implications

According to our simulations, regional Medicare PPOs will enroll up to four million beneficiaries in areas not served by HMOs, at a cost to the Trust Funds of $1,600 per enrollee or up to $60 billion over ten years. The most cost-effective way of attracting enrollees will probably be to offer rebates, so beneficiaries will
switch from traditional FFS Medicare to private plans that have similar nondrug benefits but also offer rebates. These plans will not be available everywhere; they will be most prevalent (because of the largest rebates) in New York, Florida, California, Arizona, Michigan, and parts of New England.

If Congress or the CMS decides to save money by shifting from population weighting to enrollment weighting in some future year, we expect regional PPOs to practically disappear except for those serving about 800,000 beneficiaries in rural Florida and Arizona. Overall, much federal money will have been spent on higher payment rates and other subsidies for PPOs with little lasting effect.

So what can be done? The root of the problem is MMA’s uneven application of regional bidding across plan types. If local plans were eliminated, it would be much less costly to induce regional plans to compete throughout their regions and provide sustainable coverage in rural areas, although questions remain about the ability of PPOs to contain costs in Medicare. On the other hand, the elimination of local plans would cause severe disruption for enrollees, not to mention opposition from HMOs themselves. If regional bidding requirements cannot be applied to existing local plans, in our opinion it will not be possible to use the attractiveness of highly paid areas to “leverage” coverage for less-well-paid areas, and the only way to induce private plans to enter those areas will be through high payment rates and subsidies. Unless funds are available to maintain this solution, regional PPOs in Medicare will offer unstable coverage featuring meager benefits in only a few parts of the country.

Several cautions apply to our analysis. Our simulations were based on 2001 data, and MMA greatly increased payment rates in real terms relative to 2001. Because these increases apply equally to HMOs and PPOs, our results regarding competition between plan types should be unaffected; however, our specific predictions about premium levels and the impact on the Trust Funds could be conservative because payment rates will be higher than those we used. On the other hand, if PPO costs are higher than HMO costs (as we expect, particularly in rural areas) and PPOs experience adverse selection relative to HMOs, then prospects for regional plans could be worse than we predict. Finally, our analysis assumed that PPOs will make market-entry decisions without considering possible entry by other regional plans. If multiple regional plans enter the same markets, economies of scale could be limited, which implies higher costs and lower benefits or rebates.

This research was supported by Grant no. 51151 from the Robert Wood Johnson Foundation’s (RWJF’s) Changes in Health Care Financing and Organization (HCFO) Initiative. The views expressed in this paper are those of the authors and do not necessarily reflect the positions of the RWJF, the Department of Veterans Affairs, Boston University, or the University of Minnesota. The authors thank Carlos Zarabozo, Robert Coulam, Bonnie Austin, Sharon Arnold, and Ann Hendricks for helpful comments.
NOTES

1. This paper focuses on preferred provider organizations (PPOs) and health maintenance organizations (HMOs). We did not attempt to make predictions about the viability of the stand-alone prescription drug plans (PDPs). PDPs do not exist in the commercial market and have never been tested in Medicare. Consequently, opportunities for formal statistical modeling are limited, and prospects are highly uncertain. For a discussion of the issues relevant to PDPs, see R.F. Atlas, “The Role of PBMs in Implementing the Medicare Prescription Drug Benefit,” Health Affairs, 28 October 2004, content.healthaffairs.org/cgi/content/abstract/hlthaff.w4.504 (21 January 2005).


3. Per enrollee, this cost estimate is roughly three times the official estimate published in the Final Rule.


7. For recent estimates and a review of the literature, see M.M. Mello et al., “Understanding Biased Selection in Medicare HMOs,” Health Services Research 38, no. 3 (2003): 981–992.


16. MMA includes an Intra-Service Area Rate (ISAR) Adjustment that would seem to address this problem. After careful review and consultation with CMS staff, we found that the impact of the ISAR adjustment would be minimal. In fact, in the example given above, it would have no impact at all.


18. Congressional Budget Office, “CBO’s Analysis of Regional Preferred Provider Organizations under the Medicare Modernization Act” (Washington: CBO, October 2004). The CBO assumed that the regional benchmarks would be constructed to reflect PPO enrollment, not population.


22. The authors’ sample excluded counties with fewer than 2,783 Medicare beneficiaries in 1990 (the lowest two quintiles) and all counties in Alaska and Hawaii.

23. Details of these statistical models are available from the authors; send e-mail requests to Steven Pizer, pizer@bu.edu. We were reassured to find that applying the methods of Cawley and colleagues to approximately the same data produced nearly identical results.

24. Half of counties at the entry payment level will be entered by one plan. Given that we used entry payments to simulate plans’ bids, this implies that actual bids will be equally likely to be above or below our estimates—in other words, our estimates are unbiased.

25. Whether plans actually bid their costs is likely to depend on factors such as the number of competitors in each market and the number of markets in which the same competitors face each other. Empirical evidence is scant but encouraging. Before Congress blocked it in 1997, the Medicare Competitive Pricing Demonstration received actual bids from plans in Denver. The bids for the “market norm” benefit package (including drugs) were 5–17 percent below the payment rates for the area. Bids for entitlement benefits (no drugs) were 25–38 percent below payment rates. See B.E. Dowd, R. Feldman, and R. Coulam, “More on Medicare Competitive Pricing” (Letter), *Health Affairs* 20, no. 1 (2001): 306–307.

26. We used assumptions about enrollment by county exclusively for aggregating county-level results into region-level figures. Our qualitative results and conclusions are very robust to different enrollment assumptions. To see the effect of our assumptions, consider a region containing only two counties of equal size, one a rural county with no HMOs and the other an urban county with four HMOs, each enrolling 5 percent of beneficiaries. We assumed that the PPO attracts 5 percent of beneficiaries in the urban county (average enrollment for an HMO in the county) and 10 percent in the rural county (average enrollment for all HMOs in the region).

27. For simplicity, we assumed that PPO and HMO costs were approximately the same in this calculation. In fact, we know that PPO costs are somewhat higher, but we also know that beneficiaries place some value on the additional freedom of choice offered by PPOs relative to HMOs. In effect, we assumed that these two factors approximately offset each other.

28. One might wonder why any beneficiaries would enroll in a PPO that offered a value of extra benefits (VEB) equal to zero. The principal answer is that in counties without HMOs, this might be the only way to gain access to the highly subsidized drug benefit. Aside from this, we can think of Strategy 2 as an approximation to offering the lowest VEB that will still attract some enrollment.

29. Additional data are available in an online data supplement; see Supplemental Exhibit 1 at content.healthaffairs.org/cgi/content/full/hlthaff.w5.399/DC2.

30. Ibid.; see Supplemental Exhibits 1 and 2.

31. Enrollment in Medicare PPOs in negative-premium regions might be higher than one would ordinarily predict for a new insurance product because the premium rebates could be quite large. For example, in Michigan a negative premium of $29 translates into $348 per year, which can be divided into rebates and profits. This is a strong incentive for plans to enter the market and for beneficiaries to enroll.

32. We held geographic strategy constant at this point to isolate the effect of the weighting scheme. A shift in weighting would normally affect geographic strategy as well.

33. See also Supplemental Exhibit 3, content.healthaffairs.org/cgi/content/full/hlthaff.w5.399/DC2.


36. For a discussion, see Berenson, “Medicare Disadvantaged.”