U.S. Department of Health and Human Services

Office of Inspector General

Billions in Estimated Medicare Advantage Payments From Chart Reviews Raise Concerns

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Report in Brief
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The risk adjustment program is an important Medicare Advantage (MA) payment mechanism. It levels the playing field for MA organizations (MAOs) that enroll sicker beneficiaries who need a more costly level of care. This helps to ensure that sicker beneficiaries have continued access to MA plans. Chart reviews can be a tool to improve the accuracy of risk-adjusted payments by allowing MAOs to add and delete diagnoses in the encounter data based on reviews of patients' records. However, chart reviews—particularly those not linked to service records—may provide MAOs opportunities to circumvent the Centers for Medicare & Medicaid Services (CMS) face-to-face requirement and inflate risk-adjusted payments inappropriately.

Key Takeaway
Billions of estimated risk-adjusted payments supported solely through chart reviews raise potential concerns about the completeness of payment data submitted to CMS, the validity of diagnoses on chart reviews, and the quality of care provided to beneficiaries.

What OIG Found

Our findings highlight potential issues about the extent to which chart reviews are leveraged by MAOs and overseen by CMS. Based on our analysis of MA encounter data, we found that:

- MAOs almost always used chart reviews as a tool to add, rather than to delete, diagnoses—over 99 percent of chart reviews in our review added diagnoses.
- Diagnoses that MAOs reported only on chart reviews—and not on any service records—resulted in an estimated $6.7 billion in risk-adjusted payments for 2017.[1]
- CMS based an estimated $2.7 billion in risk-adjusted payments on chart review diagnoses that MAOs did not link to a specific service provided to the beneficiary—much less a face-to-face visit.
- Although limited to a small number of beneficiaries, almost half of MAOs reviewed had payments from unlinked chart reviews where there was not a single record of a service being provided to the beneficiary in all of 2016.

These findings raise three types of potential concerns. First, there may be a data integrity concern that MAOs are not submitting all service records as required. Second, there may be a payment integrity concern if diagnoses are inaccurate or unsupported—making the associated risk-adjusted payments inappropriate. Third, there may be a quality-of-care concern that beneficiaries are not receiving needed services for potentially serious diagnoses listed on chart reviews, but with no service records.

[1] CMS's actual risk-adjusted payments to MAOs incorporate diagnoses from both Risk Adjustment Processing System (RAPS) data and encounter data; however, there is no method to identify which diagnoses in the RAPS data are from chart reviews. Risk-adjustment-eligible diagnoses in the encounter data should be in the RAPS data. If MAOs submitted any eligible diagnoses from chart reviews only in the RAPS or only in the encounter data system, our payment estimates could underestimate or overestimate the actual risk-adjusted payments resulting solely from diagnoses on chart reviews.

Why OIG Did This Review

We undertook this study because of concerns that MAOs may use chart reviews to increase risk-adjusted payments inappropriately. Unsupported risk-adjusted payments are a major driver of improper payments in the MA program, which provided coverage to 21 million beneficiaries in 2018 at a cost of $210 billion.

CMS risk-adjusts payments by using beneficiaries' diagnoses to pay higher capitated payments to MAOs for sicker beneficiaries—which may create financial incentives for MAOs to make beneficiaries appear as sick as possible. MAOs report these diagnoses via CMS's MA encounter data system and RAPS based on services and chart reviews (i.e., MAO's reviews of a beneficiary's medical record to identify diagnoses that a provider did not submit or submitted in error).

To be eligible for risk adjustment, a diagnosis must be documented in a medical record as a result of a face-to-face visit. Although CMS requires MAOs to identify chart reviews in the encounter data, CMS does not require MAOs to link these chart reviews to a specific service associated with the diagnoses. This may provide MAOs opportunities to circumvent CMS's face-to-face requirement and inflate risk-adjusted payments inappropriately.

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Despite the potential for MAOs to misuse chart reviews, CMS has not reviewed the financial impact of chart reviews in the encounter data on risk-adjusted payments. CMS has not assessed variation across MAOs in their chart review submissions. In addition, CMS has not analyzed the quality of care provided to beneficiaries who may have serious health conditions and may not be receiving needed services. Finally, CMS has not yet performed audits that validate diagnoses reported on chart reviews in the encounter data against beneficiaries' medical records. CMS reported that it plans to begin audits that would include such chart reviews later this year.

What OIG Recommends

We recommend that CMS (1) provide targeted oversight of MAOs that had risk-adjusted payments resulting from unlinked chart reviews for beneficiaries who had no service records in the 2016 encounter data, (2) conduct audits that validate diagnoses reported on chart reviews in the MA encounter data, and (3) reassess the risks and benefits of allowing chart reviews that are not linked to service records to be used as sources of diagnoses for risk adjustment. CMS concurred with these recommendations.

How OIG Did This Review

We analyzed 2016 MA encounter data to determine the 2017 financial impact of diagnoses reported only on chart reviews and not on any service record in the encounter data that year. We also analyzed CMS's responses to a structured questionnaire to identify actions taken by CMS to review the impact of chart reviews on MA payments.

Key Terms

Encounter Data
Chart reviews and service records submitted by MAOs to CMS's encounter data system.

Chart Reviews
Records based on MAOs' retrospective reviews of beneficiaries' medical record documentation to (1) add diagnoses not previously submitted or (2) delete diagnoses submitted in error.

Service Records
Records based on information that providers submit to MAOs after providing services or medical items to beneficiaries (non-chart reviews).

Full report can be found at oig.hhs.gov/oei/reports/oei-03-17-00470.asp

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BACKGROUND

Objectives

1. To determine the extent to which diagnoses reported only on chart reviews conducted by Medicare Advantage organizations increased Medicare Advantage (MA) risk-adjusted payments.
2. To identify actions that the Centers for Medicare & Medicaid Services (CMS) has taken to review the impact of chart reviews on MA risk-adjusted payments.

Ensuring that MA organizations (MAOs) receive accurate payments to provide appropriate care to Medicare beneficiaries is critically important. Toward this end, CMS makes risk-adjusted payments by using beneficiaries' diagnoses to pay higher capitated rates to MAOs for sicker beneficiaries with higher risk scores. However, this may create financial incentives for MAOs to make beneficiaries appear as sick as possible to obtain higher payments. CMS estimates that from 2013 through 2016, Medicare paid $40 billion in overpayments that resulted from plan-submitted diagnoses that were not supported by beneficiaries' medical records. The Government Accountability Office (GAO) and the Department of Justice (DOJ) have also identified vulnerabilities related to MAOs inflating their beneficiaries' risk scores. This OIG evaluation analyzed data and trends related to chart review encounter records (hereafter chart reviews), an allowable source of diagnoses that may provide MAOs with opportunities to inflate risk scores inappropriately.

The Medicare Advantage Program

Under MA, also known as Medicare Part C, CMS contracts with private insurance companies, known as MAOs, to provide coverage of Parts A and B services through private health plan options.[1] In 2018, a third of Medicare beneficiaries—21 million—elected to enroll with approximately 700 MAOs rather than receive services through the Medicare fee-for-service program.[2] MA program costs were $210 billion of the total $711 billion in Medicare program costs in fiscal year 2018.[3]

[1] Each MAO may offer multiple plans. Medicare Parts A and B include hospital care, skilled nursing facility care, hospice care, home health care, physician services, and durable medical equipment, prosthetics, orthotics, and supplies. Many MA plans also offer prescription drug coverage under Medicare Part D.

[2] We use the term MAO to refer to a unique MA contract.

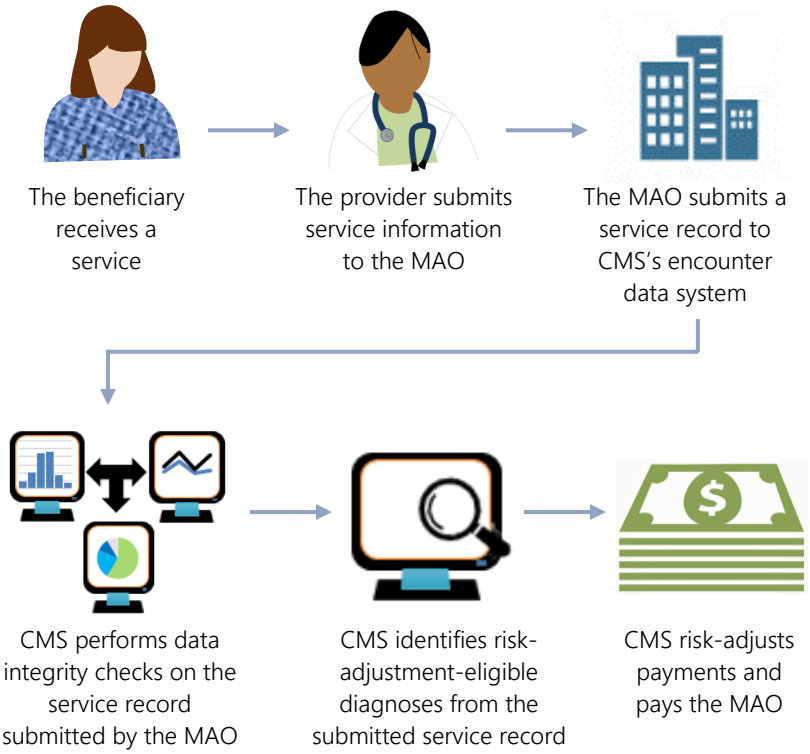
[3] CMS, *CMS Financial Report Fiscal Year 2018*, November 2018, p.71. Accessed at https://www.cms.gov on November 15, 2018.

MA Risk-Adjusted Payments

For each beneficiary enrolled, MAOs receive a monthly capitated payment that reflects CMS's predicted cost of providing care to an MA beneficiary. CMS risk-adjusts payments to pay MAOs more for beneficiaries with higher expected healthcare costs. CMS bases risk adjustments on MA beneficiaries' demographic information and diagnoses from the prior year. As outlined in Exhibit 1, CMS's risk-adjustment process relies on diagnoses reported by MAOs.

MAOs Report Diagnoses to CMS. The risk-adjustment process begins when the beneficiary receives a service or medical item from a provider. The provider submits claims information, including diagnoses, to the MAO based on the service or medical item provided. The MAO submits a record of the service (hereafter service record) to CMS's MA encounter data system that contains this claims information, including the diagnoses.[4] CMS began collecting encounter data from MAOs in 2012 as part of an effort to improve MA payment accuracy and better perform MA quality reviews.

Exhibit 1: MA risk-adjustment process



[4] MAOs also submit data on beneficiaries' diagnoses to CMS through the Risk Adjustment Processing System (RAPS). Ultimately, CMS plans to rely exclusively on encounter data to identify diagnoses for risk-adjusted payments.

CMS Performs Activities To Safeguard the Integrity of Reported Diagnoses. CMS requires MAOs to certify the accuracy, completeness, and truthfulness of their encounter data submissions.[5] In addition, CMS performs activities to safeguard the integrity of the encounter data. During the data submission process, CMS performs automated checks, or edits, that reject service records containing incorrect information (e.g., service records with improperly formatted data or missing fields) that CMS deems key to MA program payment and data integrity. After records pass these edits, CMS conducts analyses to review the stored data. If these analyses identify data errors, CMS may perform outreach to MAOs or introduce new edits to prevent incorrect data from being included in the encounter data.[6]

CMS Identifies Eligible Diagnoses for Risk Adjustment. For CMS to permit a diagnosis to be eligible for risk adjustment, it must be:

> (1) documented in a medical record from a hospital inpatient stay, hospital outpatient visit, or a visit with a physician or other eligible healthcare professional during the prior year; and
>
> (2) documented as a result of a face-to-face visit between the beneficiary and the provider.[7]

To identify which diagnoses meet these eligibility criteria, CMS extracts, or filters, diagnoses in the encounter data based on whether the service record contains an acceptable procedure code and/or type of bill code[8, 9]

CMS Risk-Adjusts Payments. To risk-adjust payments to MAOs based on eligible diagnoses, CMS employs a health-based risk adjustment model known as the CMS hierarchical condition category (CMS-HCC) model. The model groups certain medical conditions into HCCs, which are categories of clinically related diagnoses.[10] The model also ranks related groups of risk-adjustment-eligible diagnoses on the basis of disease severity and costs associated with treatment. Each HCC has relative numerical values (i.e., relative factors) that represent CMS's predicted costs associated with treating the

[5] 42 CFR § 422.504(l).

[6] CMS plans to implement additional compliance activities, such as issuing notices of noncompliance, warning letters, and corrective action plans, for MAOs that fail to satisfy certain performance thresholds related to the integrity of the encounter data.

[7] CMS, *Medicare Managed Care Manual*, Pub. No. 100-16 (Rev. 118, September 19, 2014), ch. 7, § 40. Accessed at https://www.cms.gov on December 17, 2018.

[8] For institutional outpatient services, CMS uses type of bill and procedure codes to identify which diagnoses are eligible for risk-adjusted payment. For hospital inpatient services, CMS uses type of bill codes. For professional services, CMS uses procedure codes to identify which diagnoses are eligible for risk-adjusted payment. For CMS's filtering logic, the type of bill code is a value signifying the type of claim information submitted on a record. For example, type of bill code 11X indicates a hospital inpatient record.

[9] CMS, *Final Encounter Data Diagnosis Filtering Logic*, December 2015. Accessed at https://www.csscoperations.com on December 27, 2018.

[10] 42 CFR § 422.2.

medical conditions in the category. A beneficiary may have multiple HCCs. A beneficiary's risk score equals the sum of the relative factors that correspond with his or her HCCs and demographic characteristics.[11] The total risk-adjusted payment to an MAO for an enrolled beneficiary equals the risk score multiplied by the MA plan's base payment rate.[12]

In addition to diagnoses reported by MAOs in the RAPS data, CMS began incorporating diagnoses from the encounter data into risk scores in 2015. To determine risk-adjusted payments for 2017, CMS calculated a blended risk score for each beneficiary by combining 25 percent of the risk score calculated from diagnoses in the encounter data and 75 percent of the risk score calculated from diagnoses in the RAPS data. CMS requires MAOs to submit records to the encounter data system for all services provided to beneficiaries. Therefore, MAOs should report the same risk-adjustment-eligible diagnoses in both the RAPS and encounter data.

CMS Conducts Audits To Validate Diagnoses Used in Risk Adjustment. After making risk-adjusted payments to MAOs, CMS determines whether a sample of diagnoses reported by MAOs can be validated by supporting medical record documentation using contract-level and national risk-adjustment data validation (RADV) audits.[13] CMS has conducted these audits of diagnoses submitted to CMS through RAPS since payment year 2007. When contract-level RADV audits cannot validate a diagnosis, CMS uses this information to recover overpayments from MAOs and calculate a payment error rate. As part of the RADV audit process, CMS identifies the HCCs that had the highest rates of errors for that payment year.

Chart Reviews

In addition to reporting diagnoses to CMS on service records, MAOs may also perform retrospective reviews of beneficiaries' medical record documentation to identify diagnoses that (1) providers did not originally submit to the MAO or (2) providers submitted to the MAO in error. To perform these reviews, MAOs may employ third-party vendors to examine beneficiaries' medical records by using staff with clinical or coding experience or by using artificial intelligence software. MAOs may report diagnoses identified by these reviews to the encounter data as chart review records (hereafter chart reviews).[14] CMS allows

[11] The CMS-HCC model also includes relative factors for certain combinations of coexisting diagnoses (i.e., disease interactions) and interactions between certain diseases and a beneficiary's disabled status (i.e., disabled interactions), which are added to a beneficiary's risk score. For the purposes of this evaluation, we use the term HCCs to refer to all HCCs, disease interactions, and disabled interactions.

[12] An MA plan's base payment rate is the plan's standardized bid adjusted by the county Intra Service Area Rate factor for the beneficiary's county of residence.

[13] CMS, *Contract-Level Risk Adjustment Data Validation Medical Record Reviewer Guidance*, September 2017, p.5. Accessed at https://www.cms.gov on November 23, 2017.

[14] Although MAOs may also report diagnoses identified by chart reviews to the RAPS data, CMS does not have a method to identify which RAPS records contain diagnoses resulting from chart reviews.

diagnoses reported on chart reviews that are eligible for risk adjustment (i.e., contain an acceptable type of bill code and/or procedure code) to support risk-adjusted payments.

MAOs may submit an unlimited number of chart reviews to the encounter data system. However, CMS instructs MAOs that a chart review should not be the only record in the encounter data system that contains information about an item or service provided to a beneficiary.[15] Furthermore, diagnoses reported on chart reviews should be associated with an item or service provided to the beneficiary.[16]

As with service records, CMS performs edits on chart reviews during the data submission process. However, to reduce administrative burden for MAOs and streamline processing of these records, CMS recently discontinued a number of edits performed on chart reviews, including edits that would have rejected chart reviews with institutional type of bill codes that contained unacceptable diagnosis codes and missing dates of service on service lines.[17]

Linked Chart Reviews. Linking a chart review to a previously accepted service record allows CMS and other oversight entities to identify the specific item or service that is associated with a risk-adjustment-eligible diagnosis. MAOs link chart reviews by identifying the previously accepted service record to which they are adding or deleting chart review diagnoses.[18] In April 2019, CMS issued guidance to MAOs that CMS will reject linked chart reviews that do not match certain data fields on the linked service record.[19]

Unlinked Chart Reviews. CMS permits MAOs to submit unlinked chart reviews that add diagnoses to the encounter data without identifying the specific item or service associated with the diagnoses.[20] CMS instructs MAOs that all diagnoses submitted on unlinked chart reviews must be supported by medical record documentation from a face-to-face visit with the beneficiary. However, when the MAO does not know the actual procedure code associated with a diagnosis submitted on an unlinked chart review, CMS allows MAOs to submit any procedure code of their choosing—and refers to the code as a default procedure code. However, CMS requires MAOs to include a variable that indicates that they used a default procedure code on the chart review. CMS reminds MAOs that, "diagnoses that are not risk-adjustment-eligible should not

[15] CMS, *Encounter Data Submission and Processing Guide*, *Medicare Advantage Program*, March 2019, ch. 2, p.3. Accessed at https://www.csscoperations.com on June 3, 2019.

[16] Ibid.

[17] CMS, *Encounter Data Software Release-Chart Review Record Edits*, October 2018.

[18] On a linked chart review, MAOs identify the previously accepted service record by reporting that service record's unique internal control number.

[19] CMS, *June 2019 Encounter Data Software Release Updates*, May 2019.

[20] MAOs cannot use unlinked chart reviews to delete previously accepted diagnoses.

be submitted with default [procedure] codes that would cause the diagnoses to be allowed [for risk adjustment]."[21]

Concerns Reported About Chart Reviews. Federal entities have questioned MAOs' use of chart reviews to add diagnoses for risk adjustment. Risk adjustment may provide opportunities for MAOs to inappropriately inflate Medicare Advantage payments through the submission of unsupported diagnoses. Chart reviews appear particularly vulnerable to such misuse by MAOs. By allowing MAOs to add or delete diagnoses, chart reviews can be a tool to improve the accuracy of risk-adjustment-eligible data submitted to CMS. However, MAOs may use chart reviews to mainly increase their risk-adjusted payments. In 2017, the United States joined a whistleblower lawsuit filed under the False Claims Act alleging that an MAO used the results of chart reviews to report diagnoses that the treating physician did not originally report but did not use the chart review results to delete diagnoses found to be invalid by these chart reviews.[22] In 2016, GAO stated concern that diagnoses collected from MAOs' retrospective chart reviews may be less likely to be supported by medical records compared to diagnoses submitted to MAOs by providers.[23]

Methodology

We reviewed chart reviews from the 2016 MA encounter data stored in CMS's Integrated Data Repository (IDR) to determine the amount of 2017 MA risk-adjusted payments that would have resulted from diagnoses reported only on chart reviews. We did not incorporate diagnoses stored in CMS's RAPS data into our payment calculations, as there is no way to identify which diagnoses in the RAPS data are from chart reviews.

We determined there were 52.6 million chart reviews submitted by 80 percent of MAOs (553 of 690) that added or deleted diagnoses in the MA encounter data, as outlined in Exhibit 2.[24]

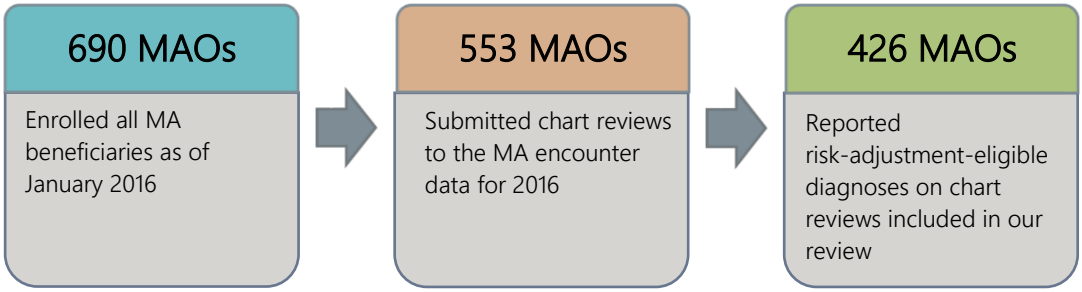
[21] CMS, *Encounter Data Submission and Processing Guide, Medicare Advantage Program*, March 2019, ch. 2, p.3. Accessed at https://www.csscoperations.com on June 3, 2019.

[22] Department of Justice, *U.S. intervenes in Second "Whistleblower" Lawsuit Alleging UnitedHealth Mischarged the Medicare Advantage and Prescription Drug Programs*, May 16, 2017. Accessed at https://www.justice.gov on December 17, 2018; United States ex rel. *Poehling v. UnitedHealth Group, Inc. et al.*, No.11-cv-8697-MWF (SSX), (C.D. Cal. filed May 16, 2017).

[23] GAO, *Fundamental Improvements Needed in CMS's Effort to Recover Substantial Amounts of Improper Payments*, GAO-16-76, April 2016, p.13. Accessed at https://www.gao.gov on December 15, 2018.

[24] We use the term MAO to represent each unique MA contract number. As of January 2016, CMS contracted with 690 MAOs to provide Parts A and B services to MA beneficiaries. CMS, *Medicare Advantage, Cost, PACE, Demo, and Prescription Drug Plan Contract Report-Monthly Summary Report (Data as of January 2016)*, January 2016. Accessed at https://www.cms.gov on March 28, 2019.

Exhibit 2: The number of MAOs included in our review



Source: OIG analysis of 2016 MA encounter data from CMS's IDR and CMS's *Medicare Advantage, Cost, PACE, Demo, Prescription Drug Plan Contract Report—Monthly Summary Report (Data as of January 2016)*.

We included chart reviews only for beneficiaries enrolled in the same MA plan for all 12 months of 2016 in our evaluation.[25] In addition, we excluded cost plans, demonstration plans, program of all-inclusive care for the elderly (PACE) organizations, and Medicare medical savings account plans. We analyzed risk-adjustment-eligible diagnoses reported on 17 million chart reviews submitted by 426 MAOs (hereafter referred to as the MAOs reviewed) to calculate the impact on risk-adjusted payments for 2017.[26] Appendix A contains a detailed description of our methodology.

Financial Impact of Chart Reviews

To determine the financial impact of diagnoses reported only on chart reviews in the encounter data, we calculated the net difference between the amount of increased payments from chart reviews that added diagnoses and the amount of decreased payments from chart reviews that deleted diagnoses.

Increased Payments From Chart Reviews. To estimate the amount of increased payments from chart reviews, we identified beneficiaries who had risk-adjustment-eligible diagnoses reported on chart reviews that were not reported on any service records in 2016.[27, 28] We used the 2017 CMS-HCC model to identify the HCCs that would not have been generated if MAOs had not added these diagnoses. For each HCC, we calculated the increased

[25] We use the term MA plan to represent each unique combination of an MA contract number and plan number.

[26] Out of the 40.6 million chart reviews that added risk-adjustment-eligible diagnoses for beneficiaries included in our review, 16.8 million chart reviews contained diagnoses found only on chart reviews and not on any service records. An additional 273,118 chart reviews deleted diagnoses from service records, resulting in a total of 17 million chart reviews analyzed for risk-adjusted payment.

[27] MAOs may submit a chart review to the encounter data when a provider documents more diagnoses than the maximum number of diagnoses allowable on a service record. Our evaluation excluded chart reviews that MAOs linked to accepted service records that contained the maximum number of diagnoses allowable on a service record.

[28] For beneficiaries with diagnoses reported on chart reviews with dates of service in the last quarter of 2016 (October through December), we ensured that the diagnoses were not reported on any service records with service dates in the first quarter of 2017 (January through March).

risk-adjusted payment by multiplying the MA plan's base payment rate by the HCC's relative factor. Our calculations are reasonable payment estimates if the MAOs submitted the same risk-adjustment-eligible diagnoses reported on chart reviews to the RAPS as they submitted to the MA encounter data system. We cannot confirm this because there is no mechanism to identify which diagnoses came from chart reviews in RAPS. However, MAOs are required to submit complete and accurate data to each system. Furthermore, it is in an MAO's financial interest to submit all eligible diagnoses to both systems to maximize its resulting risk-adjusted payment.

We summarized the number and type of HCCs that increased payments and compared our list of HCCs to the high-risk HCCs that CMS identified for 2014.[29] We also checked for variation across MAOs and their parent organizations to see if certain MAOs and parent organizations had higher or lower amounts of risk-adjusted payments due to diagnoses reported only on chart reviews.[30] We performed these same analyses separately for the subset of diagnoses reported only on unlinked chart reviews.

Decreased Payments From Chart Reviews. To estimate the amount of decreased payments from chart reviews, we identified beneficiaries who had risk-adjustment-eligible diagnoses deleted by chart reviews. We removed these diagnoses from the previously accepted service records identified by the MAOs and determined the HCCs that would have been generated if the MAOs had not deleted these diagnoses. We calculated the amount of decreased payments associated with these HCCs and reviewed MAO variation by using the same methods as outlined above for our analysis of increased payments.

CMS Oversight of the Financial Impact of Chart Reviews

To identify the actions taken by CMS to review the impact of chart reviews on MA risk-adjusted payments, we analyzed CMS's responses to a structured questionnaire and reviewed documentation related to:

- instructions, procedures, and policies CMS has in place to review the financial impact of chart reviews using MA encounter data, RADV audits, and/or any other data sources;
- the use of encounter data, RADV audits, or any other data sources to track and analyze the care provided to MA beneficiaries for diagnoses added by chart reviews;
- the kinds of issues, if any, identified by CMS related to the financial impact of chart reviews; and
- descriptions of whether and how concerns regarding the financial impact of chart reviews were addressed by CMS.

[29] We used HCCs that CMS identified as at high risk for payment errors for 2014, the most recent year for which CMS identified high-risk HCCs. CMS, *High-Risk Hierarchal Condition Categories*, November 2017.

[30] A parent organization is an entity that owns or has controlling interest in one or more MAOs.

Limitations

We did not review CMS's final payment data to MAOs for 2017. In addition, we estimated risk-adjusted payments that resulted from chart reviews based solely on diagnoses contained in the MA encounter data. We did this because there is no method to identify which diagnoses in the RAPS data are from chart reviews. CMS's actual risk-adjusted payments to MAOs incorporate diagnoses from both RAPS and encounter data. For 2017, CMS calculated a blended risk score for each beneficiary by combining 25 percent of the risk score calculated from diagnoses in the encounter data and 75 percent of the risk score calculated from diagnoses in the RAPS data. Because CMS requires MAOs to submit records of all services provided for beneficiaries to the encounter data system, MAOs should submit the same risk-adjustment-eligible diagnoses in both the RAPS and encounter data. However, if MAOs submitted any risk-adjustment-eligible diagnoses from chart reviews only to the RAPS or only to the encounter data system, our payment estimates could underestimate or overestimate the actual risk-adjusted payments resulting solely from diagnoses on chart reviews.

CMS bases risk-adjusted payments for a given year on diagnoses from specified face-to-face visits provided to the beneficiary in the previous year. Thus, we estimated the potential impact of chart reviews on the MA program for 2017 by using the encounter data submitted by MAOs for 2016. CMS's actual monthly payments to MAOs may change each month if there are changes in certain beneficiary characteristics, such as long-term institutional status, dual-eligibility status, and county of residence. For analytic efficiency, our analysis calculated payment estimates for the entire year using encounter data and beneficiaries' characteristics as of January 2016. We believe that selecting a point in time resulted in reasonable payment estimates because changes to these characteristics during the year can cause both payment increases, and payment decreases, which could balance out across the population. We also assumed that 2016 MA beneficiaries remained enrolled in MA in 2017.

We also did not determine whether diagnoses reported only on chart reviews were supported by documentation in beneficiaries' medical records. Finally, we did not determine whether each MAO had submitted all required encounter records.

Standards

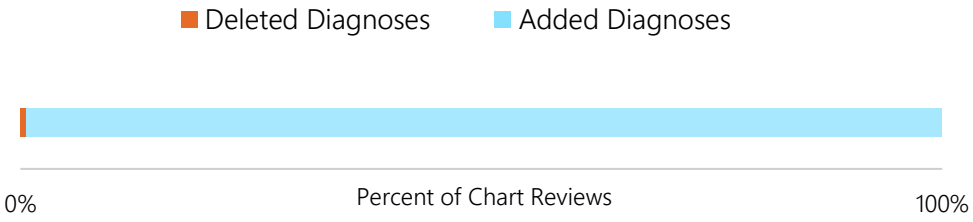
We conducted this study in accordance with the *Quality Standards for Inspection and Evaluation* issued by the Council of the Inspectors General on Integrity and Efficiency.

FINDINGS

Less than 1 percent of chart reviews deleted risk-adjustment-eligible diagnoses from the MA encounter data for payment year 2017

Although chart reviews can be a tool that MAOs can use to strengthen payment accuracy by adding and deleting beneficiaries' diagnoses, MAOs almost exclusively added diagnoses as a result of their chart reviews. Thus, chart reviews rarely resulted in decreased payments to the MAOs. As Exhibit 3 shows, 0.7 percent of the chart reviews reviewed deleted incorrect diagnoses from previously accepted service records compared to the 99.3 percent that added diagnoses. For 2017, only 218 MAOs submitted chart reviews that deleted diagnoses. The deleted diagnoses decreased MA payments by an estimated $196.5 million.

Exhibit 3: MAOs almost always used chart reviews as a tool to add, rather than to delete, diagnoses for risk adjustment, resulting in increased payments to MAOs



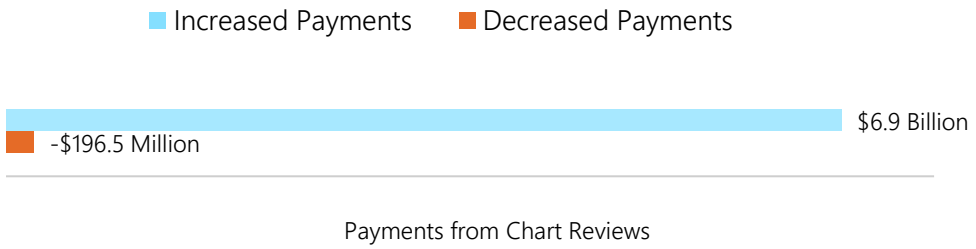
Source: OIG analysis of 2016 MA encounter data from CMS's IDR.

Overall, 48 percent of the MAOs that had increased risk-adjusted payments from chart reviews did not use a single chart review to delete an incorrect risk-adjustment-eligible diagnosis. The highest amount of increased payments solely from chart reviews for a single MAO was an estimated $507.3 million. This MAO had only an estimated $779,508 in decreased payments from chart reviews, a ratio of $651 to $1. Payments to 201 MAOs that exclusively used chart reviews to increase payments (and never to decrease payments) totaled an estimated $1.6 billion.

Diagnoses that MAOs reported only on chart reviews, and not on any service records, resulted in an estimated $6.7 billion in risk-adjusted payments for 2017

Diagnoses that MAOs reported only on chart reviews in the encounter data totaled an estimated $6.7 billion in risk-adjusted payments for 2017.[31] Chart reviews that added diagnoses increased risk-adjusted payments by an estimated $6.9 billion, as shown in Exhibit 4. Chart reviews that deleted diagnoses decreased risk-adjusted payment by $196.5 million, resulting in net payments of $6.7 billion.

Exhibit 4: For 2017, increased risk-adjusted payments from chart reviews that added diagnoses far exceeded decreased payments from chart reviews that deleted diagnoses



Source: OIG estimation of 2017 payment amounts using 2016 MA encounter data from CMS's IDR.

For the beneficiaries reviewed, MAOs submitted 40.6 million chart reviews to add risk-adjustment-eligible diagnoses. For 16.8 million, or 41 percent, of these chart reviews, there were no service records of visits, procedures, tests, or supplies that contained the diagnosis reported on the chart review. This means that, for the entire year, these beneficiaries may not have received any other services for the medical conditions indicated by the diagnoses. However, we estimated that Medicare paid MAOs billions in MA risk-adjusted payments to provide care for these beneficiaries.

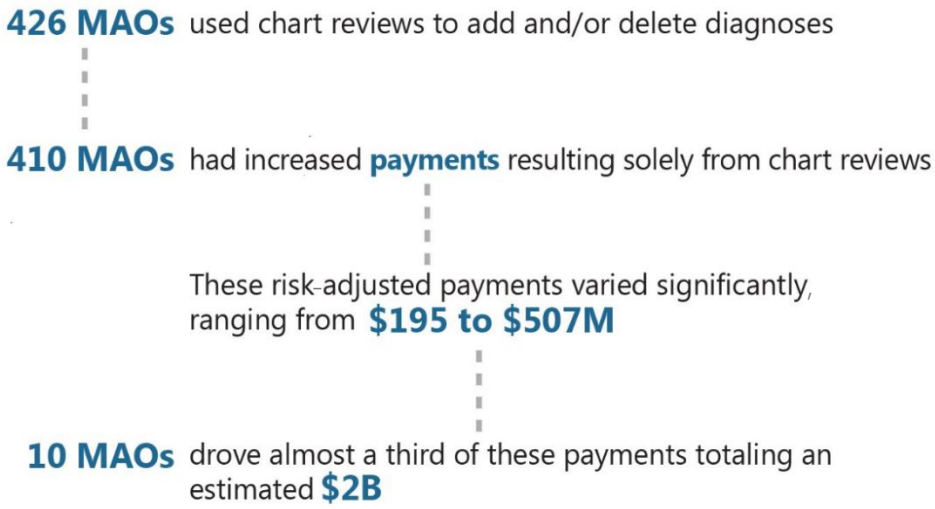
Overall, 426 MAOs used chart reviews to add and/or delete risk-adjustment-eligible diagnoses in the encounter data. Almost all of these MAOs (410 of 426) had a payment resulting solely from chart reviews, as shown in Exhibit 5.[32] For these 410 MAOs, risk-adjusted payments due solely to diagnoses reported on chart reviews varied significantly, ranging from a high of $506.6 million to a low of $195 across MAOs. Ten MAOs drove almost a third of these risk-adjusted payments, totaling an estimated $2.2 billion. Of the 137 parent organizations reviewed, 10 parent organizations drove 79 percent of

[31] Risk-adjustment-eligible diagnoses reported by MAOs in the encounter data should be reported in the RAPS data. However, if MAOs submitted any risk-adjustment-eligible diagnoses from chart reviews only in the RAPS or only in the encounter data system, our payment estimates could underestimate or overestimate the actual risk-adjusted payments resulting solely from diagnoses on chart reviews. If all the diagnoses included in our analysis were submitted only in the encounter data and not in the RAPS data, actual risk-adjusted payments resulting solely from chart reviews would total an estimated $1.7 billion.

[32] Eight MAOs had net decreases in risk-adjusted payments from diagnoses reported on chart reviews. An additional 8 of the 426 MAOs reported risk-adjustment-eligible diagnoses on chart reviews that did not impact their payments.

the risk-adjusted payments from chart reviews. These 10 parent organizations enrolled 70 percent of MA beneficiaries.

Exhibit 5: Almost all MAOs reviewed had estimated payments resulting solely from chart reviews



Source: OIG estimation of 2017 payment amounts using 2016 MA encounter data from CMS's IDR.

In an extreme case, a beneficiary had diagnoses reported only on chart reviews that resulted in an estimated $229,050 in risk-adjusted payments to the MAO for 2017.

We estimated that MAOs received risk-adjusted payments for 1.7 million beneficiaries based solely on chart review diagnoses. For these beneficiaries, there was no record in the encounter data demonstrating that they received any other medical care for diagnoses on chart reviews. In an extreme case, a beneficiary had diagnoses reported only on chart reviews that resulted in an estimated $229,050 in risk-adjusted payments to the MAO for 2017. However, these diagnoses did not appear on a single service record for this beneficiary in 2016.

The HCCs generated by diagnoses reported only on chart reviews included serious illnesses, such as cancer, diabetes, and heart disease. Appendix B provides the amount of risk-adjusted payments for each HCC that resulted from diagnoses reported only on chart reviews. The 10 HCCs that CMS identified as having the highest payment error rates for 2014 (the most recent year for which CMS identified high-risk HCCs) accounted for $216 million of the estimated net increase in risk-adjusted payments from chart reviews for 2017. Appendix C lists the impact on risk-adjusted payments from chart reviews for these HCCs.

CMS based an estimated $2.7 billion in risk-adjusted payments on chart review diagnoses that MAOs did not link to any service provided to the beneficiary

Diagnoses that MAOs reported only on unlinked chart reviews (i.e., those that add diagnoses to the encounter data without identifying the specific item or service associated with the diagnoses) generated an estimated $2.7 billion in risk-adjusted payments for 2017.[33] This amount represents 41 percent of the estimated $6.7 billion in net risk-adjusted payments from diagnoses only on chart reviews. Estimated payments to MAOs for diagnoses reported only on unlinked chart reviews ranged from a high of $146.4 million to a low of $2,346. Seven MAOs drove almost a quarter of these payments, totaling an estimated $650.9 million. Among parent organizations, 10 parent organizations drove two-thirds of all payments resulting from unlinked chart reviews, totaling an estimated $1.8 billion.

For a diagnosis to be eligible for risk adjustment, it must be (1) documented in a medical record from a hospital inpatient stay, hospital outpatient visit, or a visit with an eligible healthcare professional during the prior year; and (2) documented as a result of a face-to-face visit between the beneficiary and the provider.[34] However, as a result of our encounter data analysis, we estimate that CMS based billions in risk-adjusted payments on diagnoses that MAOs did not link to a specific face-to-face visit provided to the beneficiary. Although CMS allows unlinked chart reviews, the extent to which MAOs used them to drive higher risk-adjusted payments raises concerns about why so many chart reviews were not linked back to the service from which the MAO used the medical record to support the chart review diagnoses.

Although CMS uses procedure codes to identify which diagnoses in the encounter data are eligible for inclusion in risk adjustment, CMS allows MAOs to enter any procedure code of their choosing as a default procedure code on unlinked chart reviews. MAOs are allowed to do this when they are unable to determine the actual procedure code documented by the provider for services with the diagnoses. MAOs are not allowed to use default procedure codes on other service records that are used for risk adjustment. For the unlinked chart reviews where procedure codes are used to identify diagnoses for risk adjustment, we found that 67 percent (5.3 million of 7.9 million) contained default procedure codes—suggesting that MAOs were unable to determine the actual procedure code associated with the chart review, for the majority of services with these diagnoses.

[33] If all the diagnoses included in our analysis were submitted only in the encounter data and not in the RAPS data, the actual risk-adjusted payments resulting solely from unlinked chart reviews would total an estimated $676.8 million.

[34] CMS, *Medicare Managed Care Manual*, Pub. No. 100-16 (Rev. 118, September 19, 2014), ch. 7, § 40. Accessed at https://www.cms.gov on December 17, 2018.

Allowing MAOs to submit default procedure codes on chart reviews creates an opportunity for MAOs to circumvent the face-to-face visit requirement for risk adjustment.

Allowing MAOs to submit default procedure codes on chart reviews creates an opportunity for MAOs to circumvent the face-to-face visit requirement for risk adjustment. CMS instructs MAOs not to use default procedure codes that would trigger an adjustment when diagnoses are not from risk-adjustment-eligible services. However, CMS does not have safeguards in place to ensure that MAOs comply with this requirement. The decision as to which default procedure code to submit is left entirely up to the MAO. As such, nothing prevents an MAO from receiving payment for a diagnosis that is not risk-adjustment-eligible when it chooses to submit a default procedure code that is risk-adjustment-eligible.

The diagnoses that MAOs reported only on unlinked chart reviews corresponded to some serious and chronic health conditions

Unlinked chart reviews that resulted in risk-adjusted payments provided the only source of diagnoses associated with some serious and chronic medical conditions for beneficiaries. There were no service records in the encounter data of visits, procedures, tests, or supplies that contained the diagnoses reported on these unlinked chart reviews. This means that these beneficiaries may not have received services throughout 2016 for the medical conditions indicated by the diagnoses. For 105,607 beneficiaries, diagnoses that MAOs reported only on unlinked chart reviews corresponded to having vascular disease. However, their MAOs did not identify which service record was associated with these diagnoses and there were no service records directly demonstrating that they received treatment for these serious health diagnoses. Fifty-six percent of risk-adjusted payments ($1.5 billion of $2.7 billion) from diagnoses reported only on unlinked chart reviews were concentrated among 10 of 101 possible HCCs, as shown in Exhibit 6.

Exhibit 6: Half of the estimated MA risk-adjusted payments from unlinked chart reviews corresponded to 10 HCCs

HCC	HCC Description	Number of HCCs Added by Unlinked Chart Reviews	Estimated Payments From Unlinked Chart Reviews	Percentage of Unlinked Payments
HCC108	Vascular Disease	105,607	$269,536,256	10%
HCC18	Diabetes With Chronic Complications	74,221	$208,226,576	8%
HCC111	Chronic Obstructive Pulmonary Disease	67,703	$189,101,725	7%
HCC85	Congestive Heart Failure	63,568	$178,715,593	7%
HCC58	Major Depressive, Bipolar, and Paranoid Disorders	58,059	$173,294,795	6%
HCC22	Morbid Obesity	71,924	$169,677,377	6%
HCC40	Rheumatoid Arthritis and Inflammatory Connective Tissue Disease	35,260	$119,265,820	4%
HCC55	Drug/Alcohol Dependence	24,629	$75,094,794	3%
HCC8	Metastatic Cancer and Acute Leukemia	3,237	$71,051,426	3%
HCC96	Specified Heart Arrhythmias	28,674	$67,609,601	2%
	Total	532,882	$1,521,573,963	56%

Source: OIG estimation of 2017 payment amounts using 2016 MA encounter data from CMS's IDR.

Almost a third of MAOs reviewed had estimated risk-adjusted payments driven by only unlinked chart reviews, totaling nearly $1 billion

The highest risk-adjusted payment for a single MAO based solely on unlinked chart reviews totaled an estimated $146.4 million.

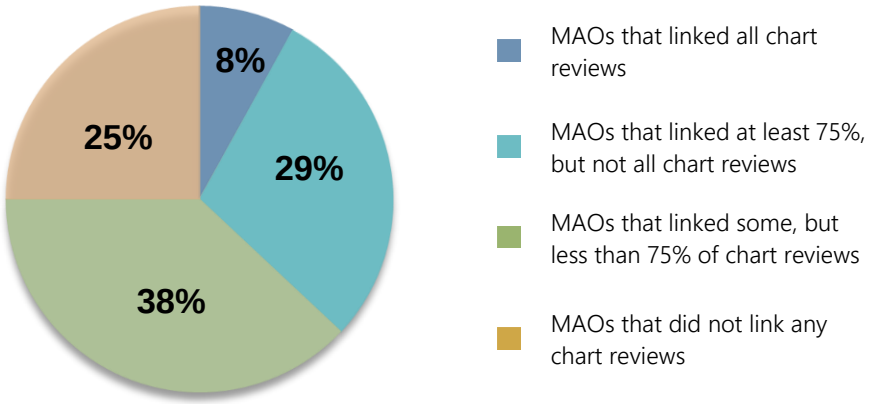
For 125 of 426 MAOs, diagnoses reported only on unlinked chart reviews drove all of their risk-adjusted payments from chart reviews. Risk-adjusted payments for these 125 MAOs totaled an estimated $986.5 million of the $2.7 billion in risk-adjusted payments from unlinked chart reviews. The highest risk-adjusted payment for a single MAO based solely on unlinked chart reviews totaled an estimated $146.4 million. For 33 MAOs, all risk-adjusted payments resulted from linked chart reviews. For 258 MAOs, risk-adjusted payments resulted from a combination of linked and unlinked chart reviews. The remaining 10 MAOs did not increase their risk-adjusted payments from diagnoses reported only on chart reviews.

CMS does not require MAOs to link chart reviews to service records due to concerns of burden on MAOs

According to CMS's responses to our questionnaire, it would be extraordinarily burdensome for some MAOs to link information collected from annual or periodic chart reviews with the claims information the MAOs continuously collect from providers in their electronic databases. CMS reported that the process of linking findings from chart reviews to claims information is difficult to automate and thus can be labor-intensive. The burden may differ among plans, requiring some to overhaul data collection systems or billing systems. In addition, CMS noted that in some cases, beneficiaries' medical record documentation may not contain sufficient information to identify the previously accepted service record associated with the diagnosis. CMS stated concern that requiring MAOs to submit linked chart reviews to the service record may limit the completeness of the submitted data.

Despite CMS's concerns about the burden of linking chart reviews, more than a third of MAOs (156 of 426) reviewed linked all or most of their chart reviews to service records. We found that 32 of these MAOs were able to link all of their chart reviews to service records. An additional 124 MAOs linked at least 75 percent of their chart reviews to service records, as shown in Exhibit 7.

Exhibit 7: Despite CMS's concerns about the burden of linking chart reviews, more than a third of MAOs linked all or most of their chart reviews to service records[1]



Source: OIG analysis of 2016 MA encounter data from CMS's IDR.[1] This analysis is based on the 17 million chart reviews submitted by MAOs (i.e., contract numbers) included in this review.

Although limited to a small number of beneficiaries, almost half of MAOs had payments from unlinked chart reviews where there was not a single record of a service being provided to the beneficiary in all of 2016

Almost half of MAOs (196 of 426) received risk-adjusted payments based on diagnoses from unlinked chart reviews where not a single item or service was provided to the beneficiary by the MAO in 2016. These MAOs submitted only unlinked chart reviews and no service records for 4,616 beneficiaries. CMS states that a chart review must be based on a review of the medical record for a service or item provided to the beneficiary during a face-to-face encounter. For the 4,616 beneficiaries with no service records for the year, the source of the chart reviews is unclear. These chart reviews resulted in an estimated $21.9 million in risk-adjusted payments for 2017. Most of these payments ($18.4 million) were concentrated among 35 MAOs and the top 6 MAOs accounted for half ($11.8 million) of these payments. One MAO submitted only unlinked chart reviews and no service records for 4 percent of its beneficiaries, resulting in $3.9 million in risk-adjusted payments.

Although CMS has instructed all MAOs that a chart review should not be the only record in the MA encounter data that contains information about an item or service provided to a beneficiary, CMS does not verify MAOs' compliance with this instruction. The total lack of any record aside from an unlinked chart review that triggered a risk-adjusted payment raises concerns that these MAOs:

- may not have ensured that the MA encounter data contains all records of items and services provided to beneficiaries,
- may not have provided appropriate treatments and services to MA beneficiaries who have serious and chronic health problems, or
- may have submitted diagnoses on the chart review that were not documented in the beneficiary's medical record—and, therefore, may have received inappropriate payments from CMS.

CMS has not validated diagnoses or reviewed the financial impact of diagnoses reported on chart reviews in the encounter data

At the time of this review, CMS had not performed audits that validate the diagnoses reported on chart reviews in the encounter data against beneficiaries' medical record documentation to identify the extent to which overpayments resulted from these diagnoses. CMS had not yet conducted audits of 2015 risk-adjusted payments, which is the first payment year that CMS incorporated diagnoses from encounter data along with RAPS data. However, CMS reported that it plans to begin audits of 2015 risk-adjusted payments later this year.

Although CMS has the ability to identify which diagnoses in the encounter data were added or deleted by MAOs as the result of chart reviews, CMS has not used—and has no plans to use—the encounter data to review the financial impact of chart reviews on risk-adjusted payments to MAOs. For example, CMS has not determined the increase or decrease in MA payments due to chart reviews. Also, CMS has not assessed variation across MAOs in their chart review submissions. According to CMS, there is no reason to conduct such reviews because linked and unlinked chart reviews are acceptable methods to submit risk-adjustment-eligible diagnoses. CMS also has not tracked or analyzed the care provided to beneficiaries who had diagnoses added only through chart reviews.

CONCLUSION AND RECOMMENDATIONS

The risk adjustment program is an important mechanism for accurately reimbursing MAOs based on the differences in health status across beneficiaries. It levels the playing field for MA organizations (MAOs) that enroll sicker beneficiaries who need a more costly level of care. This helps to ensure that sicker beneficiaries have continued access to MA plans. Chart reviews can be a tool to improve the accuracy of risk-adjusted payments by allowing MAOs to add and delete diagnoses in the encounter data based on reviews of patients' records. We found that MAOs' chart reviews almost always resulted in added diagnoses (over 99 percent of chart reviews), and almost never deleted diagnoses (less than 1 percent).

CMS uses the diagnoses from chart reviews to determine risk-adjusted payments—as long as the diagnoses are based on a face-to-face visit between beneficiaries and their providers. Diagnoses that MAOs reported only on chart reviews—and not on any service records—resulted in an estimated $6.7 billion in risk-adjusted payments for 2017.

Of the $6.7 billion in risk-adjusted payments, CMS based an estimated $2.7 billion on diagnoses that MAOs did not link to any service provided to the beneficiary in 2016. Allowing unlinked chart reviews provides opportunities for MAOs to circumvent CMS' face-to-face requirement and inflate risk-adjusted payments inappropriately. Although limited to a small number of beneficiaries, almost half of MAOs reviewed had risk-adjusted payments from unlinked chart review for beneficiaries where there was not a single record of any service being provided to them in all of 2016. For beneficiaries with unlinked chart reviews, and no records of services in all of 2016, it is not at all clear what services were used to generate diagnoses added on these chart reviews.

These findings raise three types of potential concerns. First, there may be a data integrity concern that MAOs are not submitting all service records as required. Second, there may be a payment integrity concern if diagnoses are inaccurate or unsupported—making the associated risk-adjusted payments inappropriate. Third, there may be a quality of care concern that beneficiaries are not receiving needed services for potentially serious diagnoses listed on chart reviews but no service records. Despite the potential for MAOs to misuse chart reviews, CMS has not yet validated the diagnoses reported on chart reviews and has not reviewed the financial impact of chart reviews on risk-adjusted payments.

We understand that MAOs need a mechanism to add diagnoses to the encounter data that providers have neglected to include in the service information submitted to the MAO. However, in the absence of monitoring and oversight by CMS, our findings raise questions about the vulnerabilities associated with using chart reviews, particularly unlinked chart reviews, as this mechanism.

Based on these findings we recommend that CMS:

Provide targeted oversight of MAOs that had risk-adjusted payments resulting from unlinked chart reviews for beneficiaries who had no service records in the 2016 encounter data

CMS should take actions to perform targeted oversight of MAOs that had risk-adjusted payments from unlinked chart reviews for beneficiaries who had no service records whatsoever in the 2016 encounter data. To do this, OIG will provide CMS with a list of the 4,616 beneficiaries who had unlinked chart reviews and no records to show that any services were provided in all of 2016. CMS should use this information to perform targeted reviews of the MAOs who had payments resulting from these beneficiaries' unlinked chart reviews. These reviews could include outreach to the MAOs to determine whether they submitted records for all services, as required. If CMS identifies problems with the completeness of these MAOs' encounter data submissions, or if CMS identifies that an MAO submitted a chart review without a service to support the creation of that chart review, CMS should take action to remedy these problems.

Conduct audits that validate diagnoses reported on chart reviews in the MA encounter data

Risk-adjusted payments for diagnoses reported only on chart reviews raise concerns regarding payment integrity. Risk-adjustment data validation audits provide an important opportunity for CMS to determine whether diagnoses reported in the MA encounter data that resulted in risk-adjusted payments were supported by medical record documentation. CMS began collecting the encounter data in 2012 and began using diagnoses from the encounter data for calculating 2015 risk-adjusted payments. CMS has not yet conducted RADV audits of 2015 payments. CMS should incorporate risk-adjustment-eligible diagnoses from the MA encounter data, including chart reviews, into contract-level RADV audits of 2015 payments. In addition, CMS should ensure that audits include a representative sample of diagnoses reported on chart reviews. After conducting these contract-level RADV audits and any other assessments of chart reviews, CMS should take steps to mitigate any vulnerabilities identified in its audits and oversight of chart reviews. For example, CMS might flag certain diagnoses or MAOs for enhanced review.

Reassess the risks and benefits of allowing chart reviews that are not linked to service records to be used as sources of diagnoses for risk adjustment

Identifying the service associated with diagnoses reported on chart reviews is critical to safeguard the integrity of MA payments and ensure that MA beneficiaries receive needed care. CMS should use data gathered during risk-adjustment data validation audits and targeted MA reviews to determine the impact of unlinked chart reviews on MA data integrity and overpayments. If contract-level RADV audits do not include a sufficient number of beneficiaries

with diagnoses reported only on unlinked chart reviews, CMS should conduct a separate review of unlinked chart reviews. These audits and/or reviews should identify the risks and benefits associated with unlinked chart reviews by (1) determining the validity of diagnoses reported only on unlinked chart reviews, (2) analyzing the care provided to beneficiaries for diagnoses documented only on unlinked chart reviews, (3) assessing the completeness of encounter data service records submitted by MAOs for beneficiaries with unlinked chart reviews, and (4) measuring the potential burden to MAOs of linking all chart reviews.

After assessing the risks and benefits, CMS should reconsider allowing MAOs to submit unlinked chart reviews. If CMS ultimately demonstrates that the benefits of allowing unlinked chart reviews outweigh the risks, CMS should conduct an additional assessment to determine the risks and benefits of eliminating the use of default procedure codes on chart reviews.

AGENCY COMMENTS AND OIG RESPONSE

CMS concurred with all three of our recommendations. However, in reference to our finding that diagnoses reported only on chart reviews resulted in an estimated $6.7 billion in risk-adjusted payments for 2017,[35] CMS stated that this payment estimate seems inaccurate because we only used encounter data and did not apply CMS's blended calculation using the RAPS data. As noted in the report, there is no method to identify which diagnoses in the RAPS data are from chart reviews. We believe our calculations resulted in reasonable payment estimates because CMS requires MAOs to submit the same risk-adjustment-eligible diagnoses in both RAPS and encounter data. If MAOs submitted any risk-adjustment-eligible diagnoses from chart reviews only in the RAPS or only in the encounter data system, our payment estimates could underestimate or overestimate the actual risk-adjusted payments resulting solely from diagnoses on chart reviews, as we noted in our findings and methodology. In a scenario in which *all* of the diagnoses included in our analysis were submitted only in the encounter data and not in the RAPS data, the actual risk-adjusted payments resulting solely from chart reviews would total an estimated $1.7 billion. However, such a discrepancy between the RAPS and the encounter data would raise serious concerns regarding the integrity of MA risk adjustment data.

In response to our first recommendation, CMS stated that it will review the beneficiaries we identified as having unlinked chart reviews and no service records in the 2016 encounter data. CMS will provide targeted outreach to the MAOs where these beneficiaries were enrolled, if appropriate. CMS noted that it will also provide targeted outreach to MAOs that submitted unlinked chart reviews but no service records for beneficiaries that CMS identified in the 2018 encounter data.

In response to our second recommendation, CMS agreed to include diagnoses submitted on chart reviews in the MA encounter data in their RADV audits beginning with payment year 2015. CMS stated that it anticipates launching payment year 2015 RADV audits in late 2019.

Finally, in response to our third recommendation, CMS noted that it will conduct a review of unlinked chart reviews to determine whether they should be used as sources of diagnoses for risk adjustment. CMS will use RADV audits to determine whether beneficiaries have the diagnoses that were reported on unlinked chart reviews. In addition, CMS will analyze the extent to which the 2018 encounter data include the service records associated with unlinked chart

[35] CMS's comments reference $6.6 billion in risk-adjustment payments for diagnoses resulting only from chart reviews, as that was our preliminary calculation in the draft report that CMS reviewed. In our final calculations, that estimate is $6.7 billion.

reviews. Finally, CMS will assess the burden to MAOs of linking chart reviews to service records.

For the full text of CMS's comments, see Appendix D.

APPENDIX A: Detailed Methodology

This appendix provides a more detailed description of the methodology that we used to determine the amount of 2017 MA risk-adjusted payments that resulted from diagnoses reported only on chart reviews with 2016 service dates. We did not review CMS's final 2017 risk-adjusted payments to MAOs. In addition, we estimated risk-adjusted payments that resulted from chart reviews based solely on diagnoses contained in MA encounter data.[36] We did this because there is no method to identify which diagnoses in the RAPS data are from chart reviews. CMS's actual risk-adjusted payments to MAOs incorporate diagnoses from both RAPS and encounter data. Because CMS bases risk-adjusted payments for a given year on diagnoses from services provided to the beneficiary in the previous year, we estimated the potential impact of chart reviews on 2017 payments based on encounter data that MAOs submitted for 2016.

Analyses of All Chart Reviews

We determined the chart reviews that added and deleted diagnoses in the 2016 MA encounter data, as shown in Exhibit A-1 and described below.[37] In October 2018, after the September deadline for MAOs to submit data for payment year 2017, we identified chart reviews in the 2016 MA encounter data in CMS's IDR as records containing:

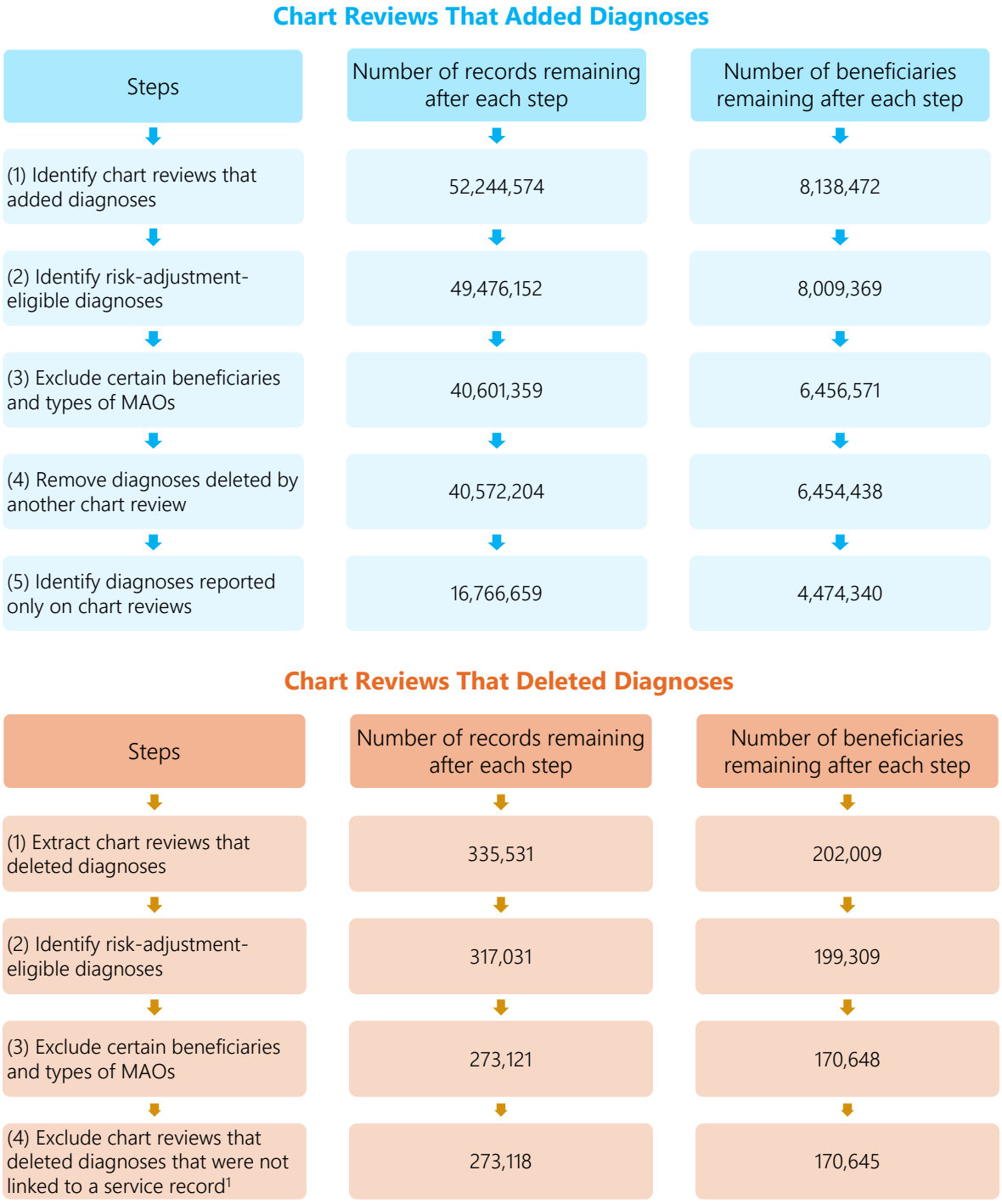
- a claim type code between 4000 and 4800, indicating that the record is MA encounter data;
- a claim through date between January 1, 2016, and December 31, 2016;
- a submission date between January 1, 2016, and September 14, 2018;
- a chart review switch value of "Y," indicating that the record is a chart review; and
- a chart review effective switch of "Y," indicating that the record is the most recently accepted version of the chart review.

For chart reviews that added diagnoses, we identified diagnoses reported only on chart reviews and not on any service record in the 2016 MA encounter data. For beneficiaries with diagnoses reported on chart reviews with dates of service in the last quarter of 2016 (October through December), we also ensured that the diagnoses were not reported on any service records with dates of service in the first quarter of 2017 (January through March).

[36] If MAOs reported any risk-adjustment-eligible diagnoses from chart reviews only in the RAPS or only in the encounter data system, our payment estimates could underestimate or overestimate the actual risk-adjusted payments resulting solely from diagnoses on chart reviews.

[37] MAOs may submit a chart review to the encounter data when a provider documents more diagnoses than the maximum number of diagnoses allowable on a service record. Therefore, we did not include 1.3 million chart reviews that added diagnoses and were linked to accepted service records that contained the maximum number of diagnoses allowed on a service record.

Exhibit A-1: Identifying chart reviews in the encounter data that resulted in added and deleted diagnoses



Source: OIG analysis of 2016 MA encounter data from CMS's IDR.

[1] To delete a diagnosis from a service record, a chart review must be linked to a previously accepted service record containing that diagnosis. After excluding certain beneficiaries, we also excluded chart reviews that deleted diagnoses that were not linked to a previously accepted service record (i.e., had a four-part effective key that did not match the four-part effective key of a 2016 service record).

Identification of Risk-Adjustment-Eligible Diagnoses. We then identified which diagnoses reported on chart reviews in the MA encounter data met CMS's eligibility criteria for risk adjustment by using the same methods used by CMS.[38] For each chart review, we identified whether it contained a risk-adjustment-eligible claim type code (which corresponds to the type of bill code on institutional inpatient and outpatient encounter data) and/or a procedure code listed on CMS's filtering list for 2016.[39] Because MAOs may submit chart reviews to delete diagnoses from a previously accepted chart review, we also removed diagnoses added by chart reviews and subsequently deleted by chart reviews.

Exclusion of Beneficiaries With Certain Characteristics. We excluded beneficiaries who had end-stage renal disease, were receiving hospice care, or did not reside in a U.S. State based on information contained in the IDR's MA prescription drug (MARx) data, because CMS uses different methods to calculate these payments. We included only beneficiaries enrolled with the same MA plan for all 12 months of 2016.[40] We excluded beneficiaries with inconsistencies between their MA encounter data, Medicare beneficiary data, and MARx data contained in the IDR to ensure data accuracy. For example, we did not include beneficiaries whose MAO contract number was not the same across all three IDR data sources.

Identification of Diagnoses Reported Only on Chart Reviews. For each beneficiary with a diagnosis added by chart reviews, we identified all of their service records contained in the IDR's 2016 MA encounter data. For beneficiaries with diagnoses reported on chart reviews with a claim through date between October 1, 2016, and December 31, 2016, we also identified all service records that had claim through dates between January 1, 2017, and March 31, 2017. We then compared the diagnoses reported on the chart reviews to the diagnoses reported on the service records. We kept the diagnoses reported on chart reviews that were not reported on any service record in 2016 and, if applicable, the first quarter of 2017.

Identification of Linked and Unlinked Chart Reviews. We separated chart reviews that added diagnoses into groups of linked versus unlinked chart reviews. We identified linked chart reviews as chart reviews that contained an original control number and had a four-part effective key that matched the

[38] CMS requires risk-adjustment-eligible diagnoses to be based on a face-to-face visit between the beneficiary and certain types of providers. CMS identifies risk-adjustment-eligible diagnoses in the encounter data based on whether the service record contains an acceptable procedure code and/or type of bill code. CMS, *Final Encounter Data Diagnosis Filtering Logic*, December 2015. Accessed at http://www.csscoperations.com on December 27, 2018.

[39] CMS, *2016 Medicare Risk-Adjustment-Eligible CPT/HCPCS Codes*. Accessed at https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Risk-Adjustors.html on May 2, 2018.

[40] We use the term MAO to represent each unique MA contract number. We excluded from our review all cost plans, demonstration plans, PACE organizations, and Medicare medical savings account plans.

four-part effective key of an accepted service record with a date of service in 2016.[41] We considered all other chart reviews unlinked. Of the 16.8 million chart reviews that added a risk-adjustment-eligible diagnoses code reported only on chart reviews, 8.2 million were unlinked chart reviews. Of these, 7.9 million were non-inpatient unlinked chart reviews (i.e., did not have a hospital inpatient type of bill code). We determined the number of non-inpatient unlinked chart reviews that contained default data reason code 056, indicating that the chart review contained default procedure codes.[42]

Identification of HCCs Generated by Diagnoses Reported on Chart Reviews

HCCs Added by Chart Reviews. For beneficiaries who had risk-adjustment-eligible diagnoses reported only on chart reviews, we used the 2017 CMS-HCC model and CMS's CMS-HCC mapping software to identify the HCCs generated by the diagnoses reported only on chart reviews.[43] To identify these HCCs, we first mapped all of a beneficiary's risk-adjustment-eligible diagnoses (i.e., diagnoses reported on both service records and chart reviews) to HCCs. Then, we mapped just the risk-adjustment-eligible diagnoses reported on service records to HCCs. Finally, we compared the two sets of HCCs to determine the HCCs generated from mapping the diagnoses reported only on chart reviews.

HCCs Deleted by Chart Reviews. For beneficiaries who had a chart review that deleted a risk-adjustment-eligible diagnosis, we identified the HCCs that would have been generated if the MAOs had not deleted these diagnoses. To determine these HCCs, we first mapped all of a beneficiary's risk-adjustment-eligible diagnoses without removing the diagnoses deleted by chart reviews. Then, we removed the diagnoses that the chart reviews deleted from the previously accepted service records identified by the MAOs and mapped only the risk-adjustment-eligible diagnoses that remained for the beneficiary. We compared the two sets of HCCs to determine the HCCs generated from mapping the diagnoses deleted by chart reviews.

Assignment of Relative Factors to HCCs. We assigned relative factors to each HCC based on the segment of the 2017 CMS-HCC model that applied to each

[41] As instructed by CMS, we used a four-part effective key to link chart reviews to previously accepted service records. The four-part effective key includes the claim type effective code, the claim date signature effective key, the claim number effective key, and the geographic beneficiary effective key.

[42] For chart reviews with a hospital inpatient type of bill code, CMS does not use the procedure codes to determine risk adjustment eligibility. Therefore, we excluded inpatient unlinked chart reviews from this analysis.

[43] CMS, *Announcement of Calendar Year (CY) 2017 Medicare Advantage Capitation Rates and Medicare Advantage and Part D Payment Policies and Final Call Letter, Table VI-1. 2017 CMS-HCC Model Relative Factors for Community and Institutional Beneficiaries*, April 2016, p.78-84. Accessed at https://www.cms.gov on December 19, 2018; and CMS, 2017 Model Software/ICD-10 Mappings, V2217.79.O1. Accessed at https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Risk-Adjustors.html on May 9, 2018.

beneficiary based on their characteristics as of January 2016. These characteristics included the beneficiaries' long-term institutional status, age, original reason for Medicare entitlement, and dual-eligibility status. We used Medicare beneficiary data from the IDR to identify beneficiaries' age, original reason for Medicare entitlement, and dual-eligibility status. We used MARx data from the IDR to identify beneficiaries' long-term institutional status. We adjusted each HCC's relative factor by CMS's normalization and coding adjustment factors for 2017 prior to calculating payment estimates.[44]

Calculation of Payment Estimates

We calculated estimates of the amount of increased and decreased annual risk-adjusted payments associated with each added and deleted HCC, respectively, by multiplying the MA plan's monthly base payment rate by the HCC's relative factor. We then multiplied monthly amounts of increased or decreased payments by 12 to determine annual payment estimates.

We determined the base payment rate for each beneficiary's plan by using information gathered from several data sources. For MA plans that submit bids to CMS, we identified base payment rates for December 2017 in the Approved Bid Pricing Tool Extract from CMS's Health Plan Management System. For Employer-Group Waiver Plans (EGWPs), which do not submit bids to CMS, we identified base payment rates using CMS's EGWP county-level rate books for regional and local EGWPs and information on each EGWP's star rating.[45, 46] We then determined base payment rates for each beneficiary's plan based on each beneficiary's plan contract number, plan number, plan segment number, Part A and B entitlement status, and county of residence as of January 2016 in the MARx data.

For a small percentage of beneficiaries, we used an alternative method to determine their plans' base payment rates. For 11 percent of beneficiaries included in our analysis, we calculated payment estimates based on a median base payment rate for all non-EGWPs, instead of each plan's actual base payment rate. For 10.9 percent of these beneficiaries, the MA plan enrollment information (i.e., the contract number, plan number, segment number, or county of residence) contained in the IDR for January 2016 did not match the

[44] CMS adjusts the risk score by a normalization factor and a coding-adjustment factor. The normalization factor reduces risk scores to ensure that the average beneficiary risk score in any given year remains 1.0, despite annual increases in risk scores. The coding adjustment factor reduces risk scores to account for differences in coding patterns between MA and Medicare fee-for-service.

[45] CMS, *2017 Medicare Advantage Ratebook and Prescription Drug Rate Information*, 2017. Accessed at https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Ratebooks-and-Supporting-Data.html on January 5, 2018.

[46] We identified EGWPs' 2017 star ratings using the Approved Bid Pricing Tool Extract and the MA Quality Bonus Payment Rating files from CMS's Health Plan Management System.

2017 MA plan information used in our analysis.[47] In addition, 0.1 percent of beneficiaries were enrolled in an EGWP and were covered only by either Medicare Part A or Medicare Part B (and not covered by both Medicare Parts A and B). For these beneficiaries, we determined the median Part A and/or Part B base payment rate for December 2017 for all plans in the Approved Bid Pricing Tool Extract.

We conducted summary analysis of estimated payment amounts and HCCs from linked and unlinked chart reviews. We calculated the net difference between the amount of increased and decreased payments from chart reviews. We summarized the number and type of HCCs that increased and decreased payments and compared our list of HCCs to the high-risk HCCs that CMS identified as having the highest rates of errors for 2014.[48] We also checked for variation across MAOs (i.e., contract numbers) and their parent organizations to see if certain organizations had higher or lower payments due to diagnoses reported on chart reviews.

[47] The 2017 MA plan information used in our analysis included information from the Approved Bid Pricing Tool Extract and the Plan Benefit Package Extract in CMS's Health Plan Management System, as well as CMS's EGWP county-level rate books.

[48] We used HCCs that CMS identified as at high risk for payment errors for 2014, the most recent year of payment error data. CMS, *High-Risk Hierarchal Condition Categories*, November 2017.

APPENDIX B: Estimated Payments Resulting From Diagnoses Reported Only on Chart Reviews, by HCC

For beneficiaries who had diagnoses reported only on chart reviews in the 2016 MA encounter data, we identified the HCCs generated by these added diagnoses. As shown in Exhibit B-1, the estimated 2017 risk-adjusted payments for each HCC added by chart reviews ranged from $2,379 to $624.0 million. Decreased payments for each HCC deleted by chart reviews ranged from $2,572 to $13.0 million.

Exhibit B-1: Estimated 2017 payments resulting from diagnoses reported on chart reviews, by HCC

HCC	HCC Description	2017 Increased Risk-Adjusted Payments	2017 Decreased Risk-Adjusted Payments	2017 Net Risk-Adjusted Payments
HCC108	Vascular Disease	$624,015,682	-$12,747,660	$611,268,022
HCC22	Morbid Obesity	$559,183,801	-$6,077,936	$553,105,865
HCC111	Chronic Obstructive Pulmonary Disease	$558,092,852	-$5,631,330	$552,461,522
HCC18	Diabetes with Chronic Complications	$555,902,426	-$9,217,688	$546,684,738
HCC85	Congestive Heart Failure	$497,625,400	-$6,020,620	$491,604,780
HCC58	Major Depressive, Bipolar, and Paranoid Disorders	$406,925,420	-$9,061,133	$397,864,287
HCC40	Rheumatoid Arthritis and Inflammatory Connective Tissue Disease	$350,613,311	-$7,132,613	$343,480,698
HCC8	Metastatic Cancer and Acute Leukemia	$184,261,584	-$9,395,942	$174,865,642
HCC55	Drug/Alcohol Dependence	$166,550,059	-$3,872,066	$162,677,993
HCC96	Specified Heart Arrhythmias	$165,271,612	-$3,984,647	$161,286,965
HCC48	Coagulation Defects and Other Specified Hematological Disorders	$135,884,401	-$3,168,256	$132,716,145
HCC161	Chronic Ulcer of Skin, Except Pressure	$117,461,633	-$1,773,973	$115,687,660
HCC189	Amputation Status, Lower Limb/Amputation Complications	$115,626,317	-$522,914	$115,103,403
HCC103	Hemiplegia/Hemiparesis	$110,157,913	-$2,544,705	$107,613,208
HCC21	Protein-Calorie Malnutrition	$108,737,169	-$2,996,674	$105,740,495
HCC23	Other Significant Endocrine and Metabolic Disorders	$107,860,427	-$3,262,498	$104,597,929
HCC75	Myasthenia Gravis/Myoneural Disorders and Guillain-Barre Syndrome/Inflammatory and Toxic Neuropathy	$92,693,353	-$5,797,873	$86,895,480
HCC47	Disorders of Immunity	$83,767,480	-$3,308,864	$80,458,616
HCC82	Respirator Dependence/Tracheostomy Status	$76,498,580	-$247,917	$76,250,663

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Exhibit B-1: Estimated 2017 payments resulting from diagnoses reported on chart reviews, by HCC (continued)

HCC	HCC Description	2017 Increased Risk-Adjusted Payments	2017 Decreased Risk-Adjusted Payments	2017 Net Risk-Adjusted Payments
HCC88	Angina Pectoris	$78,566,216	-$2,940,818	$75,625,398
HCC10	Lymphoma and Other Cancers	$75,884,098	-$3,227,194	$72,656,904
HCC79	Seizure Disorders and Convulsions	$71,524,374	-$1,002,701	$70,521,673
HCC19	Diabetes without Complication	$69,256,511	-$1,379,037	$67,877,474
HCC188	Artificial Openings for Feeding or Elimination	$67,633,105	-$552,126	$67,080,979
HCC46	Severe Hematological Disorders	$59,967,818	-$1,406,728	$58,561,090
HCC78	Parkinson's and Huntington's Diseases	$57,755,804	-$955,947	$56,799,857
HCC135	Acute Renal Failure	$51,846,788	-$4,392,214	$47,454,574
HCC84	Cardio-Respiratory Failure and Shock	$42,027,142	-$2,670,446	$39,356,696
HCC27	End-Stage Liver Disease	$36,059,563	-$667,199	$35,392,364
HCC106	Atherosclerosis of the Extremities With Ulceration or Gangrene	$39,197,346	-$4,030,133	$35,167,213
HCC35	Inflammatory Bowel Disease	$34,397,104	-$559,974	$33,837,130
HCC107	Vascular Disease With Complications	$37,873,851	-$6,254,858	$31,618,993
HCC57	Schizophrenia	$31,610,792	-$220,284	$31,390,508
HCC112	Fibrosis of Lung and Other Chronic Lung Disorders	$29,077,393	-$443,450	$28,633,943
HCC28	Cirrhosis of Liver	$28,669,099	-$571,934	$28,097,165
HCC72	Spinal Cord Disorders/Injuries	$29,090,320	-$1,470,668	$27,619,652
HCC186	Major Organ Transplant or Replacement Status	$25,562,992	-$355,549	$25,207,443
HCC9	Lung and Other Severe Cancers	$30,632,704	-$6,436,584	$24,196,120
HCC158	Pressure Ulcer of Skin With Full Thickness Skin Loss	$23,009,366	-$902,403	$22,106,963
HCC2	Septicemia, Sepsis, Systemic Inflammatory Response Syndrome/Shock	$22,377,064	-$1,032,119	$21,344,945
HCC77	Multiple Sclerosis	$18,536,609	-$164,752	$18,371,857
HCC39	Bone/Joint/Muscle Infections/Necrosis	$19,173,836	-$889,730	$18,284,106
HCC71	Paraplegia	$17,651,393	-$225,207	$17,426,186
HCC124	Exudative Macular Degeneration	$17,428,482	-$445,905	$16,982,577
HCC176	Complications of Specified Implanted Device or Graft	$18,264,506	-$2,513,591	$15,750,915
HCC134	Dialysis Status	$15,883,440	-$166,930	$15,716,510
HCC137	Chronic Kidney Disease, Severe (Stage 4)	$15,059,826	-$608,940	$14,450,886
HCC169	Vertebral Fractures Without Spinal Cord Injury	$17,340,191	-$2,990,413	$14,349,778
HCC87	Unstable Angina and Other Acute Ischemic Heart Disease	$16,245,743	-$2,171,216	$14,074,527
HCC70	Quadriplegia	$13,793,142	-$469,489	$13,323,653
HCC34	Chronic Pancreatitis	$12,203,694	-$403,020	$11,800,674
HCC29	Chronic Hepatitis	$12,013,143	-$388,234	$11,624,909

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Exhibit B-1: Estimated 2017 payments resulting from diagnoses reported on chart reviews, by HCC (continued)

HCC	HCC Description	2017 Increased Risk-Adjusted Payments	2017 Decreased Risk-Adjusted Payments	2017 Net Risk-Adjusted Payments
HCC122	Proliferative Diabetic Retinopathy and Vitreous Hemorrhage	$11,954,165	-$331,571	$11,622,594
HCC104	Monoplegia, Other Paralytic Syndromes	$12,037,509	-$460,910	$11,576,599
HCC12	Breast, Prostate, and Other Cancers and Tumors	$12,733,378	-$2,289,158	$10,444,220
HCC33	Intestinal Obstruction/Perforation	$11,279,410	-$1,122,810	$10,156,600
HCC114	Aspiration and Specified Bacterial Pneumonias	$11,385,876	-$1,439,746	$9,946,130
HCC136	Chronic Kidney Disease, Stage 5	$8,370,840	-$849,894	$7,520,946
HCC6	Opportunistic Infections	$7,393,274	-$585,605	$6,807,669
HCC157	Pressure Ulcer of Skin With Necrosis Through to Muscle, Tendon, or Bone	$5,738,216	-$315,268	$5,422,948
HCC115	Pneumococcal Pneumonia, Empyema, Lung Abscess	$5,701,524	-$358,048	$5,343,476
HCC80	Coma, Brain Compression/Anoxic Damage	$5,615,122	-$644,290	$4,970,832
HCC11	Colorectal, Bladder, and Other Cancers	$11,246,919	-$6,281,339	$4,965,580
HCC1	HIV/AIDS	$4,438,303	-$60,778	$4,377,525
HCC86	Acute Myocardial Infarction	$7,770,769	-$3,498,486	$4,272,283
HCC54	Drug/Alcohol Psychosis	$4,081,699	-$90,415	$3,991,284
HCC17	Diabetes with Acute Complications	$4,269,503	-$608,995	$3,660,508
HCC170	Hip Fracture/Dislocation	$4,176,285	-$869,601	$3,306,684
HCC76	Muscular Dystrophy	$2,880,618	-$43,896	$2,836,722
HCC110	Cystic Fibrosis	$2,818,485	-$74,680	$2,743,805
HCC73	Amyotrophic Lateral Sclerosis and Other Motor Neuron Disease	$2,646,642	-$67,279	$2,579,363
HCC167	Major Head Injury	$2,669,608	-$326,694	$2,342,914
HCC74	Cerebral Palsy	$2,264,214	-$25,335	$2,238,879
HCC99	Cerebral Hemorrhage	$3,632,171	-$1,455,800	$2,176,371
HCC173	Traumatic Amputations and Complications	$2,137,805	-$462,633	$1,675,172
HCC162	Severe Skin Burn or Condition	$487,287	-$40,779	$446,508
HCC166	Severe Head Injury	$103,238	-$19,067	$84,171
HCC83	Respiratory Arrest	$1,286,777	-$1,400,586	-$113,809
HCC100	Ischemic or Unspecified Stroke	$9,252,840	-$13,007,907	-$3,755,067

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Exhibit B-1: Estimated 2017 payments resulting from diagnoses reported on chart reviews, by HCC (continued)

HCC	HCC Description	2017 Increased Risk-Adjusted Payments	2017 Decreased Risk-Adjusted Payments	2017 Net Risk-Adjusted Payments
Disease Interactions				
HCC85_gCopdCF	Congestive Heart Failure*Chronic Obstructive Pulmonary Disease Group	$153,167,321	-$1,583,709	$151,583,612
HCC85_gDiabetesMellit	Congestive Heart Failure*Diabetes Group	$128,721,969	-$1,655,531	$127,066,438
HCC85_HCC96	Congestive Heart Failure*Specified Heart Arrhythmias	$82,167,702	-$1,129,385	$81,038,317
HCC85_gRenal	Congestive Heart Failure*Renal Group	$63,949,989	-$1,803,179	$62,146,810
gRespDepandArre_gCopdCF	Cardiorespiratory Failure Group*Chronic Obstructive Pulmonary Disease Group	$51,995,057	-$2,217,217	$49,777,840
HCC47_gCancer	Immune Disorders*Cancer Group	$47,451,848	-$1,305,906	$46,145,942
gSubstanceAbuse_gPsychiatric	Substance Abuse Group*Psychiatric Group	$19,928,643	-$355,855	$19,572,788
SEPSIS_ARTIF_OPENINGS	Sepsis*Artificial Openings for Feeding or Elimination	$488,349	$0	$488,349
SCHIZOPHRENIA_gCopdCF	Schizophrenia*Chronic Obstructive Pulmonary Disease	$371,680	-$3,321	$368,359
SCHIZOPHRENIA_SEIZURES	Schizophrenia*Seizure Disorders and Convulsions	$261,654	$0	$261,654
gCopdCF_ASP_SPEC_BACT_PNEUM	Chronic Obstructive Pulmonary Disease*Aspiration and Specified Bacterial Pneumonias	$264,046	-$2,572	$261,474
SEPSIS_ASP_SPEC_BACT_PNEUM	Sepsis*Aspiration and Specified Bacterial Pneumonias	$248,487	$0	$248,487
ART_OPENINGS_PRESSURE_ULCER	Artificial Openings for Feeding or Elimination*Pressure Ulcer	$206,807	-$2,798	$204,009
SCHIZOPHRENIA_CHF	Schizophrenia*Congestive Heart Failure	$171,321	$0	$171,321
SEPSIS_PRESSURE_ULCER	Sepsis*Pressure Ulcer	$135,185	$0	$135,185
ASP_SPEC_BACT_PNEUM_PRES_ULC	Aspiration and Specified Bacterial Pneumonias*Pressure Ulcer	$117,653	-$3,655	$113,998

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Exhibit B-1: Estimated 2017 payments resulting from diagnoses reported on chart reviews, by HCC (continued)

HCC	HCC Description	2017 Increased Risk-Adjusted Payments	2017 Decreased Risk-Adjusted Payments	2017 Net Risk-Adjusted Payments
Disabled/Disease Interactions				
DISABLED_ HCC85	Disabled, Congestive Heart Failure	$134,778	$0	$134,778
DISABLED_ HCC161	Disabled, Chronic Ulcer of the Skin, Except Pressure Ulcer	$92,421	-$2,624	$89,797
DISABLED_ PRESSURE_ ULCER	Disabled, Pressure Ulcer	$77,628	$0	$77,628
DISABLED_ HCC77	Disabled, Multiple Sclerosis	$40,271	$0	$40,271
DISABLED_ HCC39	Disabled, Bone/Joint Muscle Infections/Necrosis	$25,246	$0	$25,246
DISABLED_ HCC6	Disabled, Opportunistic Infections	$2,379	$0	$2,379
	TOTAL	$6,861,135,786	-$196,472,424	$6,664,663,362

Source: OIG estimation of 2017 payment amounts using 2016 MA encounter data from CMS's IDR.

APPENDIX C: Estimated Payments From Chart Reviews for HCCs at High Risk for Improper Payments

When conducting audits of a sample of risk adjustment data submitted by MAOs, CMS determines whether the diagnoses that resulted in risk-adjusted payments can be validated by medical record documentation. When audits cannot validate diagnoses, CMS uses this information to recover overpayments from MAOs and calculate a payment error rate. The 2014 payment year is the most recent payment year that CMS identified HCCs at a high risk for payment errors (including both overpayments and underpayments).[49] The 10 HCCs that CMS identified as having the highest payment error rates for 2014 accounted for $216 million of the estimated net payments solely from chart reviews for 2017.[50] Exhibit C-1 outlines the estimated amount of 2017 risk-adjusted payments attributed to each of these high-risk HCCs.

Exhibit C-1: Estimated payments from chart reviews for HCCs that CMS previously identified as at a high risk for improper payments totaled $216 million for 2017

HCC Identified by CMS as High-risk	HCC Description	2017 Increased Risk-Adjusted Payments	2017 Decreased Risk-Adjusted Payments	2017 Net Risk-Adjusted Payments
HCC75	Myasthenia Gravis/Myoneural Disorders and Guillain-Barre Syndrome/Inflammatory and Toxic Neuropathy	$92,693,353	-$5,797,873	$86,895,480
HCC27	End-Stage Liver Disease	$36,059,563	-$667,199	$35,392,364
HCC106	Atherosclerosis of the Extremities with Ulceration or Gangrene	$39,197,346	-$4,030,133	$35,167,213
HCC9	Lung and Other Severe Cancers	$30,632,704	-$6,436,584	$24,196,120
HCC87	Unstable Angina and Other Acute Ischemic Heart Disease	$16,245,743	-$2,171,216	$14,074,527
HCC114	Aspiration and Specified Bacterial Pneumonias	$11,385,876	-$1,439,746	$9,946,130
HCC136	Chronic Kidney Disease (Stage 5)	$8,370,840	-$849,894	$7,520,946
HCC54	Drug/Alcohol Psychosis	$4,081,699	-$90,415	$3,991,284
HCC99	Cerebral Hemorrhage	$3,632,171	-$1,455,800	$2,176,371
HCC100	Ischemic or Unspecified Stroke	$9,252,840	-$13,007,907	-$3,755,067
	TOTAL	$251,552,135	-$35,946,767	$215,605,368

Source: OIG estimation of 2017 payment amounts using 2016 MA encounter data from CMS's IDR and CMS's list of HCCs at a high risk for payment errors for 2014.

[49] CMS, *High-Risk Hierarchal Condition Categories*, November 2017.

[50] We compared our list of HCCs from the 2017 CMS-HCC model that were added by chart reviews to the HCCs that CMS identified as at high risk for payment errors from the 2014 CMS-HCC model. Across the 2014 and 2017 models, there may be differences in the relative factor assigned to each HCC.

APPENDIX D: Agency Comments

DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Medicare & Medicaid Services

Administrator
Washington, DC 20201

DATE: November 1, 2019

TO: Joanne Chiedi
Acting Inspector General

FROM: Seema Verma
Administrator

SUBJECT: Office of Inspector General (OIG) Draft Report: Billions in Estimated Medicare Advantage Payments from Chart Reviews Raise Concerns (OEI-03-17-00470)

The Centers for Medicare & Medicaid Services (CMS) appreciates the opportunity to review and comment on this draft report regarding the accuracy of diagnoses that Medicare Advantage Organizations (MAOs) submit to CMS for risk-adjusted payments. CMS is committed to ensuring that such diagnoses are accurately supported by medical records.

CMS pays each MAO a monthly per-person amount for each beneficiary enrolled in its plan. The per-person amount is adjusted for the risk of the beneficiary, which takes into account differences in health status between enrolled beneficiaries. Plans that disproportionately enroll healthy beneficiaries are paid less than they would be if they enroll beneficiaries with the average risk profile, while plans that disproportionately enroll the sickest patients are paid more than if they enroll beneficiaries with the average risk profile.

Beneficiary risk scores are calculated with diagnoses that MAOs report to CMS. Diagnosis codes used for risk adjustment must meet specific criteria, including that the diagnosis is documented in the medical record. CMS uses Risk Adjustment Data Validation (RADV) audits to validate that diagnoses used for risk adjustment meet program rules.

MAOs report diagnosis codes to CMS in two ways: (1) to a legacy system called the Risk Adjustment Payment System (RAPS) using an abbreviated data set, including diagnosis codes; and (2) to the Encounter Data System, where MAOs submit a larger set of information on each service provided, including diagnosis codes. Because all diagnosis codes used for risk adjustment should be supported by medical records, CMS permits MAOs to report diagnosis codes taken from the review of medical records (i.e., charts) to both systems.

Chart review records are a type of Medicare Advantage encounter data. They allow MAOs to submit diagnosis codes for risk adjustment that were not reported on the record that reported the encounter. That typically occurs because the data used to report the encounter was taken from a claim that a provider submitted to the MAO. Such a claim would not necessarily include all the diagnoses documented in the medical record during the respective encounter.

While MAOs are required to submit all encounters to CMS, chart review records are intended for the submission of additional diagnosis codes submitted for risk adjustment. Based on their reviews of medical records, MAOs may also use chart review records to delete previously submitted diagnosis codes that are not supported by those medical records; if they identify unsupported codes, MAOs must delete them.

As OIG correctly notes in their report, there are system issues that can make it difficult for MAOs to link chart reviews to other encounter records. MAOs' systems may require significant updates: 38% of MAOs have submitted a linked chart review and, for service year 2016 (the same year as the OIG study), 46% of chart review records are linked. Encounter data is primarily sourced from claims data, whereas chart review records are generally sourced from clinical or medical record data. Claims or billing systems and clinical systems are not typically linked together. The effort required to link claims/billing data systems with clinical/billing data can involve significant levels of resources, time, and cost.

After making risk-adjusted payments to MAOs, CMS determines whether a sample of diagnoses reported by MAOs can be validated by supporting medical record documentation using contract-level and national RADV audits. When contract-level RADV audits cannot validate a diagnosis for a payment year, CMS uses this information to recover overpayments from MAOs and calculate a payment error rate.

The payment year 2014 RADV audit is currently underway and is expected to conclude in late FY 2020. HHS anticipates launching payment year 2015 RADV audits in late FY 2019. As such, CMS plans to include chart reviews in RADV audits to determine whether any overpayments were made. It is important to note that, so long as the diagnosis is validated in the medical record, there will be no audit finding. RADV audits are the best approach for assuring that MAOs are documenting diagnoses appropriately.

CMS appreciates the OIG's report on chart review diagnoses, however we have identified two issues with this report. First, OIG has identified diagnoses that were reported on chart review records to the encounter data system, and that were not reported on encounter data records. Two possible reasons for this finding are: (1) the encounter data are not complete (either that all items and services have not been reported or that not all diagnoses in the medical record have been reported), or (2) the data reported on chart review records were improperly reported.

In addition, if OIG had concluded these were improperly reported risk scores, we note that the theoretical dollar amount potentially at issue seems inaccurate. OIG finds that chart review diagnoses resulted in $6.6 billion in payments in 2017, however, the actual value of these payments that OIG confirms in its report is approximately $1.7 billion. As noted by OIG, in 2017, the year of the OIG's review, CMS calculated risk scores using a blend of both encounter data and RAPS data. Encounter data accounted for 25 percent of risk scores used for payments, while RAPS data made up the remaining 75 percent. As a result, any calculation of risk adjusted payments resulting from diagnoses in encounter data – including in chart reviews – should

undergo the same blending calculation. OIG only used encounter data and did not apply this blending calculation, and therefore multiplied the value of payments resulting from diagnoses present only on chart reviews by a factor of four. The $6.6 billion OIG presents assumes that any diagnoses present in chart reviews in the encounter data would also be present in RAPS, however, OIG made no effort to verify this assumption. In addition, OIG found that CMS based $2.7 billion in payments on chart review diagnoses that MAOs did not link to a specific service record. As noted above, OIG did not apply the blended payment rate to this calculation, and therefore the actual value of these payments supported by OIG's methodology is approximately $675 million.

OIG's recommendations and CMS' responses are below.

OIG Recommendation

Provide targeted oversight of MAOs that had risk-adjusted payments resulting from unlinked chart reviews for beneficiaries who had no service records in the 2016 encounter data

CMS Response

CMS concurs with this recommendation. For 2018 dates of service, there are approximately 8,500 beneficiaries for whom MAOs have submitted unlinked chart review records but no encounter data records, representing about 70,000 records. CMS will provide targeted outreach to the respective MAOs. If the OIG provides CMS with data related to the 4,616 beneficiaries with unlinked chart reviews identified in their analysis, CMS will review this data and include these beneficiaries in our plan outreach, if appropriate.

OIG Recommendation

Conduct audits that validate diagnoses reported on chart reviews in the MA encounter data

CMS Response

CMS concurs with this recommendation. Payment year 2015 was the first year where encounter data contributed to risk adjusted payment, therefore 2015 is the first year for which diagnosis codes submitted on chart review records could be included in this evaluation. Going forward, CMS will include chart reviews in their RADV audits.

OIG Recommendation

Reassess the risks and benefits of allowing chart reviews that are not linked to service records to be used as sources of diagnoses for risk adjustment

CMS Response

CMS concurs with this recommendation. CMS will conduct a review of unlinked chart reviews and determine whether they should be used as sources of diagnoses for risk adjustment. As mentioned in CMS' response to the second recommendation, RADV audits will be updated to include diagnosis codes submitted on chart review records. These audits will help to establish that beneficiaries have the diagnoses that were reported on unlinked chart reviews.

In addition, for 2018 dates of service, we will analyze the extent to which there are encounter data records that report the services associated with unlinked chart review records. CMS will also assess the impact on information technology systems if CMS were to require the linking of chart review records to encounter data records.

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To obtain additional information concerning this report or to obtain copies, contact the Office of Public Affairs at Public.Affairs@oig.hhs.gov.

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