The Medicare Advantage program: Status report
12-1  The Congress should eliminate the cap on benchmark amounts and the doubling of the quality increases in specified counties.

COMMISSIONER VOTES: YES 17 • NO 0 • NOT VOTING 0 • ABSENT 0

12-2  The Congress should direct the Secretary to:

• develop a risk adjustment model that uses two years of fee-for-service (FFS) and Medicare Advantage (MA) diagnostic data and does not include diagnoses from health risk assessments from either FFS or MA, and

• then apply a coding adjustment that fully accounts for the remaining differences in coding between FFS Medicare and Medicare Advantage plans.

COMMISSIONER VOTES: YES 16 • NO 1 • NOT VOTING 0 • ABSENT 0

(Additionally, the Commission reiterates its March 2014 recommendations on improving the bidding rules in the MA program and integrating hospice care into the MA benefit package and its March 2004 recommendation on allowing beneficiaries with end-stage renal disease to enroll in private plans. See text box, pp. 361–363.)
Chapter summary

Each year, the Commission provides a status report on the Medicare Advantage (MA) program. In 2015, the MA program included 3,500 plan options, enrolled more than 16.7 million beneficiaries (30 percent of all beneficiaries), and paid MA plans about $170 billion to cover Part A and Part B services. To monitor program performance, we examine MA enrollment trends, plan availability for the coming year, and payments for MA plan enrollees relative to spending for fee-for-service (FFS) Medicare beneficiaries. We also provide updates on risk adjustment, risk coding practices, and current quality indicators in MA. As a result of these analyses, we make recommendations to adjust benchmarks and risk coding.

The MA program gives Medicare beneficiaries the option of receiving benefits from private plans rather than from the traditional FFS Medicare program. The Commission strongly supports the inclusion of private plans in the Medicare program; beneficiaries should be able to choose between the traditional FFS Medicare program and alternative delivery systems that private plans can provide. Because Medicare pays private plans a per person predetermined rate rather than a per service rate, plans have greater incentives than FFS providers to innovate and use care-management techniques.

The Commission has emphasized the importance of imposing fiscal pressure on all providers of care to improve efficiency and contain Medicare program...
costs. For MA, the Commission previously recommended that payments be brought down from previous levels, which were generally higher than FFS, and be set so that the Medicare payment system is neutral and does not favor either MA or the traditional FFS program. Legislation has reduced the inequity in Medicare spending between MA and FFS. As a result, over the past few years, plan bids and payments have come down in relation to FFS spending while enrollment in MA continues to grow. The pressure of competitive bidding and lower benchmarks has led to improved efficiencies that enable MA plans to continue to increase MA enrollment by offering benefits that beneficiaries find attractive.

Previously, the Commission recommended a quality bonus program for MA; the Congress legislated such a program in the Patient Protection and Affordable Care Act of 2010, with bonuses available beginning in 2012. The data on quality indicate that plans are responding to the legislation by paying closer attention to the subset of quality measures that are the basis of bonus payments. In 2016, more plans have achieved quality ratings that would permit bonuses under the statutory provisions.

**Enrollment**—Between 2014 and 2015, enrollment in MA plans grew by about 6 percent (900,000 enrollees) to 16.7 million enrollees. About 30 percent of all Medicare beneficiaries (beneficiaries enrolled in Part A or Part B) were enrolled in MA plans in 2015, about the same rate as in 2014, but up from 28 percent in 2013. Among plan types, HMOs continued to enroll the most beneficiaries (11 million), with 20 percent of all Medicare beneficiaries in HMOs in 2015. Between 2014 and 2015, enrollment in local preferred provider organizations (PPOs) increased by about 9 percent and decreased in regional PPOs by about 1 percent. As expected because of legislation effective in 2010, enrollment in private fee-for-service (PFFS) plans continued to decrease from a high of 2.4 million enrollees in 2009 to about 300,000 enrollees in 2015.

**Plan availability**—Access to MA plans remains high in 2016, with most Medicare beneficiaries having access to a large number of plans. Almost all beneficiaries have had access to some type of MA plan since 2006, and HMOs and local PPOs have become more widely available in the past few years. Ninety-six percent of Medicare beneficiaries have an HMO or local PPO plan operating in their county of residence, up from 95 percent in 2015. Regional PPOs are available to 73 percent of beneficiaries, up from 70 percent in 2015. Forty-seven percent of beneficiaries have access to PFFS plans. Overall, 99 percent of all Medicare beneficiaries have access to an MA plan.

An analysis of the market structure of the MA program shows that, compared with 2007, MA enrollment is more heavily concentrated in 2015. The top 10 MA
organizations (ranked by enrollment) had 69 percent of total enrollment in 2015, compared with 61 percent in 2007. Despite this concentration, on average an increasing number of MA organizations are participating by county; between 2007 and 2015, the per county average number of MA organizations offering coordinated care plans (HMOs or PPOs) rose from 2.6 to 3.2. However, at the county level, enrollment is often concentrated in the top 10 organizations.

**Plan payments**—For 2016, the base county benchmarks (in nominal dollars and before any quality bonuses are applied) average approximately 3 percent higher than the benchmarks for 2015. (The benchmark that is compared to a specific plan bid is a plan-specific average, weighted by the plan’s enrollment from each county in its service area.) Also, for 2016, 70 percent of MA enrollees, up from a projected 59 percent in 2015, are projected to be in plans that will receive add-ons to their benchmarks through the quality bonus provisions. These quality bonus add-ons are either 5 percent or 10 percent. On average, the quality bonuses in 2016 will add 4 percent to the average plan’s (averaging both bonus and nonbonus plans) base benchmark, up from 3 percent added in 2015, and will add 3 percent to plan payments. We estimate that 2016 MA benchmarks (including the average 4 percent for quality bonuses), bids, and payments will average 107 percent, 94 percent, and 102 percent of FFS spending, respectively.

Removing quality bonuses from the benchmarks, we expect the base benchmarks to average 102 percent of FFS in 2017 and thus approach rough equity with FFS. Nonetheless, there are equity issues surrounding the distribution of benchmarks and payments. Currently, CMS’s calculation of FFS spending, on which MA benchmarks are based, needs refinement to be more representative of FFS spending for the beneficiaries who can enroll in MA plans (i.e., those who are enrolled in both Part A and Part B); benchmark caps can unduly penalize plans that exceed the cap, often through reduced quality bonuses; and legislation providing double quality bonuses to qualified counties inequitably raises these bonuses for some counties without commensurate quality improvements. Therefore, we recommend eliminating the benchmark caps and double quality bonuses to improve intercounty benchmark equity.

**Risk adjustment and coding intensity**—Medicare payments to plans for an enrollee are based on the plan’s payment rate and the enrollee’s health risk score. Analyses have shown that MA plan enrollees have higher risk scores than similar FFS beneficiaries because of plans’ more intensive coding efforts. As mandated by the Deficit Reduction Act of 2005, CMS makes an across-the-board adjustment to the risk scores to make them more consistent with FFS coding. We find that CMS would need to increase the coding adjustment (i.e., lower enrollees’ risk scores)
and/or change the way diagnoses are collected for use in the risk adjustment process to ensure the coding levels in aggregate are roughly equal between the FFS and MA programs. Specifically, we consider an alternative approach to adjust for coding differences that would (1) remove health risk assessments as a source of diagnoses from risk adjustment calculations, (2) use two years of FFS and MA diagnostic data in the risk adjustment model, and (3) apply an across-the-board adjustment of appropriate size such that the combined effect eliminates the impact of differences in MA and FFS coding intensity.

**Quality measures**—A comparison of the most current results for MA quality indicators relative to last year shows that performance improved in several measures, declined for one measure among HMOs, and slightly declined in patient experience measures. In general, quality indicators remained stable, but a number of measures had specification changes that did not allow us to determine year-over-year changes in the measure results.

MA plans are able to receive bonus payments if they achieve an overall rating of 4 stars or higher on CMS’s 5-star rating system. Although the distribution of plans at different star levels changed between the 2015 star ratings and the 2016 star ratings, there was little change in the enrollment-weighted average star ratings for the 331 plans that had a star rating for both rating periods. However, across all plans, the share of enrollees in bonus-level plans increased. Among 363 plans with an overall 2016 star rating, 173 (48 percent) have a star rating of 4 stars or higher; as of October 2015, these bonus-eligible plans include 70 percent of MA enrollment. In the preceding year, among 389 plans with an overall 2015 star rating, 153 MA plans (39 percent) had a star rating of 4 or higher, representing 59 percent of the 2014 enrollment. The smaller number of plans with ratings and the greater share of enrollees in bonus-eligible plans is partly due to contract consolidations whereby an organization combines multiple plans under one surviving plan. For 2016, 16 contracts with lower than 4-star ratings have had their enrollees incorporated into 4-star or 4.5-star contracts.

The Commission and CMS have examined the question of whether the star rating system should take into account population differences when analyses indicate that there are systematic differences in measure results—specifically for low-income beneficiaries and beneficiaries with disabilities. Both the Commission and CMS have found systematic differences among these populations in certain measures, but the effects across plans are relatively small. CMS is considering making adjustments to the star rating system to address the potential bias in star ratings.
Background

The Medicare Advantage (MA) program allows Medicare beneficiaries to receive benefits from private plans rather than from the traditional fee-for-service (FFS) program. In 2015, the MA program included 3,500 plan options and enrolled more than 16.7 million beneficiaries (30 percent of all beneficiaries). Medicare paid MA plans about $170 billion to cover Part A and Part B services. The Commission supports including private plans in the Medicare program because they allow beneficiaries to choose between FFS Medicare and alternative delivery systems that private plans can provide. Plans often have flexibility in payment methods, including the ability to negotiate with individual providers, care-management techniques that fill potential gaps in care delivery (e.g., programs focused on preventing avoidable hospital readmissions), and robust information systems that provide timely feedback to providers. Plans also can reward beneficiaries for seeking care from more efficient providers and give beneficiaries more predictable cost sharing; one trade-off is that plans often restrict the choice of providers.

By contrast, traditional FFS Medicare has lower administrative costs and offers beneficiaries an unconstrained choice of health care providers among those who accept Medicare payment, but it lacks incentives to coordinate care and is limited in its ability to modify care delivery. Because private plans and traditional FFS Medicare have structural aspects that appeal to different segments of the Medicare population, we favor providing a financially neutral choice between private MA plans and traditional FFS Medicare. Medicare’s payment systems should not unduly favor one component of the program over the other.

Efficient MA plans may be able to capitalize on their administrative flexibility to provide better value to beneficiaries who enroll in their plans. However, some of the extra benefits that MA plans provide to their enrollees result from payments that would have been lower under FFS Medicare for similar beneficiaries. Thus, those benefits are financed by higher government spending and higher beneficiary Part B premiums (including for those who are in traditional FFS Medicare) at a time when Medicare and its beneficiaries are under increasing financial stress. To encourage efficiency and innovation, MA plans need to face some degree of financial pressure, just as the Commission recommends for providers in the traditional FFS program. One method of achieving financial neutrality is to link private plans’ payments more closely to FFS Medicare costs within the same market. Alternatively, neutrality can be achieved by establishing a government contribution that is equally available for enrollment in either FFS Medicare or an MA plan. The Commission will continue to monitor the effect of changes mandated by the Patient Protection and Affordable Care Act of 2010 (PPACA) on plan payments and performance and track progress toward financial neutrality.

Each year, the Commission provides a status report on the MA program. To monitor program performance, we examine MA enrollment trends, plan availability for the coming year, and payments for MA plan enrollees relative to spending for FFS Medicare beneficiaries. We also provide updates on risk adjustment, risk coding practices, and current quality indicators in MA. As a result of these analyses, we make recommendations to adjust benchmarks and risk coding.

Trends in enrollment, plan availability, and payments

In contrast to traditional FFS Medicare, MA enrolls beneficiaries in several types of private health plans. Medicare pays plans a fixed rate per enrollee rather than a fixed rate per service.

Types of MA plans

Our analysis of the MA program uses the most recent data available and reports results by plan type. The plan types are:

- **HMOs and local preferred provider organizations (PPOs)**—These plans have provider networks and can use tools such as selective contracting and utilization management to coordinate and manage care and control service use.¹ They can choose individual counties to serve and can vary their premiums and benefits across counties. These two plan types are classified as coordinated care plans (CCPs).

- **Regional PPOs**—These plans are required to offer a uniform benefit package and premium across designated regions made up of one or more states. Regional PPOs have more flexible network requirements than local PPOs. Regional PPOs are also classified as CCPs.
Private FFS (PFFS) plans—PFFS plans are not classified as CCPs. Before 2011, PFFS plans typically did not have provider networks, making them less able than other plan types to coordinate care. They usually paid providers Medicare’s FFS payment rates (instead of negotiated rates) and had fewer quality reporting requirements. Because PFFS plans generally lacked care coordination, had lower quality measures than CCPs on the measures they reported, paid Medicare FFS rates, and had higher administrative costs than traditional FFS Medicare, they were viewed as providing little value. In response, the Medicare Improvements for Patients and Providers Act of 2008 mandated that, in areas with two or more CCP plans, PFFS plans can be offered only if they have provider networks. PFFS plans are also now required to participate in quality reporting. Existing PFFS plans had to either locate in areas with fewer than two network plans or develop provider networks themselves, which in effect would change them into PPOs or HMOs, or they would operate as network-based PFFS plans.

Two additional plan classifications cut across plan types. Special needs plans (SNPs) are one of these classifications; they offer benefit packages tailored to specific populations (those beneficiaries who are dually eligible for Medicare and Medicaid, are institutionalized, or have certain chronic conditions). SNPs must be CCPs. The second classification is employer group plans, which are available only to Medicare beneficiaries who are members of employer or union groups that contract with those plans. Employer group plans cannot be PFFS plans. Both SNPs and employer group plans are included in our plan data, with the exception of plan availability figures because these plans are not available to all beneficiaries. (See the Commission’s March 2013 report to the Congress for more detailed information on SNPs.)

How Medicare pays MA plans
Plan payment rates are determined by the MA plan bid, which represents the dollar amount the plan estimates will cover the Part A and Part B benefit package for a beneficiary of average health status, and the payment area’s benchmark, which is the maximum amount of Medicare payment set by law for an MA plan to provide Part A and Part B benefits. (Medicare also pays plans for providing the Part D drug benefit, but the Medicare payments for Part D are determined through the Part D bidding process, and not all plans include the Part D benefit.) Plans with higher quality ratings are rewarded with a higher benchmark. (The benchmark that is compared to a specific plan bid is a plan-specific average, weighted by the plan’s enrollment from each county in its service area.) If a plan’s bid is above the benchmark, its MA payment rate is equal to the benchmark and enrollees have to pay a premium (in addition to the usual Part B premium) equal to the difference. If a plan’s bid is below the benchmark, its payment rate is its bid plus a percentage (between 50 percent and 70 percent depending on a plan’s quality ratings) of the difference between the plan’s bid and the benchmark; the beneficiary pays no premium to the plan for the Part A and Part B benefits (but continues to be responsible for payment of the Medicare Part B premium and may pay premiums to the plan for additional benefits). The payment amount above the bid is referred to as the rebate. The rebate must be used by the plan to provide additional benefits to enrollees in the form of lower cost sharing, lower premiums, or supplemental benefits. (The valuation of the rebate can be fully loaded, meaning that the plan can devote some of the rebate to administration costs and margins.) Plans may also choose to include additional supplemental benefits in their packages and charge premiums to cover those additional benefits. (A more detailed description of the MA program payment system can be found at http://medpac.gov/documents/payment-basics/medicare-advantage-program-payment-system-15.pdf?sfvrsn=0).

Because benchmarks have historically been set well above what it costs Medicare to provide benefits to similar beneficiaries in the FFS program, MA payment rates usually exceed FFS spending. In past reports, we examined why benchmarks are above FFS spending and what the ramifications are for the Medicare program. In 2015, Part A and Part B payments to MA plans totaled approximately $170 billion.

MA plan enrollment continued to grow faster than total Medicare beneficiary growth in 2015
Between November 2014 and November 2015, enrollment in MA plans grew by about 6 percent—or 0.9 million enrollees—to 16.7 million enrollees (compared with growth of about 3 percent in the same period for the total Medicare population). About 30 percent of all Medicare beneficiaries were enrolled in MA plans in 2015, about the same as in 2014 (Table 12-1).
Previous work we did suggests that many beneficiaries enroll in MA immediately upon becoming eligible, but that more initially enroll in FFS Medicare and then subsequently move to MA. For more on enrollment patterns, see our March 2015 report (Medicare Payment Advisory Commission 2015).

Among plan types, HMOs continued to enroll the most beneficiaries (11 million), with 20 percent of all Medicare beneficiaries in HMOs in 2015. Between 2014 and 2015, enrollment in local PPOs continued to grow, by about 9 percent. Regional PPO enrollment decreased by about 1 percent. As expected because of legislation effective in 2010, PFFS enrollment continued to decrease from a high of 2.4 million enrollees in 2009 to about 300,000 enrollees in 2015 (Table 12-1). In 2015, SNP enrollment grew by 3 percent and employer group enrollment grew by 5 percent.

Enrollment patterns differ in urban and rural areas. A larger share of urban beneficiaries are enrolled in MA (about 33 percent) compared with beneficiaries residing in rural counties (about 21 percent). About one-third of rural MA enrollees were in HMO plans (not shown in Table 12-1) compared with over 70 percent of urban enrollees. By contrast, 6 percent of rural enrollees were in PFFS plans compared with 1 percent of urban enrollees.

The percentage of Medicare beneficiaries enrolled in MA plans in 2015 varied widely by geography. In some metropolitan areas, less than 1 percent of Medicare beneficiaries were enrolled in MA plans (Anchorage, AK), whereas in other areas, enrollment was 60 percent or more (Miami, FL; Pittsburgh, PA; Rochester, NY; and several areas in Puerto Rico).

Growth in MA enrollment in 2015 continued a trend begun in 2003. Since 2003, enrollment has more than
Access to PFFS plans in 2016 is unchanged at 47 percent of beneficiaries. Overall, 99 percent of Medicare beneficiaries have access to an MA plan, and 99 percent have access to a CCP (not shown in Table 12-2), an increase from 98 percent in 2015.

The availability of SNPs has changed slightly and varies by the type of special needs population served. In 2016, 83 percent of beneficiaries reside in areas where SNPs serve beneficiaries who are dually eligible for Medicare and Medicaid (up from 82 percent in 2015), 50 percent live where SNPs serve institutionalized beneficiaries (up from 47 percent in 2015), and 54 percent live where SNPs serve beneficiaries with chronic conditions (down from 55 percent in 2015). Overall, 86 percent of beneficiaries reside in counties served by at least one type of SNP.

In 2016, 81 percent of Medicare beneficiaries have access to at least one MA plan that includes Part D drug coverage and charges no premium (beyond the Medicare Part B premium), compared with 78 percent in 2015. Twenty-seven percent of beneficiaries have access to plans that offer some reduction in the Part B premium (not shown in Table 12-2). Table 12-2 shows the average rebates for nonemployer, non-SNP plans. For 2016, rebates (which can include allocations to plan administration and profit margin) for nonemployer, non-SNP plans average $81 per enrollee per month. The rebates are higher than in 2014 and 2015, but lower than in the peak year of 2012.

In most counties, a large number of MA plans are available to beneficiaries. For example, beneficiaries in Cleveland, OH; New York City; and Orange County, CA, can choose from at least 40 plans in 2016. At the other end of the spectrum, over 200 counties, representing 1 percent of beneficiaries, have no MA plans available; however, many of these beneficiaries have the option of joining cost plans (another managed care option under Medicare).2 On average, nine plans are offered in each county in 2016, the same as in 2015. The plans offered include an average of nine CCPs in 2016, up from an average of eight in 2015 (Table 12-2 does not break out the number of CCPs, and there are non-CCPs offered in 2016, but not enough to make a difference when rounding). Plan availability can also be calculated, weighted by the number of beneficiaries living in the county, to give a sense of the number of plan choices available to the average beneficiary. According to that calculation, the average beneficiary has 18 plans, including 17 CCPs, available in 2016, up from 17 plans, including 16 CCPs, in 2015.

Plan availability for 2016

Every year, we assess plan availability and projected enrollment for the coming year based on the bid data that plans submit to CMS. We find that access to MA plans remains high in 2016, with most Medicare beneficiaries having access to a large number of plans. Some measures of availability have improved for 2016. While almost all beneficiaries have had access to some type of MA plan since 2006, local CCPs have become more widely available in the past few years (Table 12-2). In 2016, 96 percent of Medicare beneficiaries have an HMO or local PPO plan operating in their county of residence, up from 95 percent in 2015 and up from 91 percent in 2010. Regional PPOs are available to 73 percent of beneficiaries, up from 70 percent in 2015.
In 2015, 54 percent of MA enrollment was in the four largest parent organizations (Table 12-3, p. 336). The top 10 organizations (ranked by enrollment) had 69 percent of enrollment. There were 75 parent organizations with fewer than 10,000 enrollees each, accounting for about 1.5 percent of total MA enrollment. By contrast, in 2007, when total MA enrollment was about half the current level, the MA market was less concentrated in that the four largest organizations had 45 percent of total enrollment; the top 10 organizations had 61 percent of the total enrollment; and 99 organizations with under 10,000 enrollees had a little over 3 percent of total MA enrollment.

Looking at particular segments of the MA market, the top 10 organizations dominate the MA employer group market (which represents about one-fifth of MA enrollment). In 2015, 80 percent of MA employer group enrollment was in the top 10 parent organizations. Only 1 of the top 10 organizations (WellCare) had no employer group enrollment. For the top 10 organizations other than WellCare, the share of MA enrollment in employer plan types is as follows:

- **Local CCP**: 79% in 2010, 76% in 2011, 78% in 2012, 82% in 2013, 82% in 2014, 82% in 2015, 83% in 2016
- **Regional PPO**: 63% in 2010, 46% in 2011, 45% in 2012, 55% in 2013, 51% in 2014, 55% in 2015, 54% in 2016
- **Special needs plans**: Dual eligible—63% in 2010, 46% in 2011, 45% in 2012, 55% in 2013, 55% in 2014, 55% in 2015, 54% in 2016; Chronic disease—63% in 2010, 46% in 2011, 45% in 2012, 55% in 2013, 55% in 2014, 55% in 2015, 54% in 2016; Institutional—49% in 2010, 47% in 2011, 41% in 2012, 46% in 2013, 47% in 2014, 47% in 2015, 50% in 2016
- **Zero-premium plan with drug coverage**: 85% in 2010, 90% in 2011, 88% in 2012, 86% in 2013, 84% in 2014, 78% in 2015, 81% in 2016

In 2015, 54 percent of MA enrollment was in the four largest parent organizations (Table 12-3, p. 336). The top 10 organizations (ranked by enrollment) had 69 percent of enrollment. There were 75 parent organizations with fewer than 10,000 enrollees each, accounting for about 1.5 percent of total MA enrollment. By contrast, in 2007, when total MA enrollment was about half the current level, the MA market was less concentrated in that the four largest organizations had 45 percent of total enrollment; the top 10 organizations had 61 percent of the total enrollment; and 99 organizations with under 10,000 enrollees had a little over 3 percent of total MA enrollment.

### Market structure of the Medicare Advantage program

In past reports and in this year’s report, the Commission has written about the market structure of the Medicare Part D drug program. In this section, we provide a similar analysis of the market structure of the MA program and changes over time.

In 2015, 185 parent organizations offered MA plans or participated in the Medicare–Medicaid demonstration project for dually eligible Medicare beneficiaries (in which the plans operate as MA plans). For the 2016 contract year, 9 new organizations are offering MA plans, and 1 organization has discontinued its MA participation, resulting in 193 parent organizations offering plans in 2016. The types of organizations sponsoring MA plans range from multistate insurers to more local plans that can be sponsored by providers to highly specialized plans such as the chronic care special needs plans offered to beneficiaries with HIV/AIDS.

### Table 12–2: Access to Medicare Advantage plans remains high

<table>
<thead>
<tr>
<th>Type of plan</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any MA plan</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>99%</td>
<td>99%</td>
</tr>
<tr>
<td>Local CCP</td>
<td>91%</td>
<td>92%</td>
<td>93%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>96%</td>
</tr>
<tr>
<td>Regional PPO</td>
<td>86%</td>
<td>86%</td>
<td>76%</td>
<td>71%</td>
<td>71%</td>
<td>70%</td>
<td>73%</td>
</tr>
<tr>
<td>PFFS</td>
<td>100%</td>
<td>63%</td>
<td>60%</td>
<td>59%</td>
<td>53%</td>
<td>47%</td>
<td>47%</td>
</tr>
<tr>
<td>Special needs plans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dual eligible</td>
<td>79%</td>
<td>76%</td>
<td>78%</td>
<td>82%</td>
<td>82%</td>
<td>82%</td>
<td>83%</td>
</tr>
<tr>
<td>Chronic disease</td>
<td>63%</td>
<td>46%</td>
<td>45%</td>
<td>55%</td>
<td>51%</td>
<td>55%</td>
<td>54%</td>
</tr>
<tr>
<td>Institutional</td>
<td>49%</td>
<td>47%</td>
<td>41%</td>
<td>46%</td>
<td>47%</td>
<td>47%</td>
<td>50%</td>
</tr>
<tr>
<td>Zero-premium plan with drug coverage</td>
<td>85%</td>
<td>90%</td>
<td>88%</td>
<td>86%</td>
<td>84%</td>
<td>78%</td>
<td>81%</td>
</tr>
<tr>
<td>Average number of choices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>County weighted</td>
<td>21%</td>
<td>12%</td>
<td>12%</td>
<td>12%</td>
<td>10%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Beneficiary weighted</td>
<td>30%</td>
<td>26%</td>
<td>19%</td>
<td>19%</td>
<td>18%</td>
<td>17%</td>
<td>18%</td>
</tr>
<tr>
<td>Average rebate for nonemployer, non-SNP plans</td>
<td>$74</td>
<td>$83</td>
<td>$85</td>
<td>$81</td>
<td>$75</td>
<td>$76</td>
<td>$81</td>
</tr>
</tbody>
</table>

**Note:** MA (Medicare Advantage), CCP (coordinated care plan), PPO (preferred provider organization), PFFS (private fee-for-service), SNP (special needs plan). CCPs include HMO, local PPO, and regional PPO plans. These figures exclude employer-only plans. Special needs plans are included in the three special needs plan rows but excluded from all other rows. A zero-premium plan with drugs includes Part D coverage and has no premium beyond the Part B premium.

**Source:** MedPAC analysis of CMS bid data and population reports.
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While MA concentration has increased when measured by market shares of the largest companies, on average, the number of organizations competing in each geographic area is increasing. Between 2007 and 2015, the per county average number of available MA organizations offering CCPs (that is, HMOs or PPOs, in which plans are required to form provider networks) increased from 2.6 to 3.2 per county. In the 10 counties with the largest Medicare populations (representing 10 percent of the total Medicare population and 14 percent of MA enrollment), the average number of organizations per county rose from 11 to 16 (with only 1 large county, Miami-Dade, seeing a reduction in the number of MA organizations, from 16 to 14). There was a reduction in the number of organizations offering CCPs in 586 counties (where 14 percent of the Medicare population resided, with 16 percent of MA enrollment in October 2015), but 3 or more organizations remained available for 116 of the 586 counties. The 116 counties had the larger population share among the 586 counties. The 470 counties with fewer than 3 organizations remaining had 5 percent of the Medicare population and 2 percent of MA enrollment in October 2015. At the county level,

SNPs are another market segment in MA. The level of concentration among the top 10 MA organizations listed in Table 12-3 varies by SNP type. In 2015, the top 10 organizations had:

- 53 percent of the enrollment of SNPs for Medicare–Medicaid dually eligible beneficiaries;
- 73 percent of chronic disease SNP enrollment; and
- 84 percent of the enrollment in SNPs for institutionalized beneficiaries (with 1 organization, UnitedHealth Group, the sponsor of Evercare, accounting for 76 percent of all institutional special needs plans’ (I–SNPs’) enrollment).

<table>
<thead>
<tr>
<th>Parent organization</th>
<th>2007 Enrollment as a percent of total</th>
<th>2015 Enrollment as a percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>UHC–Pacificare (UnitedHealth)</td>
<td>17%</td>
<td>20%</td>
</tr>
<tr>
<td>Humana Inc.</td>
<td>14%</td>
<td>19%</td>
</tr>
<tr>
<td>Kaiser Permanente</td>
<td>10%</td>
<td>7%</td>
</tr>
<tr>
<td>Wellpoint Inc.</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Subtotals, top 4 organizations</strong></td>
<td><strong>45%</strong></td>
<td><strong>54%</strong></td>
</tr>
<tr>
<td>Highmark Inc.</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>Coventry Health Care Inc.</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Health Net Inc.</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Universal American Financial Corporation</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Aetna Inc.</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Blue Cross Blue Shield of Michigan</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Totals, top 10 organizations</strong></td>
<td><strong>61%</strong></td>
<td><strong>69%</strong></td>
</tr>
</tbody>
</table>

Note: MA (Medicare Advantage). Figures may not sum to stated totals due to rounding.

Source: MedPAC analysis of Medicare Advantage monthly contract reports and plan directories.
and present three sets of percentages: the benchmarks relative to projected FFS spending, the bids relative to projected FFS spending, and the resulting payments to MA plans relative to projected FFS spending. Benchmarks are set each April for the following year. Plans submit their bids in June and incorporate the recently released benchmarks. Benchmarks reflect FFS spending estimates for 2016 made by CMS actuaries at the time the benchmarks were published in April 2015. We estimate that 2016 MA benchmarks (including quality bonuses), bids, and payments will average 107 percent, 94 percent, and 102 percent of FFS spending, respectively (Table 12-4), the same as last year.

**MA benchmarks**
Under PPACA, county benchmarks in 2016 are transitioning to a system in which each county’s benchmark in 2017, excluding quality bonuses, will be a certain percentage (ranging from 95 percent to 115 percent, subject to caps) of the average per capita FFS Medicare spending for the county’s residents. Each county’s benchmark in 2017, excluding quality bonuses, is determined by organizing the counties into quartiles based on their FFS spending. Counties (excluding the territories) are ranked by average FFS spending; the highest spending quartile of counties have benchmarks set at 95 percent of local FFS spending. The next highest

<table>
<thead>
<tr>
<th>Plan type</th>
<th>Percent of FFS spending in 2016</th>
<th>Benchmarks*</th>
<th>Bids</th>
<th>Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>All MA plans</td>
<td></td>
<td>107%</td>
<td>94%</td>
<td>102%</td>
</tr>
<tr>
<td>HMO</td>
<td></td>
<td>106</td>
<td>90</td>
<td>101</td>
</tr>
<tr>
<td>Local PPO</td>
<td></td>
<td>109</td>
<td>105</td>
<td>108</td>
</tr>
<tr>
<td>Regional PPO</td>
<td></td>
<td>103</td>
<td>98</td>
<td>101</td>
</tr>
<tr>
<td>PFFS</td>
<td></td>
<td>111</td>
<td>108</td>
<td>110</td>
</tr>
<tr>
<td>SNP**</td>
<td></td>
<td>105</td>
<td>94</td>
<td>101</td>
</tr>
<tr>
<td>Employer group**</td>
<td></td>
<td>108</td>
<td>103</td>
<td>106</td>
</tr>
</tbody>
</table>

Note: FFS (fee-for-service), MA (Medicare Advantage), PPO (preferred provider organization), PFFS (private fee-for-service), SNP (special needs plan). Benchmarks are the maximum Medicare program payments for MA plans and incorporate plan quality bonuses. We estimate FFS spending by county using the 2016 MA rate book. We removed spending related to the remaining double payment for indirect medical education payments made to teaching hospitals.
* Benchmarks include quality bonuses.
** SNPs and employer group plans have restricted availability, and their enrollment is included in the statistics by plan type. We have broken them out separately to provide a more complete picture of the MA program.

Source: MedPAC analysis of data from CMS on plan bids, enrollment, benchmarks, and fee-for-service expenditures.

2016 benchmarks, bids, and payments relative to FFS spending
Using plans’ bid projections, we compare the Medicare program’s projected MA spending with projected FFS spending on a like set of FFS beneficiaries. We calculate enrollment is often concentrated among the organizations listed in Table 12-3. For example, as of October 2015, 79 percent of MA enrollees in non-SNP, non-employer-group plans reside in counties in which the top 10 organizations have over 50 percent of the MA enrollment, and 54 percent of such enrollees reside in counties in which the top 10 organizations have 70 percent or more of the MA enrollment. Looking at the top four organizations, 53 percent of non-SNP, non-employer-group-plan enrollees reside in a county in which the top four organizations have 50 percent or more of the MA enrollment; 28 percent of such enrollees are in counties where the top four organizations have 70 percent or more of the MA enrollment.

Currently, a number of mergers of health insurers are planned, including those among 4 of the top 10 organizations—the merger of Aetna and Humana and that of Anthem and Cigna. If these mergers are approved, we can expect to see concentration increase in the MA marketplace.
spending quartile of county benchmarks is set at 100 percent of FFS spending, followed by the third highest quartile set at 107.5 percent of FFS spending. The lowest spending quartile has benchmarks set at 115 percent of local FFS spending. Each quartile contains 786 or 787 counties, except the lowest spending quartile, which also contains the U.S. territories. Low-FFS-spending counties will have benchmarks higher than FFS to help attract plans, and high-FFS-spending counties will have benchmarks lower than FFS to generate Medicare savings. Plans awarded quality bonuses will have benchmarks 5 percent higher than the standard county benchmarks, and in certain counties (where plans receive the double bonus), the benchmarks for plans awarded quality bonuses will be 10 percent higher than the standard benchmarks.

The transition from old benchmarks will be complete by 2017. (See the Commission’s March 2011 report to the Congress for more details on PPACA benchmark changes.) In 2016, four-fifths of all counties have base benchmarks (not including quality payments in the base) that have fully transitioned to the final PPACA levels. These counties include 70 percent of all Medicare beneficiaries and 68 percent of MA enrollees. Overall, about 90 percent of the dollar changes in the base benchmarks transition has occurred:

- In 2011, plan base benchmarks averaged 113 percent of FFS spending.
- In 2016, plan base benchmarks average 103 percent of FFS spending.
- In 2017, fully transitioned base benchmarks are expected to average about 102 percent of FFS spending.

For 2016, the base county benchmarks (in nominal dollars and before any quality bonuses are applied) average approximately 3 percent more than the benchmarks for 2015. Also, for 2016, 70 percent of MA enrollees, up from a projected 59 percent in 2015, are projected to be in plans that will receive add-ons to their benchmarks through the PPACA quality bonus provisions. These quality bonus add-ons are either 5 percent or 10 percent of FFS spending. On average, the quality bonuses add 4 percent to the benchmarks in 2016, while the bonuses added 3 percent to the benchmarks on average in 2015.³

**MA bids and payments for different plan types**

The modest growth in benchmarks over the past few years may have exerted fiscal pressure on MA plans and encouraged them to better control costs and restrain growth in their bids. The average bid for 2016 is 94 percent of the projected FFS spending for beneficiaries with similar geographic and risk profiles, unchanged from 2015. About 63 percent of nonemployer plans bid to provide Part A and Part B benefits for less than what the FFS Medicare program would spend to provide these benefits in 2016. These plans are projected to enroll 68 percent of nonemployer MA enrollees in 2016. About 1 million beneficiaries, excluding those enrolled in employer group MA plans, are projected to enroll in plans that bid lower than 73 percent of FFS spending, while a similar number of beneficiaries are projected to enroll in plans that bid at least 112 percent of FFS spending.

Figure 12-2, illustrating over 2,000 plan bids (excluding roughly 1,500 employer plans, SNPs, and plans in the territories), shows how plans bid relative to FFS for service areas with different ranges of FFS spending. The first three FFS spending ranges roughly correspond to the FFS ranges in the first three payment rate quartiles in the PPACA payment rules for 2016. We broke the fourth quartile into three FFS spending ranges because a substantial share of Medicare beneficiaries—about 35 percent—live in counties in the highest spending quartile. Each of the 6 FFS ranges covers the bids of at least 110 plans and 1.2 million projected enrollees.

Table 12-4, p. 337; Figure 12-2).

Although plan bids average less than FFS spending, payments for enrollees in these plans usually exceed such spending because the benchmarks (including the quality bonuses) are high relative to FFS spending. Overall, plan

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³ While the bidding and payment patterns are reported here as averages, clearly there is much variation within these averages (Table 12-4, p. 337; Figure 12-2).
bids average 94 percent of expected FFS spending for beneficiaries with similar geographic and risk profiles in 2016, but because the benchmarks average 107 percent of FFS spending, Medicare pays an average of 102 percent of FFS for beneficiaries enrolled in MA. (Excluding quality bonuses, Medicare benchmarks average 103 percent of FFS, and Medicare payments average 99 percent of FFS for MA enrollees.)

The ratio of MA plan payments to FFS spending varies by plan type, but the ratios for all plan types are at or higher than 100 percent of FFS. For example, HMOs as a group bid an average of 90 percent of FFS spending, yet 2016 payments for HMO enrollees are estimated to average 101 percent of FFS spending because the benchmarks average 106 percent of FFS spending. Local PPOs and PFFS plans have average bids above FFS spending. As a result, payments for local PPO and PFFS enrollees are estimated to be 108 percent and 110 percent, respectively, of FFS spending. Payments for beneficiaries enrolled in regional PPOs averaged 101 percent of FFS because of the relatively low benchmarks for the regional PPOs.

We also analyzed bids and payments to SNPs and employer plans separately because the plans are available only to subpopulations of Medicare beneficiaries and bidding behavior may differ from that of other plan types. In the past, payments to SNPs and their bids tended to be slightly higher relative to FFS spending than payments to the other MA plans. This year in aggregate, however, SNP bids and payments look much like the average plan.

Employer group plans consistently bid higher than plans that are open to all Medicare beneficiaries. Employer
groups bid an average of 103 percent of FFS compared with 92 percent of FFS for nonemployer plans (not shown in Table 12-4, p. 337). Medicare pays 106 percent of FFS for employer plan enrollees.

In the past, we have recommended that CMS pay employer plans differently because the employer bids are not usually submitted for a competitive purpose, while the bids for nonemployer plans are submitted to compete for enrollment. (For more details on employer plans and our recommendation, see our March 2014 report to the Congress, available at http://www.medpac.gov.) We have reprinted this recommendation, as well as two other previous recommendations that seek to make MA a choice for the complete Medicare benefit by including the FFS hospice benefit in the MA benefit package and by removing the exclusion of most end-stage renal disease (ESRD) beneficiaries from MA eligibility.\(^3\)

**MA plan margins**

In last year’s March report, we provided information about MA plan margins based on 2012 historical data that plans provided as part of their 2014 bid submissions (Medicare Payment Advisory Commission 2015). We found the industry-wide margin for Part C (that is, MA revenue and expenditures excluding Part D) to be 4.9 percent. However, we commented that we expected margins in subsequent years to be lower because of the sequestration that went into effect as of April 2013 and because plans were preparing to meet a medical loss ratio requirement as of 2014.

Using 2013 historical data from the 2015 bids, we find that the aggregate Part C margin for MA plans in 2013 was 3.7 percent, with administrative costs (as identified in plan bids) at 9.3 percent (with the benefit ratio therefore at 87 percent). When Part D revenue and cost data are included, the industry-wide combined Part C and Part D margin for MA plans with Part D coverage was 4.2 percent in 2013. The industry-wide margin for plans that did not include drug coverage—representing 11 percent of all revenue in Part C—was 4.9 percent in 2013.

Below are 2013 margin levels by selected MA categories for plans that include drug coverage (excluding Medicare’s reinsurance payments in Part D):

- HMOs: 4.1 percent
- local PPOs: 4.0 percent
- for-profit plans: 5.9 percent (before taxes)
- nonprofit plans: 0.4 percent
- SNPs: 8.0 percent
- plans other than SNPs: 3.3 percent

For plans with drug coverage where we have Part C and Part D data at the level of the parent organization, in 2013:

- 40 organizations, representing 20 percent of all revenue for this group of plans, had negative margins; and
- 76 organizations, with 80 percent of total revenue, were at break-even margins (4 organizations) or had positive margins (72 organizations).

**Perspective on MA plans and payments**

Enrollment in MA has reached 16.7 million enrollees (30 percent of all Medicare beneficiaries) and continues to grow faster than Medicare FFS enrollment. Plans are available to 99 percent of Medicare beneficiaries, and some measures of availability have improved over the last year. Extra benefits provided by rebate dollars have improved over the past year. Also, the benchmarks, bids, and payments have declined relative to FFS spending since 2011. In 2016, excluding quality bonuses and assuming no coding intensity differences, MA benchmarks average 103 percent of FFS, and MA payments average 99 percent of FFS.

Overall, the payment indicators are mostly positive. As a result, we conclude that the MA program is more efficient than in the past. However, there are some remaining payment issues related to intercounty payment equity, coding intensity, and quality measures.

**MA benchmarks and equity issues**

The use of benchmarks and plan bids to determine payments to MA plans began in 2006. The original MA benchmarks were based on the county-level payment rates used to pay MA plans before 2006. Those payment rates were at least as high as per capita FFS Medicare spending in each county and often substantially higher because the Congress set floors to raise the lowest rates to stimulate plan growth in areas where plans historically had not found it profitable to enter. For the most part, county benchmarks increased from 2006 to 2010 by the greater of national FFS growth or county-level FFS growth. By 2010, the median county benchmark was 114 percent of FFS. However, because of the previously determined floor rates and growth anomalies in individual
CMS has made a special adjustment to the FFS calculation for Puerto Rico because the majority of its FFS population does not buy Part B. Hawaiian plans have recently sought accommodation because almost 20 percent of the Hawaiian FFS population does not buy Part B. But while Hawaii is near the top in the share of FFS beneficiaries without Part B, other areas such as Pittsburgh, PA, and Portland, OR, have similar shares of FFS beneficiaries without Part B. These areas all have MA penetration rates over 50 percent, and the estimated effects of using only beneficiaries with both Part A and Part B on FFS spending could have a large effect and result in higher benchmarks for these areas. That is, high MA penetration leaves fewer, and perhaps less representative, beneficiaries on which to calculate FFS spending. As MA penetration continues to grow, we expect these calculation problems to grow. Therefore, the FFS calculation should be corrected to ensure that the population that is used to calculate the FFS spending is representative of the expected spending for MA beneficiaries.

CMS is the agency best positioned to calculate the FFS spending estimates based on beneficiaries enrolled in both Part A and Part B. We encourage CMS to investigate recalculating FFS spending, especially in counties where the calculation would make a substantial difference in MA benchmarks. At the same time, we will continue work on this issue.

**PPACA benchmark caps**

A second equity issue is that the PPACA payment formulations include an administratively determined cap on each county’s benchmark. The law included a provision that caps any county’s benchmark at the higher of its pre-PPACA level, projected into the future with a legislatively modified national growth factor and 100 percent of its estimated FFS spending in the current year.

The caps are based on the 2010 payment rates that varied considerably relative to county FFS spending, but there is no reason to think that the distribution of relative payments in 2010 should be perpetuated forever, especially because the 2010 payment patterns had many non-policy-based anomalies.

For 2016, benchmark caps will apply if a county’s 2016 benchmark is transitioning to generally lower levels, ranging from 95 percent of county FFS spending to 115 percent of county FFS spending (based on the quartile of the county’s FFS spending), although plan quality bonuses can increase the benchmarks. While we expect the fully transitioned benchmarks to average 102 percent of FFS and thus approach rough equity with FFS, equity issues surrounding the distribution of benchmarks and payments will remain.

### Calculating FFS spending used to set the benchmarks

One issue involves the CMS calculation of FFS spending that helps set the MA benchmarks. Currently, CMS measures average FFS spending for all FFS beneficiaries in a county who have *either* Part A or Part B of Medicare. (Average Part A spending is calculated using all beneficiaries enrolled in Part A, and average Part B spending is calculated for all beneficiaries enrolled in Part B. Those two averages are added to get the relevant FFS total.) However, to be eligible to join an MA plan, a beneficiary must be enrolled in both Part A and Part B.

We examined the Part A FFS spending for beneficiaries who were enrolled in Part A and in Medicare FFS for all of 2012. We found that 9 percent of those beneficiaries were not enrolled in Part B for at least some of the year. (In contrast, 0.5 percent of beneficiaries were enrolled in Part B but not Part A.) Part A spending for beneficiaries in Part A and Part B all year averaged 8 percent more than the average for all those in Part A, regardless of whether they were also in Part B. Beneficiaries in Part A who choose not to buy Part B are likely healthier than those who buy Part B; therefore, the risk-adjusted difference in Part A spending between these two groups of beneficiaries is likely less than 8 percent.

While the overall increase in average FFS spending used in benchmark calculations is likely to be small if FFS spending is calculated using only beneficiaries enrolled in both Part A and Part B, the effect will vary by county. Counties with 15 percent to 20 percent of their FFS beneficiaries enrolled in Part A but not Part B would likely see their benchmarks rise. Alternatively, counties with significantly lower than average (9 percent) Part A–only enrollment would be likely to see lower benchmarks if this change were made.
Double-bonus counties

PPACA also designated certain counties as “qualified” for double quality bonuses. Double-bonus-qualified counties are described in statute as counties that:

- received urban floor payment rates in 2004 (counties in metropolitan areas with a population of at least 250,000 were paid a special floor rate if their FFS spending was below a certain level),
- had a private plan penetration rate of at least 25 percent in 2009 (including cost plan enrollment), and
- have projected FFS spending lower than the national average FFS spending ($800.21 in 2016).

For 2016, if an MA enrollee both lives in a double-bonus county and is enrolled in a plan with 4 or more stars, that plan receives a 10 percentage point benchmark bonus for that enrollee. In 2016, 19 percent of MA enrollees not only live in one of the 236 double-bonus counties but also are enrolled in an MA plan with 4 or more stars (enrolled in 2015) (Table 12-6). The table shows only those enrollees in plans benefiting from the double bonus. Because the national average FFS spending level ($800.21 per month) is lower than the FFS spending in all counties in the 95 percent of FFS quartile, there are no double-bonus counties in the 95 percent quartile. Also, there are fewer double-bonus counties in the 100 percent of FFS quartile than in the two lower spending quartiles.
MA enrollees are both double bonus and capped. This overlap means that even though high-quality plans in 236 counties would qualify for double bonuses, the benchmark caps limit or eliminate the bonuses for 52 of those counties. For the most part, the benchmark cap reductions and the benchmarks for double-quality-bonus increases are distributed similarly across the quartiles.

Through eliminating two sources of inequity across counties—the reduction in benchmarks due to the benchmark caps and the increase in benchmarks due to the double quality bonuses—the MA payment system could be made more rational, aggregate payments could be kept roughly constant, and the distribution of payments across quartiles would not change a great deal (Table 12-7, p. 344).

The effects of eliminating the caps and double quality bonuses could affect the actions of plans and beneficiaries. However, if these policy changes had been made for 2016 and the plan bids were held constant, the resulting impacts would be relatively small (Table 12-8, p. 345). The overall effect is that Medicare payments to plans would decrease by 0.1 percent. Of the 182 parent organizations that submitted bids for 2016, 115 (63 percent) would have seen a change in payments of less than 0.5 percent. These 115 parent organizations enroll 83 percent of all projected MA enrollment for 2016. The largest reduction in Medicare payments to any organization would have been under 3 percent. The largest increase in payments would have been 3.9 percent.

### Table 12-6

<table>
<thead>
<tr>
<th>Double-bonus counties, 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment quartile based on FFS spending</td>
</tr>
<tr>
<td>All</td>
</tr>
<tr>
<td>Number of double-bonus counties</td>
</tr>
<tr>
<td>MA enrollees in high-quality plans and double-bonus counties</td>
</tr>
<tr>
<td>Average additional bonus (dollars per enrollee per month)</td>
</tr>
</tbody>
</table>

Note: FFS (fee-for-service), MA (Medicare Advantage). A double-bonus county is a county for which the benchmark increase for plans with 4 or more stars (high-quality plans) is 10 percent of FFS spending. For other counties, the benchmark increase is 5 percent of FFS. The 115 percent quartile is the lowest spending quartile, and the 95 percent quartile is the highest spending quartile.

Source: CMS MA rate calculation data, April 2015; CMS plan enrollment data, February 2015.

(115 percent and 107.5 percent of FFS). Assuming the county benchmarks are not capped, the double bonuses will add an additional 5 percent of FFS spending to the county high quality benchmarks. The maximum double bonus would add $40 to the county benchmark for high-quality plans in 2016, and the average increase is $28 per member per month for those high-quality plans enrolling beneficiaries in double-bonus counties. We estimate that the 2016 payments average about 0.6 percent higher than they would have been without the double bonuses. Plans in double-bonus counties get paid twice the quality bonus that plans in other counties get for exactly the same quality performance. Others have found that the double bonuses did not lead to higher quality in plans serving those counties but did lead to an increase in the number of plans serving those counties (Layton and Ryan 2015).

### Addressing the inequities of benchmark caps and double bonuses simultaneously

The law includes a benchmark cap that inequitably lowers benchmarks in some counties, especially for plans qualified for quality bonuses, and at the same time provides a double quality bonus that inequitably raises quality bonuses for some counties. One option to address the inequities would be to eliminate both the benchmark caps and the double bonuses.

This option would rationalize the MA payment system while improving equity across counties. There is substantial overlap among double-bonus and capped counties. For 2016, 52 counties with over 900,000 current MA enrollees are both double bonus and capped. This overlap means that even though high-quality plans in 236 counties would qualify for double bonuses, the benchmark caps limit or eliminate the bonuses for 52 of those counties. For the most part, the benchmark cap reductions and the benchmarks for double-quality-bonus increases are distributed similarly across the quartiles.

Through eliminating two sources of inequity across counties—the reduction in benchmarks due to the benchmark caps and the increase in benchmarks due the double quality bonuses—the MA payment system could be made more rational, aggregate payments could be kept roughly constant, and the distribution of payments across quartiles would not change a great deal (Table 12-7, p. 344).
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As a result, plans may find some markets more or less attractive than they are under current law. Also, plans may have a new incentive to improve quality in previously capped counties. Beneficiary access to plans thus may increase or decrease based on plan reactions to the new benchmarks.

The effects are expected to be small for most plans; plans subject to larger impacts are expected to account for a small share of enrollment. To the extent that the Congress finds it necessary, implementation of these benchmark changes could be transitioned over two years.

### MA risk adjustment and coding intensity adjustment

Medicare calculates its payment to plans separately for each beneficiary, multiplying the plan’s payment rate by the beneficiary’s risk score. The risk scores are based on diagnoses that providers coded during the year before the payment year. The diagnoses are reported to Medicare through claims for Medicare FFS beneficiaries or by the plans for MA enrollees. To receive the maximum payment, plans have an incentive to ensure that the providers serving the beneficiary record all diagnoses completely.

Recent research has found that risk scores for MA plan members have been growing more rapidly than risk scores for FFS beneficiaries (Kronick and Welch 2014). Thus, as mandated by the Deficit Reduction Act of 2005, CMS has been making across-the-board adjustments to

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**Table 12-7**

Effects of eliminating both benchmark caps and double quality bonuses

<table>
<thead>
<tr>
<th>Payment quartile based on FFS spending</th>
<th>All</th>
<th>115 percent</th>
<th>107.5 percent</th>
<th>100 percent</th>
<th>95 percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benchmark increases from eliminating caps (in millions)</td>
<td>$821</td>
<td>$315</td>
<td>$394</td>
<td>$110</td>
<td>$2</td>
</tr>
<tr>
<td>Benchmark decreases from eliminating double quality bonuses (in millions)</td>
<td>-$1,018</td>
<td>-$349</td>
<td>-$321</td>
<td>-$347</td>
<td>$0</td>
</tr>
<tr>
<td>Net change in benchmarks (in millions)</td>
<td>-$197</td>
<td>-$34</td>
<td>$73</td>
<td>-$237</td>
<td>$2</td>
</tr>
</tbody>
</table>

**Note:** FFS (fee-for-service). The changes in this table relate to benchmarks, not payments. Payments are determined both by benchmarks and bids. The 115 percent quartile is the lowest spending quartile, and the 95 percent quartile is the highest spending quartile.

Source: CMS Medicare Advantage rate calculation data, April 2015; CMS plan enrollment data, February 2015.

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**Recommendation 12-1**

The Congress should eliminate the cap on benchmark amounts and the doubling of the quality increases in specified counties.

**Rationale 12-1**

Current law contains two special adjustments to the county benchmarks that make the benchmarks inequitable across counties. These adjustments are based on older, inequitable, administratively set payments. Both of these adjustments affect benchmarks primarily for high-quality plans and often offset one another. Eliminating both the cap on benchmarks and the doubling of quality increases would make the benchmark-setting process simpler and more equitable, while leaving overall payments at roughly the same level. There would be a reduction of roughly 0.1 percent of MA program spending.

**Implications 12-1**

**Spending**

- Our recommendation—to eliminate the Section 1853(n)(4) cap on benchmark amounts that limits benchmarks and to eliminate the doubling of the quality increases in specified counties that increases benchmarks—would decrease federal program spending relative to current law by between $50 million and $250 million over one year and between $1 billion and $5 billion over five years.

**Beneficiary and provider**

- We expect some redistribution of plan payments; some plans, depending on the mix of counties they serve, would see increased payments and some would see decreased payments. As a result, plans may find some markets more or less attractive than they are under current law. Also, plans may have a new incentive to improve quality in previously capped counties. Beneficiary access to plans thus may increase or decrease based on plan reactions to the new benchmarks.

The effects are expected to be small for most plans; plans subject to larger impacts are expected to account for a small share of enrollment. To the extent that the Congress finds it necessary, implementation of these benchmark changes could be transitioned over two years.
the risk scores. Taking into account multiple years of coding differences, CMS reduced risk scores by 3.41 percent in each year from 2010 through 2013. PPACA specifies minimum reductions for 2014 and all future years, although CMS has discretion to make larger reductions. The Government Accountability Office found that CMS should make larger reductions to fully account for the coding differences (Government Accountability Office 2013). The American Taxpayer Relief Act of 2013 increased the minimum reductions that CMS must make in the scores. By law, the mandated reductions will end once CMS begins risk modeling based on MA diagnoses and expenditures rather than on the FFS diagnoses and expenditures supporting the current model. For 2016, CMS has chosen to reduce risk scores by 5.41 percent, the minimum reduction under current law. The law specifies that the minimum reduction rises by 0.25 percentage point each year until 2018, when it would reach 5.9 percent. The minimum reduction would remain 5.9 percent for 2019 and each subsequent year.

Last year, the Commission began its own analysis of coding differences between beneficiaries in FFS Medicare and those enrolled in MA plans. To test whether beneficiary risk scores grew faster in MA than in FFS, we used beneficiary risk scores and enrollment data from 2006 through 2013. We built cohorts of beneficiaries whose first full calendar year was spent in FFS and whose second and all subsequent full calendar years (through 2013) were spent entirely in either FFS or MA. For example, one cohort consisted of those beneficiaries whose first full year in Medicare was 2006, who were in FFS for all of 2006, and who either remained exclusively in FFS through 2013 or switched into MA in January 2007 and remained in MA through 2013. We examined the 2006 cohort and all the cohorts whose first full years in Medicare were in FFS in 2007 through 2011. Thus, all beneficiaries had an initial risk score that reflected their year in the FFS program, and the differences in the growth of their risk scores can be attributed primarily to the program in which they were coded. In this analysis, we found:

- Beneficiaries who spent their first calendar year in FFS and then switched to MA had entry risk scores that were 84 percent to 87 percent of those who remained in FFS. In other words, beneficiaries enrolling in MA start with lower risk scores than the average risk scores of beneficiaries remaining in FFS Medicare.

- The ratio of the average MA risk score to the average FFS Medicare risk score grew for every additional year of enrollment in MA.

- The ratio of the average MA risk score to the average FFS Medicare risk score during the first year of enrollment in MA increased by at least 6 percent.

### Table 12-8

<table>
<thead>
<tr>
<th>Number of organizations</th>
<th>Number of enrollees (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All organizations</td>
<td>182</td>
</tr>
<tr>
<td>Payments decreased by:</td>
<td></td>
</tr>
<tr>
<td>2.0% or more</td>
<td>9</td>
</tr>
<tr>
<td>1.5% to 2.0%</td>
<td>13</td>
</tr>
<tr>
<td>1.0% to 1.5%</td>
<td>10</td>
</tr>
<tr>
<td>0.5% to 1.0%</td>
<td>8</td>
</tr>
<tr>
<td>Payment change less than 0.5%</td>
<td>115</td>
</tr>
<tr>
<td>Payments increased by:</td>
<td></td>
</tr>
<tr>
<td>0.5% to 1.0%</td>
<td>14</td>
</tr>
<tr>
<td>1.0% to 1.5%</td>
<td>4</td>
</tr>
<tr>
<td>1.5% to 2.0%</td>
<td>4</td>
</tr>
<tr>
<td>2.0% or more</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: MedPAC analysis of 2016 Medicare Advantage bid data and benchmark data from CMS.
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increases scores for others, relative to the old model. CMS acknowledges that scores are lower for diagnoses that are suspected of being more aggressively coded in MA plans. Our analysis, and analysis from other researchers, suggests that the impact of fully implementing this new CMS–HCC model would reduce MA risk scores by about 2 percent to 3 percent compared with the old model. Taking this analysis into account, we continue to find that the coding difference has been growing over time and will undoubtedly be greater by the time policy adjustments can be made.

Medicare Advantage risk adjustment

Medicare payments to MA organizations are adjusted to account for differences in beneficiary medical costs through the CMS–HCC model. The model uses demographic information and certain diagnoses grouped into HCCs to calculate a risk score for each enrollee, such that higher risk scores generate higher payments for beneficiaries with higher expected expenditures. CMS designed this risk adjustment model to maximize its ability to predict annual medical expenditures for Medicare beneficiaries. Therefore, in developing the model, CMS used statistical analyses to select certain HCCs for inclusion in the model based on each HCC’s ability to predict annual Medicare expenditures, ensuring that diagnostic categories included were clinically meaningful and were specific enough to minimize inappropriate manipulation or discretionary coding (Pope et al. 2004).6

As a result, CMS determined that only diagnoses resulting from a hospital inpatient stay, hospital outpatient visit, or a face-to-face visit with a physician or other health care professional were acceptable for determining payment through the risk adjustment model, though there are a few exceptions. Other possible sources of diagnoses, such as home health, nursing facility, ambulatory surgery, durable medical equipment, and hospice services, are not used to determine payment through the risk adjustment model due to concerns about the reliability of the diagnoses and concerns that adding diagnoses from these sources did not improve the model’s ability to predict medical expenditures.

Together, these analyses show that, because of coding practices, beneficiaries in MA plans will have higher risk scores than they would have had if they had remained in FFS. Further, those differences in coding are larger than the current (2016) 5.41 percent coding adjustment mandated by law. One possible source of coding differences is from the use of health risk assessments (HRAs) and the incorporation of diagnoses documented on HRAs in risk adjustment. We discuss this issue and present some analysis in the following section.

CMS has taken a step to help control the increased coding in MA. Beginning in 2014, CMS phased in a new CMS–hierarchical condition category (CMS–HCC) model. This new model reduces risk scores for some diagnoses and
Each demographic and HCC factor used to determine MA payment has a coefficient that represents the expected medical expenditures associated with that component. These coefficients are estimated based on Medicare FFS data. Medicare payment for a particular enrollee is equal to the sum of the dollar-value coefficients for all components identified for that enrollee. For example, annual Medicare payment to an MA organization in 2013 for an 84-year-old male ($4,808) with congestive heart failure ($3,116) would have been $7,924, which is the sum of the two relevant model components. Identifying an additional HCC for an enrollee can significantly increase the Medicare payment. If the same 84-year-old male with known congestive heart failure is also found to have polyneuropathy ($2,890), the Medicare payment to the MA organization would increase from $7,924 to $10,814. This $2,890 increase represents 32 percent of the annual Medicare reimbursement for an enrollee with average expenditures, which in 2013 was $9,005. The annual increase in 2013 payments to MA organizations for most HCCs when newly identified for an enrollee was between $1,000 and $5,000, and was $10,000 or more for some HCCs.

**Health risk assessments in Medicare Advantage**

HRAs are a preventive care tool used to identify health risks and evaluate patients for the presence of disease or disability. PPACA requires that an HRA be administered as part of Medicare’s annual wellness visit (AWV), during which it is paired with patient counseling about relevant health risks and referrals for follow-up care. HRAs focus on patient behaviors, medical history, and current physical health and disease status. Information about exercise habits, diet, living condition, and chronic disease is collected through a patient interview or questionnaire, medical history review, physical examination, or biometric testing or screening. This information can be helpful in identifying gaps in care, and when administered in conjunction with appropriate feedback and with connection to available resources, HRAs play an integral role in engaging patients in their own health management and decision making. For MA plans, HRAs are often the basis for developing a plan of care for a particular enrollee.

In Medicare FFS, HRAs are covered only through an AWV, which can be initiated by a beneficiary or his or her primary care provider. In MA, HRAs are covered through an AWV; however, many plans take a more active approach to patient care and have reached out to initiate care planning by offering an HRA to enrollees. One implication of this approach is that in MA, HRAs are frequently initiated by MA organizations, through either a third-party vendor or through an MA organization’s own program. Most HRAs are administered during a visit to an enrollee’s home, which typically lasts about an hour and is often conducted by a nurse practitioner. A home visit may include reviewing a patient’s self-reported medical history, measuring vital signs, conducting blood or urine tests, reviewing medications, and assessing the risks present in a patient’s home. Although HRAs have been administered to Medicare beneficiaries for several years, MA organizations and third-party vendors have been providing an increasing number in recent years. Our analysis of MA encounter data shows that the number of HRAs administered increased from 2.3 million in 2012 to 3.4 million in 2013, an increase of nearly 50 percent.

The Commission strongly supports the use of HRAs in any setting for care planning and coordination. Ideally, all health conditions identified through HRAs would be addressed in a plan of care and needed education or advice would be provided to support a beneficiary’s engagement in his or her health management.

**Impact of health risk assessments on Medicare Advantage risk adjustment**

In current payment policy, diagnoses generated from HRA documentation are used in risk-adjusted payment, regardless of whether follow-up care is provided for those conditions. If conditions are documented without services being provided to treat the condition, current policy may result in increased payments to MA organizations by an amount that is greater than the benefit provided to Medicare beneficiaries. The Commission is concerned that this policy may incentivize inappropriate use of HRAs and has considered whether payment for conditions newly identified through an HRA should be made when treatment or other care is not provided for those conditions. Consequently, the Commission has questioned whether HRAs alone should be used to determine the prevalence of a diagnosis for payment increases through the HCC risk adjustment system. Given that the cost of providing an HRA is significantly less than the potential increase in Medicare payment if an additional HCC is discovered, there is a strong incentive for plans to conduct HRAs. Instead of current policy, the Commission considered requiring some documentation of the condition...
### Table 12–9

<table>
<thead>
<tr>
<th>HCC number and name</th>
<th>HRA-only HCC frequency</th>
<th>Increase in 2013 payment per HCC</th>
<th>Total increase in 2013 payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>71 Polyneuropathy</td>
<td>105,315</td>
<td>$2,890</td>
<td>$304,412,233</td>
</tr>
<tr>
<td>105 Vascular disease&lt;sup&gt;a&lt;/sup&gt;</td>
<td>86,995</td>
<td>$2,719</td>
<td>$236,574,577</td>
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<tr>
<td>16 Diabetes with neurologic or other specified manifestation&lt;sup&gt;a,b&lt;/sup&gt;</td>
<td>73,453</td>
<td>$3,341</td>
<td>$245,386,284</td>
</tr>
<tr>
<td>55 Major depressive, bipolar, and paranoid disorders&lt;sup&gt;a&lt;/sup&gt;</td>
<td>63,870</td>
<td>$3,242</td>
<td>$207,045,718</td>
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<tr>
<td>83 Angina pectoris/Old myocardial infarction&lt;sup&gt;a,b&lt;/sup&gt;</td>
<td>56,522</td>
<td>$1,531</td>
<td>$86,523,341</td>
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<tr>
<td>108 Chronic obstructive pulmonary disease&lt;sup&gt;a,b&lt;/sup&gt;</td>
<td>52,502</td>
<td>$3,062</td>
<td>$160,739,126</td>
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<tr>
<td>15 Diabetes with renal or peripheral circulatory manifestation&lt;sup&gt;b&lt;/sup&gt;</td>
<td>50,759</td>
<td>$3,341</td>
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<td>80 Congestive heart failure&lt;sup&gt;b&lt;/sup&gt;</td>
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<tr>
<td>131 Renal failure&lt;sup&gt;a,b&lt;/sup&gt;</td>
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<td>$78,982,496</td>
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<td>18 Diabetes with ophthalmologic or unspecified manifestation&lt;sup&gt;a,b&lt;/sup&gt;</td>
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<td>$3,341</td>
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<td>23,667</td>
<td>$1,144</td>
<td>$27,065,358</td>
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<tr>
<td>38 Rheumatoid arthritis and inflammatory connective tissue disease</td>
<td>15,219</td>
<td>$3,251</td>
<td>$49,472,078</td>
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<td>92 Specified heart arrhythmias</td>
<td>14,064</td>
<td>$2,602</td>
<td>$36,599,364</td>
</tr>
<tr>
<td>100 Hemiplegia/hemiparesis&lt;sup&gt;a,b&lt;/sup&gt;</td>
<td>9,676</td>
<td>$3,116</td>
<td>$32,526,882</td>
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<tr>
<td>52 Drug/alcohol dependence&lt;sup&gt;a&lt;/sup&gt;</td>
<td>9,952</td>
<td>$3,359</td>
<td>$32,216,981</td>
</tr>
</tbody>
</table>

**Note:**
- HRA (health risk assessment), HCC (hierarchical condition category). "HRA-only HCCs" are HCCs documented on an HRA that are not documented on any other encounter used for risk adjustment.
- These HCCs are a part of a hierarchy such that the actual frequencies and payments when hierarchies are imposed may be lower than those identified in this table.
- These HCCs are also included in the model as part of one or more two- or three-way interaction terms with disability status or other HCCs. Any increase in payments to Medicare Advantage plans resulting from interaction terms indicated as a result of HRA or home evaluation and management visits is not included in this table.

**Source:** MedPAC analysis of Medicare Advantage encounter data, 2012; CMS Advance Notice for 2013 Medicare Advantage payment.

being treated through a physician or other health care professional or through an inpatient or outpatient encounter (i.e., an encounter used for MA payment) in addition to HRA documentation.

Using MA encounter data for 2012, we found that about 1.8 million HCCs were documented on an HRA, which is a little more than 1 HCC per person who received an HRA. Sixty-three percent of those HCCs were documented on another encounter during 2012 that was used to determine MA payment, but 37 percent were not documented during any other physician or other health care professional, inpatient, or outpatient encounter used to determine MA payment. Put differently, the majority of the time (63 percent), plans seem to be identifying conditions through an HRA and providing care to treat the condition. The Commission supports this use of assessments because related care was provided. These “HRA-only” HCCs, documented during 2012, were associated with about $2.3 billion in Medicare payments to MA organizations in 2013. The number of HRA-only HCCs documented during 2013 increased by 10 percent or 17 percent over 2012, depending on which HCC model is used as the basis for the analysis.

Our analysis found that HRA-only HCCs were more common for particular conditions. Fifteen HCCs accounted for 87 percent of all HRA-only HCCs. For each of these HCCs, Table 12–9 shows the HRA-only frequency in 2012 (that is, the number of enrollees for whom the HCC was documented on an HRA but not documented by another encounter used to determine MA payment), the increase in payment each time the HCC was newly identified, and the total 2013 Medicare payment associated with HRA-only documentations.

Some Commissioners raised concern about instances in which HRA-only HCCs were treated with services not covered by Medicare, which may not be captured in MA
encounter data. Such services may include various forms of telehealth, medication management by a pharmacist, or certain nutritional services. It is permissible for plans to provide services not covered by Medicare, but plans are not required to report such services through the CMS encounter data reporting system. In these cases, the concern is that, if HCCs originating only from HRAs are not considered when determining payment through the HCC risk adjustment system, then plans are being denied the revenue they need to provide these services. However, the key issue is that non-Medicare-covered services must be financed either by rebates paid by the Medicare program (for plans bidding below their benchmarks for Medicare Part A and Part B services) or through an additional premium, beyond the Part B premium, that plans are permitted to charge to beneficiaries. The HCC risk adjustment system determines the amount of revenue plans will receive for providing Medicare-covered services. Thus, removing HRA-only diagnoses from the HCC risk adjustment system would not deny plans the appropriate level of revenue for care provided using non-Medicare-covered services because plans must cover the cost of providing those services through their rebate and premium revenue. It is common for plans to provide a variety of non-Medicare-covered services, some of which are provided for the purpose of reducing the plans’ expected cost of providing Medicare Part A and Part B services (e.g., preventive care that is not covered by Medicare but that may reduce utilization of other, Medicare-covered, services). As the overall cost of Medicare-covered services is reduced, MA plans may reduce their bid for Medicare-covered services and receive a larger rebate in the following year. With additional rebate funding, MA plans can provide additional services that may be designed to attract new enrollees.

The Commission supports MA service innovations that provide health care more efficiently than in Medicare FFS. However, the Commission is concerned that HRA-only HCCs are not properly addressed when no related encounters with a physician or other health care professional or in an inpatient or outpatient setting are provided. When such treatment (i.e., using only non-Medicare-covered services) is appropriate, the payment rate determined by HCCs may not be appropriate because it represents the amount required to cover treatment for the condition using Medicare-covered services.

The Commission has also considered whether HRAs may identify diagnoses for which follow-up care would not be expected. Such diagnoses include those identified by International Classification of Diseases, Ninth Revision (ICD-9) V codes, which describe factors influencing health status or contact with health services other than disease or injury, and ICD-9 E codes, for self-inflicted poisoning or injury. Seven HCCs can be identified with ICD-9 V codes (asymptomatic HIV, long-term insulin use, tracheostomy or respirator status, dialysis testing or catheter status, major organ transplant status, artificial opening for feeding or elimination, or amputated limb status), and one HCC can be identified by ICD-9 E codes.10 Seven of these eight HCCs were indicated by a V or E code in 0.1 percent or less of MA and FFS AWVs. The V code for long-term insulin use was used to identify the diabetes without complication HCC on 1.4 percent of AWVs in MA, but it was almost never used to identify that HCC during AWVs in FFS. Given the small number of HCCs that can be identified by V or E codes and their minimal prevalence in AWVs, we do not believe such codes are a major factor in identifying HCCs through HRAs.

Finally, the number of HCCs identified through HRAs alone varies significantly across MA plans, as shown by our analysis of MA encounter data. For the HMO and PPO contracts with at least one HRA in 2012 or 2013, Figure 12-3 (p. 350) shows the average increase in annual Medicare payment per enrollee from HRA-only HCCs when these contracts are ranked into decile groups. Not all MA contracts received a significant source of revenue from HRA-only HCCs, though several contracts increased their revenue from HRA-only HCCs from 2012 to 2013, shown most prominently by increases in the sixth through ninth deciles when reading left to right. A small proportion of contracts generated substantial Medicare payments from HRA-only HCCs, shown in the highest decile. This decile included a few outlier contracts with very high HRA-only HCC revenue from 2012. Those contracts generally remained in the highest decile for 2013, but showed a reduction in revenue per enrollee from HRA-only HCCs to a level that was more in line with other contracts in that decile. To the extent that diagnoses are identified through HRAs more frequently by MA organizations than in Medicare FFS, these efforts contribute to overall differences in diagnostic coding between MA and Medicare FFS.

**Concerns about health risk assessment diagnoses**

The accuracy of the CMS–HCC risk adjustment model is ensured by the principles that diagnostic categories included in the model: (1) predict medical expenditures
Health Blog notes the financial incentives for plans to administer HRAs and some discomfort with the in-home visit offer, which, in the instance cited, included a gift card incentive for accepting (Merz 2015). CMS has also stated concern about the potential for HRAs to be used solely as a diagnosis-collection vehicle (Centers for Medicare & Medicaid Services 2014b, Centers for Medicare & Medicaid Services 2013a), and two whistleblower lawsuits add questions about the accuracy of diagnoses and related documentation collected during in-home HRA visits conducted by independent home visit vendors.

Despite those concerns, the Commission recognizes the value that HRAs provide when administered as part of a care plan that includes providing information to a beneficiary’s primary care clinician and ensures that Medicare beneficiaries are provided necessary treatment.

Note: HRA (health risk assessment), HCC (hierarchical condition category), MA (Medicare Advantage), PPO (preferred provider organization). “HRA-only HCCs” are HCCs documented on an HRA that are not documented on any other encounter used for risk adjustment. The denominator in this analysis is total enrollment in each contract, not only those beneficiaries who received an HRA.

The Commission believes that many of the concerns described here would be alleviated if Medicare’s payment policy required that follow-up treatment was provided for conditions that are newly identified through an HRA. If such a policy were implemented, the Commission would hope that the proper use of HRAs would grow for Medicare beneficiaries who may benefit.

**Policies to address diagnostic coding differences**

CMS’s adjustment for coding differences does not account for the full impact of these differences, and as a result, Medicare payments to MA organizations on behalf of a particular enrollee are larger than Medicare would have made to providers had that same beneficiary been in Medicare FFS. Foremost, CMS should increase its adjustment for coding differences to fully account for the impact. Our analysis suggests that, in 2014, the total difference in risk scores due to prior coding differences was at least 6 percent. Assuming a moderate growth rate in coding difference that is supported by our analysis, the difference in 2017 could be 9 percent or higher, though we need more experience under the CMS–HCC model introduced in 2014 to more accurately estimate the impact of coding differences. In addition to accounting for the full impact of coding differences, CMS could use other policies that offer a more equitable adjustment across MA contracts than the across-the-board adjustment.

**Exclude HRA-only diagnoses from risk adjustment** One policy to address differences in MA and FFS coding intensity would be to remove HRAs as a source of diagnoses for risk adjustment, both from Medicare FFS diagnostic data when calibrating the model and from MA diagnostic data when calculating risk scores for payment. Our analysis shows that HRA-only HCCs are more common in MA than in Medicare FFS and vary in frequency across MA contracts. Therefore, a policy that excludes diagnoses found solely in HRAs from the risk score calculation would address some coding differences between MA and FFS; it would also be more equitable across MA contracts because contracts with more HRA-only HCCs would receive a larger effective adjustment, and vice versa. For example, we note that nearly all dual-eligible special needs plan (D–SNP) contracts made up of 50 percent or more dually eligible beneficiaries have a relatively low number of HRA-only HCCs, so that a policy removing HRA-only HCCs from risk adjustment would be beneficial to these contracts compared with an across-the-board coding adjustment with equivalent aggregate impact. CMS has twice proposed removing diagnoses from HRAs from risk adjustment but received
generally negative comments from the industry and has not implemented such a proposal (Centers for Medicare & Medicaid Services 2014c, Centers for Medicare & Medicaid Services 2013b). For 2016 payment, CMS provided guidance on best practices for providing in-home HRAs and stated that it would continue tracking care provided subsequent to a home visit (Centers for Medicare & Medicaid Services 2015a). Our analysis suggests that excluding diagnoses from HRAs for risk adjustment in 2017 would effectively reduce MA risk scores by roughly 2 percent to 3 percent relative to Medicare FFS and, thus, would reduce the need for an across-the-board coding intensity adjustment.

Use two years of diagnostic data for risk adjustment A second part of this policy addressing differences in MA and FFS coding intensity is based on our analysis presented in the June 2012 report to the Congress on improving the MA risk adjustment model (Medicare Payment Advisory Commission 2012). This analysis shows that using two years of FFS diagnostic data to estimate CMS–HCC model coefficients and using two years of MA diagnostic data to calculate MA risk scores would also decrease differences in MA and FFS coding intensity. Given that HCCs generally identify chronic conditions, conditions that are coded in one year and not the next often occur as a result of incomplete coding rather than a change in condition status. In addition to addressing some difference in coding intensity, using two years of data improves the completeness of chronic condition coding for both MA and Medicare FFS enrollees and slightly improves the predictive power of the risk adjustment model for enrollees with several chronic conditions. Our analysis of using two years of diagnostic data to estimate and calculate risk scores suggests that 2017 MA risk scores would effectively be reduced by 1 percent to 2 percent relative to Medicare FFS and, thus, would reduce the need for an across-the-board coding adjustment.

Apply across-the-board adjustment for remaining coding impact Both of these changes to the risk adjustment system would provide a more equitable adjustment for coding differences across MA contracts and could be implemented simultaneously. However, our analysis suggests that applying these two changes together would not fully account for the impact of coding differences on MA risk scores. Therefore, CMS would need to estimate the effect of coding differences after implementing these two changes and then apply an across-the-board adjustment factor of appropriate size such that the combined effect would eliminate the impact of differences in coding intensity between FFS and MA. If the across-the-board adjustment factor used in this approach were less than the minimum adjustment factor required by law, CMS might need to seek authority to implement this set of policies.

RECOMMENDATION 12-2
The Congress should direct the Secretary to:

- develop a risk adjustment model that uses two years of fee-for-service (FFS) and Medicare Advantage (MA) diagnostic data and does not include diagnoses from health risk assessments from either FFS or MA, and
- then apply a coding adjustment that fully accounts for the remaining differences in coding between FFS Medicare and Medicare Advantage plans.

RATIONALE 12-2
By law, the Congress requires the Secretary to adjust for the difference in coding between MA and Medicare FFS. The Secretary has the discretion to apply a larger coding intensity adjustment, up to the full impact of coding differences, but has chosen not to do so in recent years. Our policy recommendation would have the Secretary make coding adjustments in a more equitable manner. First, the recommendation seeks to eliminate HRAs as a source of diagnoses for risk adjustment. We contend that a small number of plans are using HRAs to increase Medicare payment without providing follow-up care. Second, the recommendation would base the CMS–HCC model on two years of diagnostic data. This approach gives MA plans a greater ability to document enrollees’ chronic conditions and reduces year-to-year variation in Medicare FFS documentation. Finally, the recommendation proposes that the Secretary apply an across-the-board adjustment to account for the remaining impact of coding differences. We believe that implementing the two changes to the CMS–HCC model will reduce the across-the-board adjustment applied to all plans relative to current law.

IMPLICATIONS 12-2
Spending
- Our recommendation to use two years of diagnostic data, exclude diagnoses identified through health risk assessments, and apply a coding adjustment that fully accounts for the remaining differences in coding would decrease federal program spending relative to current law by between $750 million and $2 billion in one year and between $1 billion and $5 billion over
Quality in the Medicare Advantage program

The indicators that we track to evaluate quality in MA come from various sources described more fully in an online appendix to the March 2010 report to the Congress (available at http://medpac.gov/documents/reports/mar10_ch06_appendix.pdf?sfvrsn=0), in last year’s March report, and in technical notes from CMS. To determine whether there has been meaningful improvement in quality measures on a year-over-year basis, we compare results for plans that reported on a measure in both reporting years (a “same-store” approach).

Over the two most recent reporting periods, a number of measures improved, a small number declined, and the large majority were unchanged. Fewer measures could be tracked over the last year compared with the preceding period because some of the measure specifications changed to such an extent as to be not comparable between the two years (for example, the MA hospital readmission measure).

Among the Healthcare Effectiveness Data and Information Set® (HEDIS®) measures we track, the National Committee for Quality Assurance (NCQA) changed the specifications for six HEDIS Medicare measures (including one intermediate outcome measure and the readmission measure) such that the results cannot be compared with results for the preceding year. NCQA advises caution in interpreting results for six additional measures. Among the remaining 32 HEDIS measures we can compare on a same-store basis, three measures saw statistically significant improvement for both HMOs and local PPOs: recording of body mass index levels and two measures of the level of high-risk medications among the elderly. HMOs also improved on the measure of colorectal cancer screening. One HEDIS measure had a statistically significant decline among HMOs, the survey-based measure of whether physicians advised beneficiaries to engage in physical activity. Each of these measures, or a similar measure in the case of the use of high-risk medications, is included in the CMS star rating system we discuss below.

For patient experience measures collected through the Consumer Assessment of Healthcare Providers and Systems® for MA (CAHPS®—MA) and reported through CMS’s star rating system, there was not a meaningful change in plan performance on six measures of beneficiaries’ perceptions of their access to care, rating of their health plan and providers, and beneficiaries’ perception of their ability to get care when it was needed (with a change of about 1 percent on these measures).

The Health Outcomes Survey (HOS) is the source of two outcome measures in the CMS star system that track whether a plan’s enrollees report improvement or decline in physical health status or mental health status. Both of these measures remained stable among MA plans between the most recent reporting period and the prior reporting period. CMS also uses the HOS to determine whether health status changes in a given plan are markedly different from the average across all plans. As in past years, for the most recent two-year period of tracking changes in health status (2012 to 2014), only a small number of plans (fewer than 8 percent) had changes

five years. This estimate assumes that the Secretary would otherwise apply the minimum coding intensity adjustment required by current law, which does not account for the full impact of coding differences. We believe the decrease in program spending resulting from the recommendation would come from reduced payments to MA plans with the highest levels of coding intensity, whereas plans with the lower levels of coding intensity would see little difference or possibly a decrease in the coding intensity adjustment relative to current law.

Beneficiary and provider

- We do not expect the recommendation to have any impact on either beneficiaries’ access to care or the quality of care they receive. However, to the extent that plans currently use aggressive recruitment techniques and focus on generating assessment-based conditions without follow-up care, beneficiaries may experience some relief.

We do not expect the aggregate impact of the recommendation to significantly influence plans’ willingness to participate in the MA program, but it will have a differential impact across plans. Plans that generate few HRA-only HCCs may receive a lower across-the-board adjustment for coding intensity relative to current law, whereas plans with more HRA-only HCCs may receive a higher effective adjustment. This policy would place no restriction on providing HRAs to Medicare beneficiaries, and all plans could continue to use HRAs for care planning and management.

The indicators that we track to evaluate quality in MA come from various sources described more fully in an online appendix to the March 2010 report to the Congress (available at http://medpac.gov/documents/reports/mar10_ch06_appendix.pdf?sfvrsn=0), in last year’s March report, and in technical notes from CMS. To determine whether there has been meaningful improvement in quality measures on a year-over-year basis, we compare results for plans that reported on a measure in both reporting years (a “same-store” approach).

Over the two most recent reporting periods, a number of measures improved, a small number declined, and the large majority were unchanged. Fewer measures could be tracked over the last year compared with the preceding period because some of the measure specifications changed to such an extent as to be not comparable between the two years (for example, the MA hospital readmission measure).

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For patient experience measures collected through the Consumer Assessment of Healthcare Providers and Systems® for MA (CAHPS®—MA) and reported through CMS’s star rating system, there was not a meaningful change in plan performance on six measures of beneficiaries’ perceptions of their access to care, rating of their health plan and providers, and beneficiaries’ perception of their ability to get care when it was needed (with a change of about 1 percent on these measures).

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in their enrollees’ mental or physical health status that differed significantly from the average across all plans (http://www.hosonline.org/en/survey-results).

Part D quality measures apply to Medicare Advantage Prescription Drug plans (MA–PDs). Part D measures include three medication adherence measures (medications for diabetes, hypertension, and cholesterol). HMO plans improved their scores on two of these measures (adherence to blood pressure medication and adherence to cholesterol medication), with PPOs also improving on the blood pressure medication.

The star system of the quality bonus program described below can provide some indication of changes in plan quality over time. However, we continue to examine results for individual measures for two reasons. One reason is that some measures are not included in the star system—for example, the mental health measures that had been declining according to our analysis in last year’s March report (but remain stable this year). The other reason is that if we are interested in evaluating improvement over time across multiple plans, star rating results that show the relative performance among plans would not provide information about whether there was improvement in MA quality, particularly now that most measures do not have predetermined bonus thresholds (for example, there could be system-wide declines in quality but no effect on the relative distribution of plan results).

With regard to changes in quality measures, we would note that HEDIS is beginning to include overuse measures. There are several measures of this nature in use for the commercial and Medicaid populations. One overuse measure has been added to the measures that Medicare plans report as of 2015, which is the measure of the percentage of men age 70 or older who were screened unnecessarily for prostate cancer using prostate-specific antigen–based screening. In its announcement of possible changes to the star rating system, CMS did not indicate that this new measure will be used for 2017 star ratings (Centers for Medicare & Medicaid Services 2015d). As measures of overuse continue to be developed, it would be useful to include them in the star rating system.

**The star system and the quality bonus program**

Since 2012, the MA program has included a pay-for-performance system that gives bonuses to higher performing plans. Plans are evaluated on a subset of the quality measures just described and, to a lesser extent, on contract performance measures (such as the timeliness and accuracy of appeals). The bonuses take the form of an increase in plan benchmarks; higher rated plans are able to use a higher percentage of the difference between bids and benchmarks for rebates, which finance extra benefits. Bonuses are based on a plan’s overall star rating, with a maximum of five stars. Part D measures are included for plans that have Part D coverage (most MA plans). Performance on SNP-specific measures is a component of the star rating for SNP sponsors. Each element of the star rating is assigned a weight of 1.0 for process measures, 1.5 for patient experience and access measures, and 3.0 for outcome measures. An improvement measure that CMS calculates for MA and Part D has a weight of 5.0.

Plans that receive 5-star ratings can enroll beneficiaries outside of the annual election period. In the 2016 star ratings, 10 MA–PD plans and 2 MA-only contracts received 5-star ratings. Their status as high-rated plans is displayed at Medicare.gov. The lowest rated plans are also flagged, and beneficiaries are cautioned about choosing to enroll in a low-rated plan. Three contracts flagged as low-rated plans could be terminated at the end of 2016 if CMS exercises its authority to terminate the contracts of plans that have three consecutive years of performance at or below the 2.5-star level in either Part C or Part D (Centers for Medicare & Medicaid Services 2015b, Centers for Medicare & Medicaid Services 2015e).

**Star ratings and changes in the ratings**

For the 2016 star rating methodology, CMS moved away from having some measures for which there was a predetermined 4-star threshold, instead determining the 4-star threshold for such measures based on the relative distribution of rates among plans in each year. This approach is not the approach the Commission favors. The Commission has favored using performance benchmarks that are fixed in advance of the performance period. Fixed benchmarks provide a clear signal to plans about the level of performance necessary to achieve a given ranking, and they help plans target performance improvement efforts. CMS opted for relative benchmarks based on its finding that plan performance improved more among the star rating measures that did not have predetermined thresholds when compared with those with such thresholds.

In 2015, 27 of the 46 star measures had predetermined thresholds. For the 2015 ratings, for example, 15 of the 17 HEDIS clinical measures had a predetermined performance level for achieving 4 stars. The change to using the relative distribution resulted in some large...
the revision to the thresholds resulted in a reduced number of plans in bonus status.

Other measures had a lower 4-star threshold in 2016, such as the measure for monitoring physical activity. Among 233 HMOs reporting a result for this measure both in 2015 and 2016, 69 achieved a 4-star rating in 2016 compared with only 8 in 2015. For this measure, the number of HMOs at or above the 2015 threshold of 60 percent (among those reporting in both years) increased from 12 to 14. Using a threshold of 55 percent (the new 4-star threshold), 51 HMOs were at that level in 2015 compared with 69 in 2016.

A contract is eligible for bonus payments if the weighted average of each of the individual measure stars is at or above 3.75 (rounded to 4). As we have explained, the change in methodology for determining 2016 star ratings at the individual measure level had both positive and negative effects on individual star measures for plans in relation to their 2015 star levels. Although there might have been a concern that the movement away from predetermined thresholds could have had the effect of generally reducing plans’ star ratings, that was not the case. Looking at year-over-year changes, the change in methodology for 2016 did not have a substantially different effect on the overall star ratings of plans when compared with past changes in overall star ratings.

Table 12-10 shows the changes in overall star ratings in the most recent period (with the methodological change)

<table>
<thead>
<tr>
<th>Changes between 2014 and 2015</th>
<th>Changes between 2015 and 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2014 overall star rating</strong></td>
<td><strong>Number of HMO contracts, 2014</strong></td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td><strong>Same</strong></td>
</tr>
<tr>
<td>5.0</td>
<td>10</td>
</tr>
<tr>
<td>4.5</td>
<td>39</td>
</tr>
<tr>
<td>4.0</td>
<td>56</td>
</tr>
<tr>
<td>3.5</td>
<td>78</td>
</tr>
<tr>
<td>3.0</td>
<td>60</td>
</tr>
<tr>
<td>2.5</td>
<td>9</td>
</tr>
<tr>
<td>2.0</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: N/A (not applicable).

Source: MedPAC analysis of Medicare Advantage star ratings data.

changes for a few measures in the 2016 ratings. Overall, 10 of the 15 HEDIS clinical measures had an increase or decrease in the 4-star threshold of 5 percent or greater—with 6 measures having a 4-star threshold that was at least 5 percent higher than the previous pre-set threshold, and 4 of the 10 with the threshold reduced by at least 5 percent.

The largest threshold increase was for colorectal cancer screening, where the threshold for 4-star performance increased by 22 percent. In the 2015 ratings, among 263 HMO contracts present in the 2016 ratings, 199 contracts had colorectal screening rates of 58 percent or higher—at or exceeding the pre-set 4-star threshold—but only 100 of the 263 contracts have a 4-star rating on this measure in 2016, when the 4-star threshold is 71 percent (a 13 percentage point difference, or 22 percent higher than the 2015 threshold). The pre-set 4-star threshold of 58 percent for colorectal cancer screening had been in place for five consecutive star rating years, since the inception of pre-set thresholds in the star rating system (the 2011 star ratings developed in 2010). If the threshold had remained at 58 percent for the 2016 ratings, 220 HMO contracts would have met the threshold (compared with 199 in 2015, among HMOs reporting in both years). If the 2015 threshold had been set at 71 percent, 76 HMO contracts would have met the threshold in the 2015 ratings (compared with 100 meeting it in the 2016 ratings). As we noted, for this particular measure, plan performance did improve (with the mean rate rising from 65.4 percent to 67.4 percent among HMOs reporting in both years), but
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Overall star ratings (3.99) and the 2016 weighted ratings (4.03). Between 2014 and 2015, the comparable change in the weighted average star ratings was similar (3.88 vs. 3.91, respectively, using year 2014 enrollment; data not in table). However, across all plans, the share of enrollees in bonus-level plans increased. Among 363 plans with an overall 2016 star rating, 173 (48 percent) have a star rating of 4 stars or higher, but these bonus-eligible plans include 70 percent of MA enrollment. In the preceding year, among 389 plans with an overall 2015 star rating, 153 MA plans (39 percent) had a star rating of 4 or higher, representing 59 percent of enrollment. The smaller number of plans with ratings and the greater share of enrollees in bonus-eligible plans is partly due to contract consolidations whereby an organization combines multiple plans under one surviving plan. For 2016, 16 contracts under 4 stars have had their enrollees incorporated into 4-star or 4.5-star contracts—reducing the number of contracts with a 2016 rating and reducing the number of enrollees included when determining the enrollment-weighted average 2016 star rating based on October 2015 enrollment. For 2016, about 900,000 enrollees (about 5 percent of MA enrollment in plans with a 2015 star rating) are being folded into a bonus-eligible contract from a contract that was not in bonus status in the 2015 ratings.

Among all plans with any star rating in 2016 (excluding certain plan types not in the quality bonus program), 70 percent of enrollees are in plans with a star rating of 4 or higher based on the 2016 ratings, compared with 65 percent for the same set of enrollees if the 2015 star ratings had been used (Table 12-11). About one-fourth (26 percent) of enrollees are in plans with a 4.5 star rating, compared with 20 percent using the 2015 star ratings for the same plans; the share of enrollees in 3.5-star plans declined (from 23 percent to 20 percent).

Some plans were able to move to bonus status (rated 4 stars or higher) because of their performance on the two CMS-computed measures that gauge whether a plan has improved in Part C (one measure) and/or Part D (a separate improvement measure). Each improvement measure is weighted 5; thus, the two improvement measures make up about 12 percent of the total weight for determining the overall star rating. Of 369 MA contracts with a star rating for 2016, 15 are in bonus status because of their improvement scores. Of those 15, 3 are majority D–SNP contracts, including 2 contracts in Puerto Rico, where plans historically have had low overall star ratings—with no plans in bonus status until the 2016 ratings.

### Table 12-11: Distribution of enrollment by plan star ratings, 2015–2016

<table>
<thead>
<tr>
<th>Star rating</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0</td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>4.5</td>
<td>20</td>
<td>26</td>
</tr>
<tr>
<td>4.0</td>
<td>36</td>
<td>35</td>
</tr>
<tr>
<td>Subtotal, bonus-status plans (4 stars or higher)</td>
<td>65</td>
<td>70</td>
</tr>
<tr>
<td>3.5</td>
<td>23</td>
<td>20</td>
</tr>
<tr>
<td>3.0</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>2.5</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2.0</td>
<td>&lt;1</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: Enrollment is for October 2015. Data include plans with a star rating in either 2015 or 2016. Data exclude cost-reimbursed HMO plans, which are not eligible for bonuses. Figures may not sum to stated totals due to rounding.

Source: MedPAC analysis of CMS star ratings and enrollment data.

compared with the preceding year for HMOs with star ratings in both years compared. The only category of star ratings that saw an increase in the share of plans with lower overall ratings in the subsequent year were HMO contracts at the 5-star and 4.5-star level. Between 2014 and 2015, 30 percent of HMO plans that had been at 5 stars dropped to a lower star rating; similarly, between 2015 and 2016, 33 percent of the plans that had been at 5 stars dropped to a lower star level—a slightly higher share than from 2014 to 2015. Among plans at the 4.5-star level, between 2014 and 2015, 21 percent of HMOs dropped to a lower star level; a higher proportion—34 percent—dropped to a lower star level between 2015 and 2016. For each of the remaining star levels, fewer plans dropped to a lower star rating in the 2015 to 2016 period as compared with the 2014 to 2015 period (for example, 29 percent of 4-star plans dropped to a lower star level in the first period, as compared with 24 percent in the second period, which was the period of the change in methodology).

Although the distribution of plans at different star levels changed between the 2015 star ratings and the 2016 star ratings, the net effect of the methodological changes was minimal under a “same-store” comparison. For the 331 plans rated in both 2015 and 2016, there was virtually no difference between the 2015 enrollment-weighted average overall star ratings (3.99) and the 2016 weighted ratings (4.03). Between 2014 and 2015, the comparable change in the weighted average star ratings was similar (3.88 vs. 3.91, respectively, using year 2014 enrollment; data not in table). However, across all plans, the share of enrollees in bonus-level plans increased. Among 363 plans with an overall 2016 star rating, 173 (48 percent) have a star rating of 4 stars or higher, but these bonus-eligible plans include 70 percent of MA enrollment. In the preceding year, among 389 plans with an overall 2015 star rating, 153 MA plans (39 percent) had a star rating of 4 or higher, representing 59 percent of enrollment. The smaller number of plans with ratings and the greater share of enrollees in bonus-eligible plans is partly due to contract consolidations whereby an organization combines multiple plans under one surviving plan. For 2016, 16 contracts under 4 stars have had their enrollees incorporated into 4-star or 4.5-star contracts—reducing the number of contracts with a 2016 rating and reducing the number of enrollees included when determining the enrollment-weighted average 2016 star rating based on October 2015 enrollment. For 2016, about 900,000 enrollees (about 5 percent of MA enrollment in plans with a 2015 star rating) are being folded into a bonus-eligible contract from a contract that was not in bonus status in the 2015 ratings.

Among all plans with any star rating in 2016 (excluding certain plan types not in the quality bonus program), 70 percent of enrollees are in plans with a star rating of 4 or higher based on the 2016 ratings, compared with 65 percent for the same set of enrollees if the 2015 star ratings had been used (Table 12-11). About one-fourth (26 percent) of enrollees are in plans with a 4.5 star rating, compared with 20 percent using the 2015 star ratings for the same plans; the share of enrollees in 3.5-star plans declined (from 23 percent to 20 percent).

Some plans were able to move to bonus status (rated 4 stars or higher) because of their performance on the two CMS-computed measures that gauge whether a plan has improved in Part C (one measure) and/or Part D (a separate improvement measure). Each improvement measure is weighted 5; thus, the two improvement measures make up about 12 percent of the total weight for determining the overall star rating. Of 369 MA contracts with a star rating for 2016, 15 are in bonus status because of their improvement scores. Of those 15, 3 are majority D–SNP contracts, including 2 contracts in Puerto Rico, where plans historically have had low overall star ratings—with no plans in bonus status until the 2016 ratings.
Another change in CMS’s methodology allowed contracts with enrollment between 500 and 999 enrollees to be included in HEDIS measurement. As a result, smaller organizations have an overall star rating, including, for example, two contracts (sponsored by the same company) that are exclusively chronic condition special needs plan (C–SNP) contracts serving beneficiaries with HIV/AIDS, which have star ratings of 4.0 and 4.5.

**Moving enrollees to bonus plans**

CMS publicizes plan star ratings to coincide with the October to December MA open enrollment period so that beneficiaries can consider star ratings when choosing among plans. The 2016 star ratings, for enrollments effective in 2016, were released in October 2015. However, for bonus payment purposes, a plan’s bonus status has to be known earlier so that, when plans bid in June for the following year, the benchmarks include any bonus add-ons. Bids applicable to the 2016 contract year were therefore based on the 2015 star ratings released in October of 2014.

CMS has permitted plans to consolidate contracting by moving enrollees to a different contract (“cross-walking” the enrollees), but this consolidation can result in enrollees being moved from a contract for which the organization would not have received bonus payments for their enrollees to a contract that is in bonus status. At the end of 2013, 11 contracts were terminated and their 156,000 enrollees cross-walked to a new contract. Of that number, 122,000 enrollees in 8 contracts (all with the same parent organization) were moved from a contract with a rating below 4 stars to one with 4 or more stars, resulting in additional program expenditures through bonus payments to plans for these 122,000 enrollees. Cross-walking also occurred at the end of 2014, involving 3 companies and 387,000 beneficiaries. At the end of 2015, nearly 900,000 enrollees—about 5 percent of total MA enrollment, involving 5 companies—were moved from plans with a 2015 rating below 4 stars to bonus-eligible plans with a 2015 rating of 4 stars or higher (the 2015 ratings being the ratings that determine whether bonuses are received during the 2016 contract year). As a result of this movement of plan members, the share of MA enrollees in bonus status in 2016 (based on October 2015 enrollment levels and 2015 stars), rose from 65 percent to about 70 percent.

**Variation in star ratings by plan type**

As has been true in past years and as CMS notes in its 2016 star ratings fact sheet, plans with the highest star ratings have certain characteristics (available at https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovGenIn/PerformanceData.html). Higher rated plans have been in the MA program longer and are more likely to be nonprofit. Our analysis also shows that plans with a high proportion of enrollees who are in an employer-sponsored plan have higher average star ratings. Overall star ratings for plans also vary by plan type, with HMOs (at 4.07 in 2016) and local PPOs (at 4.16 in 2016) having higher enrollment-weighted star ratings than PFFS plans (3.80) and regional PPOs (3.33) (Table 12-12). The only plans rated at 2.5 stars overall are HMO plans, while the only 5-star plans are HMO plans. No

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**Table 12-12** Overall star ratings by plan type and weighted average ratings, 2016

<table>
<thead>
<tr>
<th>Plan type</th>
<th>Number of contracts by overall star level</th>
<th>Average stars (enrollment weighted)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.5</td>
<td>3.0</td>
</tr>
<tr>
<td>HMO</td>
<td>12</td>
<td>49</td>
</tr>
<tr>
<td>Local PPO</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Regional PPO</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Private fee-for-service</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Cost-reimbursed HMO</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: PPO (preferred provider organization). Cost-reimbursed plans are not Medicare Advantage plans and are not eligible for bonuses.

Source: MedPAC analysis of CMS 2016 star data and October 2015 enrollment data.
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its enrollment consisting of beneficiaries under the age of 65 (36 percent of whom are entitled to Medicare on the basis of disability). Otherwise, there are two other D–SNP contracts with high under-65 enrollment (at 36 percent and 58 percent) that have 4-star ratings in the 2016 stars.

In last year’s report, we provided information showing that contracts with a high proportion of enrollees under the age of 65 had lower overall star ratings in the context of determining why some D–SNPs were able to achieve high overall star ratings while others were not (Medicare Payment Advisory Commission 2015). D–SNP plans with high under-65 enrollment were almost exclusively plans that did not enroll beneficiaries under the age of 65. Subsequently, the Commission undertook an analysis of beneficiary-level data to determine whether certain HEDIS measures showed systematic differences in results based on age, disability status, and dual-eligibility status. CMS and its contractors undertook a similar analysis and evaluated information received from plans and other interested parties. Both the Commission and CMS found that there are systematic differences, and those differences can be seen not only within a contract but also across contracts. As a result, CMS is considering ways to adjust star ratings to compensate for the systematic performance differences among population categories. Our work and that of CMS and its contractors is summarized in the text box on MA plan star ratings.

PFFS or regional PPO plans are rated higher than 4 stars. Among cost-reimbursed HMO contracts, for the six that have an overall star rating, two have a rating of 5 stars and four have a rating of 4 stars.

Contracts with a majority of enrollment (50 percent or more) consisting of beneficiaries who are dually eligible for Medicare and Medicaid tend to have low star ratings. Across all plans, 70 percent of enrollees in plans with a 2016 star rating are in plans that have bonus-level star ratings (4 stars or above; Table 12-11, p. 356); however, the corresponding figure is 37 percent among contracts in which the majority of enrollment consists of dually eligible beneficiaries (for contracts with 50 percent or more D–SNP enrollment). Excluding these majority D–SNP contracts, 74 percent of enrollees are in bonus-level plans. In the 2015 star ratings examined in last year’s report, 14 percent of enrollees in majority D–SNP plans were in plans rated 4 stars or higher. The larger percentage for 2016 is in part due to the effect of the improvement measures in raising overall stars (Table 12-13).

Sixty-six contracts that are majority D–SNP contracts have a 2016 star rating (Table 12-13). Fourteen are bonus-status contracts, with a star rating of 4 (11 contracts) or 4.5 (3 contracts). Three of the contracts with 4 stars are in bonus status only because of the improvement measures, including one contract with over 30 percent of its enrollment consisting of beneficiaries under the age of 65 (36 percent of whom are entitled to Medicare on the basis of disability). Otherwise, there are two other D–SNP contracts with high under-65 enrollment (at 36 percent and 58 percent) that have 4-star ratings in the 2016 stars.

### Table 12-13

<table>
<thead>
<tr>
<th>Type of contract</th>
<th>Star rating in bonus status</th>
<th>Star rating in bonus status due to improvement</th>
<th>Star rating not in bonus status</th>
</tr>
</thead>
<tbody>
<tr>
<td>All*</td>
<td>62</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>100 percent D–SNP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With 65 and older enrollment at 100%</td>
<td>8</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Majority D–SNP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With under-65 enrollment over 30%</td>
<td>42</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>With under-65 enrollment at or below 30%**</td>
<td>12</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: D–SNP (dual-eligible special needs plan). Contracts with star ratings of 4 stars or higher are in bonus status.

* Excludes four contracts, all in nonbonus status, for which we do not have data on the under-65 enrollment.

** Includes one contract that has been sanctioned, resulting in a star rating of 2.5 (rated 4 in the preceding year).

Source: MedPAC analysis of CMS star ratings and enrollment data.
Since 2012 Medicare Advantage (MA) plans have been eligible for quality bonus payments if they achieve a star rating of 4 or higher in the 5-star rating system established by CMS. Plans that enroll a disproportionate share of low-income beneficiaries believe that they are at a disadvantage in the star rating system because their enrollees’ sociodemographic status complicates the plans’ ability to provide optimal care. Data at the contract level (the level used for determining star ratings) do indicate that plans with high shares of low-income beneficiaries tend to have lower star ratings, which is also the case for plans with high shares of enrollees under the age of 65. Because MA rules allow plans to limit their enrollment to certain categories of beneficiaries, the impact of the differences in star ratings falls most heavily on plans that specialize in serving Medicare–Medicaid dually eligible beneficiaries, nearly half of whom are under the age of 65.

In response to the concerns raised, CMS and its contractors examined whether there was a systematic bias in the star rating system affecting low-income enrollees. The agency found such a bias for a number of the quality measures. The agency continues to evaluate how to address the bias while maintaining the integrity of the star rating system but allowing adjustments that can result in bonus payments for plans that would otherwise not be eligible, absent such adjustments. As required by the Improving Medicare Post-Acute Care Transformation Act of 2014, the Department of Health and Human Services is also examining the question of the extent to which socioeconomic factors should be taken into account in quality measurement.

The Commission undertook an analysis similar to that of CMS as a follow-up to our analysis of star ratings and the contract-level composition of enrollment of plans (Medicare Payment Advisory Commission 2015).

Our research, and that of CMS and its contractors, found that for a subset of measures in the star system, rates for low-income individuals and beneficiaries with disabilities were systematically lower than for other populations, but that for a few measures, rates were better among low-income populations or those with disabilities (Centers for Medicare & Medicaid Services 2015e). Our analysis was limited to a subset of Healthcare Effectiveness Data and Information Set® (HEDIS®) measures for which we had beneficiary-level data that could be combined with demographic data and health status information. None of the measures we examined are case-mix adjusted for star rating purposes, and when CMS did its analysis, it specifically excluded measures (such as Consumer Assessment of Healthcare Providers and Systems® measures) that are case-mix adjusted.

Each analysis found that for a limited number of measures, there were meaningful differences between results for the two populations examined (the under-65 and low-income beneficiaries) and other plan enrollees. Specifically, CMS and its contractor (RAND) found that for the low-income population (beneficiaries entitled to low-income subsidies under Part D), 8 of 16 measures examined had a median difference of over 2 percent (ranging from 2 percent to 8 percent) compared with rates for non-low-income individuals within the same contract. In the star rating system, those measures constitute about 15 percent of the total weight of all measures. For disabled individuals, there were 10 such measures (with a median difference ranging from 3 percent to 9 percent), making up about 22 percent of the total weight of star measures. A set of factors that CMS examined was a set of factors not included in our analysis—census block measures of socioeconomic status (SES), including education and income/poverty levels. These SES factors were found not to have a meaningful effect when low-income status and disability status were taken into account (Centers for Medicare & Medicaid Services 2015e).

CMS’s intent is to make adjustments when there are systematic within-contract differences in results for the populations in question. That is, to the extent that differences arise because there are differences between contracts that reflect the poorer performance of the contractor, an adjustment is not appropriate.

(continued next page)
As of this writing, CMS is considering the manner in which star ratings can be adjusted. The agency has proposed using either: (1) a method by which there is essentially a contract-level case-mix adjustment, with a star rating adjustment applied to deciles of plans grouped by their share of the relevant populations, or (2) indirect standardization of measure results. Under indirect standardization, a plan’s performance for each relevant subpopulation (the observed rate) is measured against an all-plan uniform standard for each subpopulation (the expected rate). The plan’s overall performance is the weighted average of its observed-to-expected results by subpopulations. CMS has requested comments on these approaches or others (Centers for Medicare & Medicaid Services 2015d).

The Commission has a precedent for dealing with disparities in plan quality indicators and their effect on plan payments. In the case of the hospital readmission penalty, there is an association between a hospital’s share of low-income patients and its rate of readmissions. Hospitals with higher shares of low-income patients are more likely to incur penalties because of their higher overall readmission rates. The Commission has suggested using an approach whereby hospitals are grouped into categories (e.g., deciles) by their share of low-income patients. A target performance will be determined for each category of hospitals, with penalties applied when a hospital does not meet the target for its category of hospitals (e.g., a grouping consisting of hospitals with over 50 percent of patients being low income). The calculated readmission rate will not be adjusted (it will remain high for many hospitals with high low-income volume, and disparities would not be masked), but the penalty structure will be different.

In material presented after the agency’s request for comments on its proposal (Centers for Medicare & Medicaid Services 2015c), CMS stated that, for public reporting purposes, the Medicare.gov website (Plan Finder) would display an unadjusted result at the level of the individual measure (e.g., breast cancer screening rates) and at the level of the domain (breast cancer screening is in the “Staying Healthy: Screenings, Tests and Vaccines” domain). However, the Part C and Part D summary star ratings would have adjusted results displayed. This approach is somewhat different from the approach the Commission favors in the case of hospital readmission rates, for which only unadjusted rates would be publicly reported. In CMS’s proposed approach to the display of star ratings, a user of Plan Finder would have to look specifically at the measure and domain levels to determine unadjusted rates.

Summary of MA quality data and issues with star ratings

To summarize our analysis of MA quality, we found that most quality indicators remained relatively stable or unchanged, with improvement seen in measures of drug adherence and the avoidance of high-risk drugs for the elderly. One measure declined among HMOs, and some patient experience measures had slight declines for HMOs and PPOs. A number of measures had specification changes that did not allow us to determine year-over-year changes in the measure results.

For the 2016 star rating period, more MA enrollees will be in plans eligible for bonus payments, though there was little change in the enrollment-weighted average plan star ratings between 2015 and 2016 despite certain changes in the methodology for determining overall star ratings. We continue to see that certain plan types perform better than other plan types in the star ratings, and there is evidence that there are systematic differences in plan performance with respect to certain populations—the under-65 population (entitled to Medicare on the basis of disability) and the often overlapping category of low-income beneficiaries. CMS is considering ways to address these systematic differences. CMS and the Department of Health Human Services are continuing to study the issue.

We have called attention to the large number of beneficiaries that plans have been able to move from nonbonus status to bonus status through an end-of-the-year “cross-walking” from one contract to another. This practice results in additional program expenditures that
The Commission reiterates its March 2014 and March 2004 recommendations on Medicare Advantage

The Commission reiterates recommendations it has recently made to improve the bidding rules in the Medicare Advantage (MA) program and to integrate hospice care into the MA benefit package. The effects on spending were estimated at the time the Commission made these recommendations (and we believe the magnitude and the direction of these effects have not substantially changed in the last two years). We also reiterate our recommendation from 2004, calling for the Congress to allow all beneficiaries with end-stage renal disease to enroll in private (MA) plans.

Recommendation 13-1, March 2014 report
The Congress should direct the Secretary to determine payments for employer group Medicare Advantage plans in a manner more consistent with the determination of payments for comparable nonemployer plans.

The implementation of this recommendation could use the national average bid-to-benchmark ratio for nonemployer plans and apply that ratio to employer group plans. However, alternatives to this approach are also possible.

Implications 13-1
Spending
- We would expect Medicare program spending to decrease. Under the specific option we discussed, spending would decrease between $250 million and $750 million over one year and between $1 billion and $5 billion over five years.

Plans
- Most employer group plans would be paid less by Medicare because of the lowering of Medicare subsidies. In response, plans could charge employers more, offer fewer supplemental benefits, make lower profits, or lower their costs.

Beneficiaries
- Some employer group plan enrollees might choose plans in the nonemployer market or move to fee-for-service (FFS) Medicare if employers dropped plans or increased charges to plan enrollees.

Recommendation 13-2, March 2014 report
The Congress should include the Medicare hospice benefit in the Medicare Advantage benefits package beginning in 2016.

The carve-out of hospice from MA fragments financial responsibility and accountability for care for MA enrollees who elect hospice. Including hospice in the MA benefits package would give plans responsibility for the full continuum of care, which would promote integrated, coordinated care, consistent with the goals of the MA program. With the inclusion of hospice in the MA benefits package, plans would have greater incentive to use the flexibility inherent in the MA program to develop and test innovative programs aimed at improving end-of-life care and improving care for patients with advanced illnesses more broadly. In addition, giving MA plans responsibility for hospice would be a step toward synchronizing accountability for hospice across Medicare platforms (MA, accountable care organizations (ACOs), and

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FFS). Because the Commission believes it is important to include hospice in the MA benefits package as soon as possible, we have recommended this change be made by 2016. We recognize that implementing this change, if it were enacted by the Congress, would require actions by CMS (to recalculate capitation rates and risk scores) and by plans and providers (to negotiate contracts), but we believe this change could be accomplished by 2016 under a tight time line.

Implications 13-2

Spending

- The effect on Medicare program spending is expected to be negligible, with the policy potentially resulting in a small cost or small savings. The estimated one-year and five-year effects on Medicare program spending fall into our smallest budget categories: cost or savings of less than $50 million over one year and less than $1 billion over five years.

Beneficiaries and providers

- MA enrollees could benefit from a more integrated, coordinated MA benefits package. Some plans may choose to provide concurrent hospice and conventional care or offer other supplemental benefits aimed at improving care for patients with advanced illnesses, which could expand options available to beneficiaries. We would not expect an adverse impact on beneficiaries’ access to hospice care. As with other types of Medicare services, beneficiaries might be required to obtain services from a network provider, so they might have fewer hospice providers to choose from than they do under FFS Medicare. MA plans would have the option to charge nominal beneficiary cost sharing for hospice services, whereas under FFS Medicare, there is no cost sharing (with minor exceptions). If the experience with home health is any guide, MA plans may be unlikely to charge hospice cost sharing. Few MA plans require cost sharing for home health services from network providers.

MA plans would be better positioned to manage and coordinate care for patients with advanced illnesses. If including hospice in MA led some plans to experiment with concurrent care or other approaches that seek to improve care for patients with advanced illnesses, hospice providers could

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have opportunities to participate in new models of care.

Plans and hospices currently engage in private contracting for commercially insured individuals and incur administrative costs associated with that contracting. If hospice were included in MA, the breadth of those contracting activities would increase and plans and hospice providers would incur additional administrative costs associated with them.

Quality
• Including hospice in MA would reduce fragmentation of coverage, which would promote integrated, coordinated care. Furthermore, broadening MA plans’ bundle of services to include the full continuum of end-of-life care could incentivize plans to focus more on efforts to improve quality and satisfaction with this care.

Delivery system reform
• Hospice is an area in which Medicare policy differs across delivery systems. Including hospice in MA would be a step toward synchronizing policies across the Medicare system (MA, ACOs, and FFS).

Recommendation 4B, March 2004 report
The Congress should allow all beneficiaries with end-stage renal disease to enroll in private plans.

All beneficiaries should be allowed the voluntary choice of plans so long as payment is accurate. In 2005, CMS will replace the current payment system for end-stage renal disease (ESRD) enrollees with a version of the new risk adjustment system that should perform much better than the current demographic system, and payments to plans will more accurately reflect the costs of treating them. A study evaluating a Medicare ESRD demonstration showed that the quality of care and outcomes of most plan participants were equal to or better than those for ESRD patients enrolled in traditional Medicare.

Implications 4B
Spending
• This recommendation should not affect Medicare benefit spending.

Beneficiary and plan
• ESRD beneficiaries will have the choice of private plans.
• There should be no significant impact on plans.
While all HMOs and PPOs have provider networks, PPOs cover out-of-network care and HMOs typically do not. There are also HMOs that offer a point-of-service option that covers some out-of-network care.

Cost plans are technically not MA plans. They do not submit bids but are paid their reasonable costs under provisions of Section 1876 of the Social Security Act.

Benchmarks for regional plans are based on a weighted average of benchmarks for counties in the region and bids submitted by the regional PPOs. For 2016, regional plans submitted bids in 18 of the 26 MA regions. In 12 of the 18 regions, the average bids were below the region’s average benchmark, and so benchmarks for those regions were reduced. As a result, the average regional PPO benchmark (weighted by projected enrollment) was 103 percent of FFS spending, compared with the overall average of 107 percent of FFS spending.

If plans were required to bid their costs for each county separately, then in many instances, bids for distinct counties would be different from those we observe in the data.

CMS allows ESRD beneficiaries with a functioning kidney transplant to enroll in Medicare Advantage plans.

CMS also analyzed two-way and three-way interactions of HCCs and included certain relevant interactions in the model based on the same criteria as individual HCCs.

We identified HRAs as encounters either with a Healthcare Common Procedure Coding System (HCPCS) code of G0438, G0439, 99420 or with a HCPCS code for an evaluation and management visit and with place of service as home, given that a large portion of HRAs are known to be provided in a patient’s home. Our initial analysis of only the three HRA HCPCS codes did not include certain MA contracts known to have a home visit program in place in 2012. We believe this analysis reasonably identifies HRAs administered in MA, though it may include some home visits during which medical care was provided and an HRA was not, and it may have missed other HRA administration encounters. CMS began tracking HRAs provided in the home in 2014.

The vast majority of this 37 percent of HCCs had no other provider encounter at all. Only a small portion of these HCCs (6 percent of the total) were identified on another encounter that does not affect MA payment (e.g., home health, nursing facility, hospice).

Medicare payment in 2014 used a blend of risk scores based 75 percent on the new CMS–HCC model mentioned earlier and 25 percent on the CMS–HCC model used in 2013 payments. The incorporation of the new CMS–HCC model reduced the impact of HRA-only HCCs on Medicare payments in 2014.

The version of the CMS–HCC risk adjustment model introduced in 2014 includes the same V and E codes for the same 8 HCCs, but also includes V codes indicating a body mass index of 44.0 or greater, which are associated with the morbid obesity HCC. Since changing to ICD–10 diagnostic codes, these diagnoses generally continue to be used in the HCC risk adjustment model.

According to a CMS memo dated December 4, 2014, an MA organization may create programs that provide rewards and incentives to enrollees in connection with their participation in activities that focus on promoting improved health, preventing injuries and illness, and promoting efficient use of health care resources. Rewards and/or incentives may not be offered in the form of cash or monetary rebates, including reduced cost sharing or premiums. Otherwise, MA organizations have considerable flexibility with regard to what may be offered as a reward or incentive. Gift cards are a permissible form of reward or incentive as long as they are not redeemable for cash and comply with CMS guidelines. MA organizations are encouraged to offer enrollees a choice of gift cards from which to choose to account for differences in enrollees’ preferences and accessibility of retailers.
References


Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2015e. Updated research findings on the impact of socioeconomic status on star ratings 09 08 2015 (v 101232015). Baltimore, MD: CMS.


