

**Department of Health and Human Services**

**OFFICE OF  
INSPECTOR GENERAL**

**MEDICARE ADVANTAGE  
ENCOUNTER DATA  
SHOW PROMISE FOR  
PROGRAM OVERSIGHT,  
BUT IMPROVEMENTS ARE  
NEEDED**



**Suzanne Murrin  
Deputy Inspector General for  
Evaluations and Inspections**

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## Report in Brief

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### Why OIG Did This Review

For the Medicare Advantage (MA) program, the Centers for Medicare & Medicaid Services (CMS) contracts with private insurance companies, known as MA organizations (MAOs), to provide Medicare coverage for 18.6 million beneficiaries. In fiscal year 2016, MA expenses reached \$200 billion.

In 2012, CMS began collecting detailed information from MAOs regarding each service provided to MA beneficiaries. This information is known as MA encounter data. These data must be accurate for CMS to review the medical care that beneficiaries are receiving and use the data to increase payments to MAOs for beneficiaries in poorer health. Ensuring the completeness, validity, and timeliness of the MA encounter data is also critical to safeguard program integrity and to ensure that MA beneficiaries receive needed medical care.

### How OIG Did This Review

We analyzed 102 million MA encounter records from the first quarter of 2014 to determine the extent to which data contained in CMS's Integrated Data Repository were complete, valid, and timely. In addition, to review the actions that CMS has taken to address errors in MA encounter data, we analyzed CMS's responses to a structured questionnaire and relevant policy and procedural documentation.

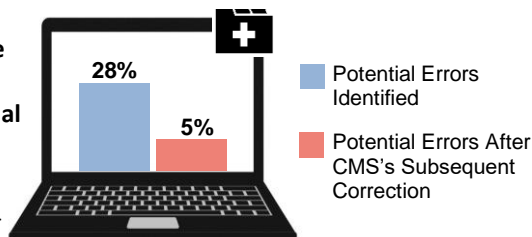
## Medicare Advantage Encounter Data Show Promise for Program Oversight, But Improvements Are Needed

### What OIG Found

Overall, 28 percent of MA encounter records that we reviewed from the first quarter of 2014 had at least 1 potential error, but CMS reported correcting the majority of these records. According to CMS, most of these potential errors were created when CMS removed provider identifiers from records in its edit process. With CMS's subsequent correction, only 5 percent of the records in our review would contain a potential error. Types of potential errors included inactive or invalid identifiers for billing providers; duplicated service lines; missing required data; inconsistent dates; and beneficiary information that did not match CMS's records. Just 1 percent of MAOs submitted 51 percent of the records with potential error(s). Some of these errors may raise concerns about the legitimacy of services documented in the data, such as records that lacked a beneficiary last name or a valid identifier for the billing provider.

**Exhibit 1. Percentage of MA Encounter Records With Potential Errors**

MA Encounter Data  
January to March 2014



Although MAOs must submit identifiers for *billing* providers, CMS does not require MAOs to submit identifiers for *ordering* or *referring* providers and requires identifiers for *rendering* providers only under certain circumstances. Identifiers for ordering and referring providers—and in some cases, for rendering providers—were frequently absent from encounter data, which limits the use of these data for vital program oversight and enforcement activities.

CMS's key control to ensure data integrity has been its edit process, which rejects data that do not pass certain checks. However, CMS has not tracked whether MAOs respond when this process rejects data. CMS has plans to implement additional compliance activities to ensure data integrity, but it has not established performance measures that monitor MAOs' submission of records with complete and valid data.

### What OIG Recommends

We recommend that CMS take actions as appropriate to address potential errors in the MA encounter data; provide targeted oversight of MAOs that submitted a higher percentage of records with potential errors; ensure that billing provider identifiers are active and valid on all records; require MAOs to submit ordering and referring provider identifiers and ensure the submission of rendering provider identifiers for applicable records; track how MAOs respond to edits that reject data; and establish and monitor performance thresholds related to MAOs' submission of records with complete and valid data. CMS concurred with four of our seven recommendations.

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## OBJECTIVES

1. To assess the extent to which the Centers for Medicare & Medicaid Services' (CMS's) Integrated Data Repository (IDR) contains complete, valid, and timely Medicare Advantage (MA) encounter data.
2. To review the actions that CMS has taken to address errors in the MA encounter data.

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## BACKGROUND

In 2012, CMS began collecting detailed information from MA organizations (MAOs) regarding all services provided to MA beneficiaries. This information is known as MA encounter data. Before this effort, CMS's lack of comprehensive MA encounter data limited its ability to assess payment accuracy, safeguard program integrity, and monitor quality of care in the MA program. Furthermore, CMS and Office of Inspector General (OIG) audits found vulnerabilities in the abbreviated data that CMS collected from MAOs before it began collecting MA encounter data. Ensuring the completeness, validity, and timeliness of MA encounter data is critical for calculating accurate MA payments, improving Medicare program integrity, and using these data to improve the quality of care that beneficiaries receive.

### **The Medicare Advantage Program**

Under Medicare Part C, CMS contracts with private insurance companies, known as MAOs, to provide services covered by Medicare Parts A and B under managed-care arrangements.<sup>1,2</sup> In fiscal year 2016, almost a third of Medicare beneficiaries—18.6 million—elected to enroll in the MA program rather than the Medicare fee-for-service program. In that fiscal year, the MA program's expenses were \$200 billion of the total \$641 billion in Medicare program/activity costs.<sup>3</sup>

### **Using Encounter Data for Payments**

CMS relies on data that MAOs submit to determine MA payment amounts. CMS makes advanced monthly payments to MAOs for each beneficiary enrolled.<sup>4</sup> CMS risk-adjusts these payments so that amounts are higher for

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<sup>1</sup> 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 (DMEPOS). Many MAOs also offer prescription drug coverage under Medicare Part D.

<sup>2</sup> For the purpose of this report, we use the term "MAOs" to refer to all managed-care organizations, coordinated care plans, private fee-for-service plans, Medicare medical savings account plans, cost plans, demonstration plans, and PACE organizations (programs of all-inclusive care of the elderly) that are required to report MA encounter data to CMS. There were 716 MAOs that submitted MA encounter data for the first quarter of 2014.

<sup>3</sup> CMS, *CMS Financial Report Fiscal Year 2016*, November 2016, p. 45.

<sup>4</sup> This is different from the Medicare fee-for-service program, which reimburses providers that submit claims for services provided.

beneficiaries who are expected to use more costly services. CMS bases risk adjustments on MA beneficiaries' demographic information and diagnoses from the previous year. To determine beneficiaries' diagnoses, CMS uses data submitted by MAOs. To estimate the expected health care costs associated with these diagnoses, CMS currently uses Medicare fee-for-service data.

*Situation prior to collection of the MA encounter data.* Since 2002, CMS has used the Risk Adjustment Processing System (RAPS) to collect from MAOs the data needed to determine beneficiaries' diagnoses for risk adjustment. However, the RAPS data include only select information (i.e., data elements) for services provided by a limited set of provider types.<sup>5</sup> In addition to these limitations, several OIG audits have found that for a substantial portion of randomly sampled beneficiaries, the MAO-submitted diagnoses in the RAPS data were not supported by medical records.<sup>6</sup> Similarly, CMS found that 10 percent, or \$16 billion, of risk-adjusted payments made in 2014 were based on RAPS data that were not supported by medical records.<sup>7</sup>

*The MA encounter data.* In 2012, CMS began collecting from MAOs the more detailed, comprehensive MA encounter data. When calculating risk-adjustment payments for payment year 2015, CMS began using MA encounter data with 2014 dates of service as an additional data source to determine beneficiaries' diagnoses. Eventually, CMS plans to use the MA encounter data rather than the RAPS data to calculate payments. CMS also plans to eventually use the MA encounter data—rather than fee-for-service data—to estimate the expected health care costs associated with MA beneficiaries' diagnoses.

### **Using Encounter Data To Safeguard Program Integrity and Review Quality of Care**

Before CMS collected MA encounter data, the lack of comprehensive MA data hindered efforts to safeguard program integrity and conduct broad reviews of the quality of care provided to MA beneficiaries. For example, a 2013 OIG report found that the Medicare Drug Integrity Contractor (MEDIC)—which is responsible for identifying and investigating MA fraud and abuse—reported that it was unable to conduct proactive data analyses because of the lack of a

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<sup>5</sup> CMS requires MAOs to submit RAPS data. The data elements submitted are beneficiary health insurance claim number (HICN), diagnosis/diagnoses, provider type, and date(s) of service for services provided by hospital inpatient facilities, hospital outpatient facilities, and physicians.

<sup>6</sup> OIG, [Risk Adjustment Data Validation of Payments Made to PacifiCare of Texas for Calendar Year 2007 \(Contract Number H4590\)](#), A-06-09-00012, May 2012; OIG, [Risk Adjustment Data Validation of Payments Made to Excellus Health Plan, Inc., for Calendar Year 2007 \(Contract Number H3351\)](#), A-02-09-01014, October 2012; OIG, [Cigna Healthcare of Arizona, Inc. \(Contract H0354\), Submitted Many Diagnoses to the Centers for Medicare & Medicaid Services That Did Not Comply with Federal Requirements for Calendar Year 2007](#), A-07-10-01082, May 2013.

<sup>7</sup> Department of Health and Human Services, *Agency Financial Report Fiscal Year 2016*, November 2016, p. 213.

centralized data repository containing records of all services provided to MA beneficiaries.<sup>8</sup>

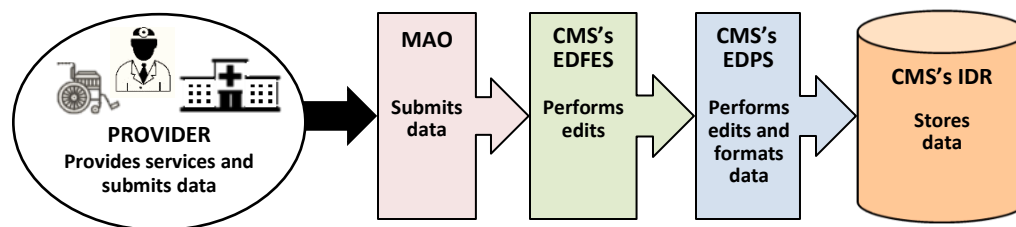
CMS now has centralized, encounter-level data to enable it to conduct reviews of program integrity and quality of care. For example, to ensure proper payments, CMS has begun using the MA encounter data to identify Medicare fee-for-service claims that were also submitted as MA encounters.<sup>9</sup> In addition, CMS has used the MA encounter data to assist with Federal disaster relief efforts by identifying MA beneficiaries who require respiratory services. CMS also has plans to use the MA encounter data to develop quality metrics to measure how MA plans coordinate care.

### Submission Process for MA Encounter Data

The process of reporting MA encounter data generally begins when a beneficiary receives a clinical service.<sup>10</sup> The provider submits a claim to the MAO. The MAO adjudicates the claim and submits it as an encounter record to CMS. As shown in Exhibit 2, MAOs submit data to the Encounter Data Front-End System (EDFES). The EDFES performs a series of automated checks, or “edits,” and transmits the data that pass these edits to the Encounter Data Processing System (EDPS). The EDPS processes data by three types of claims:

- durable medical equipment, prosthetics, orthotics, and supplies (DMEPOS) (e.g., wheelchairs and ventilators);
- professional (e.g., physicians’ services); and
- institutional (e.g., inpatient hospital stays and skilled nursing facility care).

Exhibit 2. MA Encounter Data Submission and Storage



The EDPS performs additional edits, formats the data into the Integrated Data Repository (IDR) format, and sends the data—including data that do and do not

<sup>8</sup> OIG, *MEDIC Benefit Integrity Activities in Medicare Parts C and D*, OEI-03-11-00310, January 2013.

<sup>9</sup> Government Accountability Office (GAO), *Medicare Advantage: Limited Progress Made to Validate Encounter Data Used to Ensure Proper Payments*, GAO-17-223, January 2017, p. 18.

<sup>10</sup> CMS also allows MAOs to submit chart review records that delete or add diagnoses to the MA encounter data as a result of medical record reviews conducted by the MAO.

pass EDPS edits—to the IDR.<sup>11</sup> Once stored within the IDR, CMS accesses the data to calculate risk adjustments and conduct other data analyses.

If an MAO determines that a previously submitted encounter record that passed CMS’s edit process is incorrect, it may submit a replacement record that replaces the previously accepted encounter, or void the record. If the MAO submits a replacement record, it must identify the original control number—i.e., the control number of the record being corrected—on the replacement record. If the MAO voids the record, it must identify the original control number on the voided record.

*Submission deadline.* From 2012 to June 2015, CMS provided timely filing guidance to MAOs through presentations, memos, and other documents instructing MAOs to submit encounter data within 13 months of the date of service. However, CMS no longer provides the 13-month guidance to MAOs. Instead, CMS refers to the “final risk adjustment data submission deadline” as the date that MAOs must submit encounter data. This deadline is announced each year by CMS, but is no earlier than January 31 of the year following the payment year. Depending on when a service was provided during the year, the deadline is between 13 and 25 months later.<sup>12</sup>

*Required data elements.* For the MA encounter data, CMS does not require MAOs to submit every data element contained on a Medicare fee-for-service claim. Instead, for each service provided to a beneficiary, CMS has designated a minimum set of required data elements, some of which are required across *all* services and some of which are situationally dependent.<sup>13</sup> CMS based its selection of required data elements on research and comments from MAOs and other entities, considering administrative burdens both on MAOs and on CMS. These required data elements include information about beneficiaries, providers, MAOs, diagnoses, procedures, payment information, and dates of service. According to CMS, the Encounter Data Minimum Data Elements populate 78 IDR data elements.

*Certification of data integrity.* CMS requires MAOs to certify—based on their best knowledge, information, and belief—the accuracy, completeness, and truthfulness of their MA encounter data.<sup>14</sup>

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<sup>11</sup> The EDPS also prices each encounter to ascertain the amount that CMS would have paid for the encounter had it been a Medicare fee-for-service claim. CMS needs to price encounters to eventually use these data to establish a risk-adjustment model that estimates the expected health care costs associated with MA beneficiaries’ diagnoses.

<sup>12</sup> 42 CFR § 422.310(g)(2)(ii).

<sup>13</sup> CMS, *Encounter Data Minimum Data Elements*, March 2012; CMS, *Encounter Data Minimum Data Elements*, August 2014.

<sup>14</sup> 42 CFR § 422.504(1).

## **CMS's Identification of Errors in MA Encounter Data**

To identify data errors, CMS performs edits during the submission process and analyzes the data contained in the IDR.<sup>15</sup>

*Reject edits.* CMS rejects encounter data that do not pass “reject edits” performed by the EDFES and EDPS. CMS instructs MAOs to respond to edits that reject data by submitting new records with correct information. CMS designates an edit as a “reject edit” if it identifies an error in a data element that CMS deems key to MA program payment. For example, one such edit checks whether a newly submitted encounter record for a service matches specific data values on a previously accepted record.

*Informational edits.* When MAOs' records do not pass “informational edits” performed by the EDPS, CMS notifies MAOs, but does not reject the records. CMS designates an edit as an informational edit if it identifies an error that does not align with best practices for submitting encounter data. For example, one informational edit verifies that a beneficiary's sex is appropriate for the procedure code. According to CMS, informational edits indicate to MAOs that they should review these errors for future submissions of encounter data.

*Informational suppressed edits.* The EDPS also performs what CMS calls “informational suppressed edits.” These do not reject records, nor do they result in MAOs' being notified. For example, one informational suppressed edit verifies that the discharge time contains a valid hour number and a valid minute number. CMS uses these edits for internal operational analytics.

*IDR validation edits.* When the EDPS sends MA encounter data to the IDR, CMS validates that the IDR received the data correctly. Part of this process includes edits to check whether certain data elements are present and formatted correctly and whether records are inappropriately duplicated. For example, one IDR validation edit verifies that a beneficiary's health insurance claim number (HICN) is present. CMS does not load data that fail these edits into the IDR until it can resolve the identified errors.

*Analyses of MA encounter data integrity.* CMS reported that since the MA encounter data were first loaded into the IDR in 2014, it has conducted analyses to review and validate the data. CMS also performs analyses that compare each MAO's volume of submitted records to regional and national averages across MAOs and across Medicare fee-for-service claims, which CMS may use to identify whether MAOs have submitted all required encounter records.

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<sup>15</sup> As the MA encounter data become further integrated into the payment process, CMS also plans to subject diagnoses from the MA encounter data to medical record review.



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## METHODOLOGY

### Data Collection and Analysis

*MA encounter data.* We extracted MA encounter data from the IDR in August 2015 for all accepted, final action records of encounters from the first quarter of 2014 (January through March). In total, we reviewed 102 million encounter records submitted by 716 MAOs for 13 million beneficiaries.<sup>16</sup>

To identify potential errors, we assessed the completeness and validity of 56 required data elements and determined whether encounter records contained potentially duplicated services.<sup>17</sup> Appendix A contains a detailed description of the methods we used to identify potential errors related to the completeness and validity of required data elements. Appendix B contains a detailed description of the methods we used to identify potential duplication of services.

In general, our methods to identify potential errors related to the completeness and validity of required data elements included:

- identifying missing values,
- checking that a data element's range of values was within format specifications,
- comparing values across related data elements to ensure consistency, and
- comparing values against outside sources, such as the National Plan and Provider Enumeration System (NPPES) registry of national provider identifiers (NPIs).

After identifying potential errors, we counted the number of instances of potential errors and summarized the number and percentage of encounter records that contained at least one potential error. We also checked for variation across MAOs in the number and percentage of potential errors.

In addition, we determined the extent to which certain encounter records contained NPIs for ordering/referring and rendering providers.<sup>18</sup> The NPI for the ordering/referring provider is not a required data element, but MAOs may opt to include it. CMS stated that it requires MAOs to submit the NPI for the rendering provider when it is different from that of the billing provider. Therefore, when MAOs do not submit a rendering provider NPI, CMS considers the rendering

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<sup>16</sup> The encounter records included in this review had (1) an accepted status in the code that indicates whether the header portion of the record was accepted or rejected in the EDPS, (2) an accepted status in the code that indicates the most recent status of the line portion of the record for at least one service line, and (3) an end date of service in the header portion of the record that was between January 1, 2014, and March 31, 2014. We did not include chart review records (see footnote 10) in this review.

<sup>17</sup> These 56 required data elements are among the IDR data elements that CMS identified as being populated by Encounter Data Minimum Data Elements.

<sup>18</sup> Appendix C contains definitions of ordering/referring and rendering providers.

provider NPI to be the same as the billing provider NPI. We also reviewed the timeliness of encounter data submissions—i.e., whether the data were submitted within 13 months of the date of service, which was the guidance for the time period under review. Appendix C contains a detailed description of the methods we used in these analyses.

*CMS processes and procedures.* From CMS, we obtained and summarized responses to a structured questionnaire and reviewed documentation related to the instructions, procedures, and/or processes that CMS has in place to:

- ensure that MA encounter data are complete and valid, and that they are submitted timely;
- notify MAOs of data errors identified; and
- take actions to ensure that MAOs address data errors identified.

### **Limitations**

We did not determine whether the contents of required data elements were supported by documentation in medical records, nor did we determine whether each MAO had submitted all required encounter records. In addition, our assessment of the timeliness of submissions for the first quarter of 2014 does not include records that had not been submitted by MAOs as of August 2015 (when we extracted data from the IDR).

### **Standards**

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

## FINDINGS

### Twenty-eight percent of MA encounter records contained potential errors in required data, but CMS reported correcting the majority of these records

Of the 102 million MA encounter records that we reviewed from the first quarter of 2014, 28 million records, or 28 percent, had at least 1 potential error related to the completeness or validity of a required data element, or a potential duplication of services. According to CMS, an issue was created when CMS removed identifiers from records in its edit process. With CMS's subsequent correction, only 5 percent of the records in our review would contain a potential error.<sup>19</sup> The number of potential errors per record ranged from 1 to 11, with most of the problematic records having 2 errors. As shown in Exhibit 3, the most prevalent type of error was having missing identifiers for billing providers. Appendix D outlines each potential error and provides the number of affected records by claim type.

**Exhibit 3. Number of Potential Errors on Records in the MA Encounter Data, By Error Type**

Type of Error Category	Number of Errors <sup>1</sup>
Missing values—billing provider identifiers	47,767,664
Duplicated services	2,388,875
Incorrect original control numbers	2,078,535
Inappropriate codes	309,307
Missing values—other data	252,347
Inconsistent date values	161,951
Inactive/invalid billing provider identifiers	96,970
Beneficiary data did not match CMS records	31,434
<b>Total potential errors identified</b>	<b>53,087,083</b>

Source: OIG analysis of MA encounter data for January–March 2014 from CMS's IDR.

<sup>1</sup> If a record had more than one potential error, each error is included in these counts.

### ***Missing values were the most prevalent type of potential error, but CMS reported resolving an edit problem that may have caused a substantial majority of the missing values identified***

Prior to CMS's data corrections, there were 48 million instances of potential errors in which required data elements were missing data. Most of these were missing NPIs and names for billing providers.<sup>20</sup> For all records, CMS has "reject edits" that check that the billing provider NPI is correctly formatted and not associated with a provider under sanction. However, CMS identified an issue with the reference data used in its edit process. When OIG asked CMS about missing NPIs for billing providers, CMS explained that it had removed MAO-submitted NPIs from records when the reference data used in the edit process could not validate the submitted NPI. After our review, CMS resolved this issue by (1) updating the reference data

<sup>19</sup> Unless otherwise specified, the information provided in this report is based on our analysis of the encounter data before CMS made its corrections.

<sup>20</sup> All records that were missing a billing provider NPI were also missing a billing provider name.

that it used in its edit process, (2) leaving MAO-submitted NPIs untouched, and (3) repopulating the NPIs and provider names on records from which they had been erroneously removed for 2014 MA encounter data.

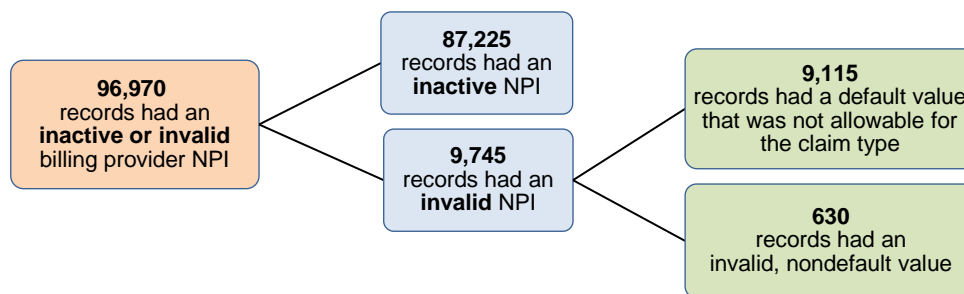
Our review also identified missing values in required data elements for the beneficiary last name, admission date, discharge status code, place of service code, and procedure code. Of these, the data elements most often missing values were the beneficiary last name—missing on 218,758 records—and the admission date—missing on 31,846 records.<sup>21</sup>

### **Thousands of encounter records had inactive or invalid NPIs for billing providers**

Of the 78 million encounter records that had a billing provider NPI, NPIs were inactive or invalid for 96,970 records—less than 1 percent. Although this is a very small percentage, the billing provider’s NPI is a key data element for ensuring the legitimacy of medical services documented in encounter data. The MA encounter data are vulnerable to this type of potential error because CMS does not perform a reject edit on the data to ensure that billing provider NPIs are active and valid in the NPPES registry.

As shown in Exhibit 4, there were 87,225 records with an *inactive* billing provider NPI, 1,139 of which had an NPI deactivated more than 2 years prior. Among the 9,745 records with an *invalid* billing provider NPI, 9,115 had a default value that was not allowable for the claim type.<sup>22</sup> Another 630 records of these 9,745 had an invalid NPI value that did not match any NPI in the NPPES registry and was not an allowable default value for any claim type. For example, the value “1234567893” appeared as a billing provider NPI.

**Exhibit 4. Encounter Records with Inactive or Invalid Billing Provider Identifiers**



Source: OIG analysis of MA encounter data for January–March 2014 from CMS’s IDR.

<sup>21</sup> The admission date was missing on 31,846 institutional records. (An admission date is not applicable to DMEPOS records or professional records.) See page 3 for more information about the three claim types.

<sup>22</sup> CMS allows MAOs to submit default NPI values for individuals or businesses that bill for services provided but do not meet the definition of a health care provider, such as providers of nonemergency transportation and providers of personal care services. For example, CMS designates the values “199999992” and “199999984” as allowable default values for the provider NPIs in DMEPOS records and professional records, respectively. However, these values incorrectly appeared on 8,573 institutional records.

***Other potential data errors included inconsistent date values, inappropriate codes, duplicated services, incorrect original control numbers, and beneficiary data that did not match CMS's records***

*Inconsistent date values.* There were 161,951 instances in which required data elements contained inconsistent date values. Examples of date inconsistencies include:

- dates of admissions that were after the date of service or before the beneficiary's date of birth;
- related-cause dates (i.e., the date of an associated cause of an illness, injury, or accident as reported on the claim) that were before the beneficiary's date of birth, such as in the years 1900 or 1901, or after the date of service;
- claim bill dates (i.e., the date when the bill was created for the claim) that were before the date of service; and
- procedure dates that were not within the record's begin and end dates of service.

In addition, 8 of the 20 required data elements for dates contained the values "12/31/9999" or "12/31/8888." It is possible that these values are being used by MAOs or CMS data programmers as defaults that signify a lack of data. However, CMS has not defined "12/31/9999" or "12/31/8888" as default values for these data elements in its written instructions to MAOs and users of MA encounter data.<sup>23</sup>

*Duplicated services.* Of the 59 million encounter records included in our review of duplication, 2.4 million, or 4 percent, contained a service line that appeared to be duplicated. Since the time of our review of the encounter data, CMS has introduced a new edit to reject duplicates for certain inpatient records and recommends that users of MA encounter data apply similar criteria to remove duplicates for inpatient records submitted prior to October 1, 2015.<sup>24</sup> Of the 2.4 million records that we identified as containing a potentially duplicated service, 50,180 were inpatient records that would be captured by this new edit.

*Inappropriate codes.* There were 309,307 instances in which required data elements contained inappropriate codes. Most of these were discharge status codes that did not conform to format specifications. Other examples of inappropriate codes include, but are not limited to, procedure codes and revenue

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<sup>23</sup> Appendix A contains a description of when we did and did not count these dates as potential errors in our review.

<sup>24</sup> CMS, *Encounter Data Considerations, Version 2*, March 2016, p. 7.

codes that were no longer valid. These codes had been deleted—one as early as 2004—from lists of valid codes.

*Incorrect original control numbers.* Each new record that passes EDFES edits receives a control number. When an MAO identifies an error in a record that CMS has already accepted and the MAO submits a replacement record, CMS requires the MAO to include the original control number—i.e., the control number of the prior record—on the resubmission. This original control number should appear only on records resubmitted by MAOs. We identified 2 million records submitted for the first time that incorrectly contained original control numbers. Since our review of the encounter data, CMS has introduced new edits that reject records that are submitted for the first time with an original control number.

*Mismatched beneficiary data.* There were 23,858 instances in which the beneficiary's birthdate did not match CMS's records in the Medicare Enrollment Database (EDB) for that beneficiary, and 7,576 instances in which the code for the beneficiary's sex did not match. Since our review of the encounter data, CMS reported that it has updated the reference data used in its edit process to validate beneficiary birthdates and sex codes.

### **Only a few MAOs submitted half of the encounter records that had a potential error**

Of the 716 MAOs that submitted the 102 million encounter records we reviewed, 683 MAOs submitted a record that had at least 1 potential error.<sup>25</sup> However, 9 MAOs, or 1 percent of all MAOs, submitted half of the records that had a potential error (2.7 of 5.2 million). Overall, these nine MAOs submitted 12 percent of all of the encounter records that we reviewed. One of these MAOs accounted for 33 percent of records with an error, largely driven by incorrect original control numbers. For four of these nine MAOs, more than 90 percent of their submitted records had a potential error.

For certain potential errors, a small number of MAOs had a high number of encounter records with the error:

- Five MAOs submitted half of the records missing beneficiary last names.
- Five MAOs submitted three quarters of the records with inactive or invalid billing provider NPIs.
- Eight MAOs submitted a quarter of the records containing a potentially duplicated service.

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<sup>25</sup> We did not include missing billing provider NPI or missing billing provider name as errors for this calculation because these billing provider identifiers may have been erroneously removed by CMS in its edit process.

- One MAO submitted 98 percent of records in which the claim bill date was before the date of service, and all had a claim bill date of March 28, 2011.

### **CMS does not require MAOs to submit certain provider identifiers used in program integrity reviews, and these were frequently absent from encounter data**

CMS does not require MAOs to submit all of the data elements contained on a Medicare fee-for-service claim. Instead, MAOs must submit at least a minimum set of required data elements for each service provided to a beneficiary.<sup>26</sup> Although CMS requires MAOs to submit the NPI for the *billing* provider, CMS does not require MAOs to submit the NPIs for *ordering/referring* providers. MAOs can submit these NPIs voluntarily, but CMS does not require them to do so. CMS stated that when it designed the encounter data, it considered MAOs' and CMS's resources and administrative burden and decided to not require NPIs for ordering/referring providers because these NPIs are required on Medicare fee-for-service claims only for certain types of services.

CMS stated that it requires MAOs to submit the NPI for the *rendering* provider when it is different from that of the billing provider. Therefore, when MAOs do not submit a rendering provider NPI, CMS considers the rendering provider NPI to be the same as the billing provider NPI. NPIs for ordering/referring and rendering providers are vital to program oversight and enforcement activities. For example, these provider identifiers are critical for identifying questionable billing patterns and pursuing fraud investigations for ordering/referring and rendering providers.

### ***NPIs for ordering/referring providers were absent from 63 percent of records for DMEPOS, clinical laboratory, imaging, and home health services***

DMEPOS, clinical laboratory services, imaging services, and home health services are Medicare program areas that are vulnerable to fraud. For example, a recent fraud investigation found that false orders/referrals for home health services led to more than \$40 million in fraudulent Medicare payments. In fee-for-service Medicare, CMS denies claims that lack a valid ordering/referring provider NPI for these types of services. However, for the MA encounter data, CMS does not require MAOs to submit the ordering/referring provider NPI for any type of service. In total, of the 37 million records for DMEPOS, clinical laboratory services, imaging services, and home health services in our review, 63 percent did not include an NPI for an ordering/referring provider.<sup>27</sup> Specifically, the ordering/referring provider NPI was absent from the following types of records:

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<sup>26</sup> CMS, *Encounter Data Minimum Data Elements*, August 2014.

<sup>27</sup> Appendix C contains a description of the encounter records included in this review.

- 72 percent of DMEPOS records,
- 62 percent of clinical laboratory and imaging records, and
- 23 percent of home health records.

Eight MAOs accounted for a quarter of the DMEPOS, clinical laboratory, imaging, and home health records that did not include an NPI for an ordering/referring provider.

***Rendering provider NPIs were absent from 13 percent of a subset of records for physician services***

Rendering providers are the providers who actually performed—or “rendered”—the service. They may or may not be distinct from billing providers, which are the individuals or organizations that bill for the services provided. To review records that would have a rendering provider that was distinct from the billing provider, we selected records for evaluation and management services.

Evaluation and management services are beneficiary visits to physicians and nonphysician practitioners to assess and manage their health, such as office visits and specialist visits. Generally, when an evaluation and management record has an *organization* that billed for the service provided, the record needs a rendering provider NPI in order to identify the *individual* who actually saw the patient. Identifying the provider who performed the service is vital to certain program oversight activities. For example, if records showed that a rendering provider performed more than 24 hours of services on the same day, this may indicate that some services were never actually performed.

When an MAO does not submit an NPI for a rendering provider, CMS considers the rendering provider NPI to be the same as the billing provider NPI. However, of the 23 million evaluation and management records that had an organization as the billing provider, 3 million (13 percent) did not include a rendering provider NPI. Because the billing providers were organizations and not individuals, it is unlikely that the rendering provider NPIs were the same as the billing provider NPIs. Five MAOs accounted for a quarter of the records that did not include a rendering provider NPI.

**For the MA encounter data in our review, MAOs had submitted almost all records within CMS’s specified timeframe**

For the dates of service that we reviewed, CMS had instructed MAOs to submit MA encounter data within 13 months of the date of service. CMS now directs MAOs to submit data by the “final risk adjustment data submission deadline.”<sup>28</sup>

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<sup>28</sup> The “final risk adjustment data submission deadline” is no earlier than January 31 of the year following the payment year, which—depending on when the service was performed during the year—is between 13 and 25 months from the date of service.



Of the 102 million encounter records from the first quarter of 2014, we reviewed 97 million that were submitted by MAOs for the first time. Of these 97 million initial submissions, 93 million, or 96 percent, were submitted by MAOs within 13 months of the service date. The average number of days that elapsed between the service date and the submission date was 127 days. Of the records submitted beyond 13 months of the service date, a quarter were submitted by five MAOs.

### **CMS has addressed errors by notifying MAOs of edit results and rejecting some data, but it has not monitored MAOs' response to these actions**

When CMS has identified data errors through reject edits, informational edits, or analyses of the MA encounter data, it has notified MAOs about these errors using a variety of mechanisms, including the following:

- automated reports of edit results for individual encounter records;
- webinar presentations, user group calls, technical instructions, newsletters, and memorandums that highlight and recommend ways to prevent errors that frequently occur across MAOs;
- periodic “report cards” tailored to each MAO that specify the MAO’s volume of submitted records and rate of rejected records compared to averages across MAOs; and
- direct contact with specific MAOs regarding their respective frequently occurring errors.

In addition, for some data errors that it has identified, CMS has introduced new reject edits to prevent incorrect data from being included in the MA encounter data. However, CMS has not implemented any other compliance activities related to ensuring data integrity, such as issuing notices of noncompliance, warning letters, or corrective action plans to MAOs.

### ***CMS has not tracked how MAOs responded to edits that rejected data and has no means of doing so***

CMS’s key control to ensure data integrity has been its edit process. However, CMS has not tracked whether or how MAOs responded to edits that rejected data. In fact, CMS instructs MAOs to respond to EDPS reject edits by submitting new records with correct information that do not identify the original control number, i.e., the control number of the rejected record that is being corrected. Without the original control number, CMS has no means of tracking whether MAOs are resubmitting corrected versions of previously rejected records. In contrast, when an MAO decides to modify a record that CMS has previously accepted, it may submit a replacement record and must identify the original control number—i.e., the control number of the accepted record that is now being modified—on the replacement record.

***CMS has not established performance measures that monitor MAOs' submission of records with missing or invalid data***

In 2016, CMS developed the *MA Encounter Data Integrity and Monitoring Plan*, which describes its strategy for ensuring the integrity of the encounter data. This strategy outlines a range of activities, including plans to implement compliance actions based on key performance measures. In its 2018 Call Letter, CMS identified seven measures that it will use to monitor and assess MAOs' performance related to the integrity of the encounter data.<sup>29</sup> CMS stated that it will issue notices of noncompliance, warning letters, and corrective action plans for MAOs that fail to satisfy certain performance thresholds based on these measures. The seven performance measures that CMS has identified address whether MAOs completed a certification to submit data, submitted any records, submitted records on a timely basis, and submitted records for all services rendered.<sup>30</sup> However, CMS has not yet identified performance measures related to the completeness of data within a submitted record (whether key data elements contain nonmissing values) and the validity of the data (whether the reported data reflect the information required to be shown in the data element). In future years, CMS expects to revise its performance measures or include additional measures.

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<sup>29</sup> CMS, *Announcement of Calendar Year 2018 Medicare Advantage Capitation Rates and Medicare Advantage and Part D Payment Policies and Final Call Letter and Request for Information*, April 2017.

<sup>30</sup> Examples of performance measures related to whether MAOs submitted records for all services rendered include whether an MAO had an extremely low volume of overall submissions and whether it had an extremely low volume of accepted records by service type.

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## **CONCLUSION AND RECOMMENDATIONS**

In 2012, MAOs began submitting more detailed information regarding all services provided to MA beneficiaries. This information is known as the MA encounter data. Ensuring the completeness, validity, and timeliness of the MA encounter data is critical for calculating accurate MA payments and realizing the full potential of these data to improve MA program integrity and quality of care in the MA program. With this being the case, potential errors in these data—like those identified in this review—may undermine these important efforts. CMS reported that it has addressed many of the errors we identified. However, some of the remaining types of errors—such as encounter records that lacked a beneficiary last name or a valid identifier for a billing provider—may raise concerns about the legitimacy of services documented in the data. In addition, CMS does not require MAOs to submit identifiers for ordering or referring providers, and it requires identifiers for rendering providers only under certain circumstances. We found that these were frequently absent, which limits the use of these data for vital program oversight and enforcement activities.

CMS's key control to ensure data integrity has been its edit process. However, CMS has not tracked whether MAOs responded to edits that rejected data, i.e., "reject edits." CMS has plans to implement additional compliance activities to ensure data integrity, but it has not identified performance measures that address MAOs' submission of records with complete and valid data.

In light of our findings, we recommend that CMS:

### **Take actions as appropriate to address potential errors in the MA encounter data**

CMS should take actions, as it deems appropriate, to address potential errors in the MA encounter data, which could include, but are not limited to (1) introducing additional reject edits, (2) identifying why data were missing and restoring these data if they were inappropriately removed in the edit process, and (3) identifying why code values did not conform to format specifications and correcting these values. In addition, OIG has provided CMS with a list of the required data elements that contained the dates "12/31/9999" and "12/31/8888." CMS should review these data elements and modify its instructions to MAOs and users of MA encounter data to indicate whether these are correct and appropriate default values for these data elements.

### **Provide targeted oversight of MAOs that submitted a higher percentage of encounter records with potential errors**

Only a few MAOs submitted half of the records that contained a potential error in our review. To prevent further submission errors, CMS should provide targeted technical assistance and guidance to MAOs that submitted a high percentage of records with potential errors. OIG has provided CMS with a list

of the MAOs that submitted encounter records that our review identified as having potential errors, as well as each MAO's percentage of encounter records that had potential errors.

### **Ensure that billing provider identifiers are valid and active on all records in the MA encounter data**

CMS already performs reject edits to prevent the submission of billing provider NPIs that are incorrectly formatted or that belong to providers under sanction. CMS should extend these efforts to include a reject edit that rejects encounter records that contain a billing provider NPI that is not a valid and active NPI in the NPPES registry.

### **Require MAOs to submit ordering and referring provider identifiers for applicable records**

CMS does not require MAOs to submit the NPIs for ordering and referring providers. CMS should amend the *Encounter Data Minimum Data Elements* documentation to clearly delineate that ordering and referring provider NPIs and names are required for certain types of records, such as those for DMEPOS, clinical laboratory, imaging, and home health services. CMS also should establish and implement reject edits that (1) reject encounter records in which the NPI and/or name for the ordering/referring provider is not present when required and (2) reject encounter records that contain an ordering/referring provider NPI that is not a valid and active NPI in the NPPES registry.

### **Ensure that MAOs submit rendering provider identifiers for applicable records**

CMS stated that it requires MAOs to submit the rendering provider NPI when it is different from the billing provider NPI. When MAOs do not submit a rendering provider NPI, CMS considers the rendering provider NPI to be the same as the billing provider NPI. Our review identified missing NPIs for rendering providers on records in which it was unlikely that the rendering provider NPI was the same as the billing provider NPI. CMS should amend the *Encounter Data Minimum Data Elements* documentation to clearly delineate that rendering provider NPIs and names are situationally required. In addition, CMS should take any other steps that it deems necessary to ensure that MAOs submit rendering provider identifiers for applicable records. For example, CMS could establish and implement reject edits that (1) reject encounter records in which the NPI and/or name for the rendering provider is not present when required (e.g., an evaluation and management record in which the billing provider NPI is for an organization) and (2) reject encounter records that contain a rendering provider NPI that is not a valid and active NPI in the NPPES registry.

### **Track MAOs' response to reject edits**

Because CMS's key control to ensure the submission of complete and accurate data is its edit process, which results in rejected data, CMS should track the extent to which MAOs correct and resubmit (or void) rejected records. To this end, CMS should require data from MAOs that would allow it to effectively track whether MAOs are responding to EDPS reject edits. For example, CMS may consider requiring MAOs respond to such edits by submitting corrected replacement records and identifying the original control number—i.e., the control number of the rejected record that is being corrected—on the resubmitted record. It also may be necessary for CMS to require MAOs to void records that CMS had rejected and that MAOs will not be resubmitting, such as records that CMS rejected as duplicates.

### **Establish and monitor MA encounter data performance thresholds related to MAOs' submission of records with complete and valid data**

CMS is in the process of establishing performance thresholds for monitoring MAOs' submission of MA encounter data. CMS should establish and monitor performance threshold(s) related to the extent to which MAOs submit complete data (i.e., whether key data elements contain nonmissing values) and valid data (i.e., whether reported data reflect the information required to be shown in the data element). In addition, CMS should identify MAOs that fail to meet these performance thresholds, and it should conduct compliance activities—such as issuing notices of noncompliance, warning letters, and corrective actions plans—as needed to improve performance.

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## AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE

In response to our draft report, CMS noted that ensuring the accuracy of the MA encounter data for payment purposes is an essential part of its commitment to combating fraud, waste, and abuse in Medicare. CMS highlighted its efforts to improve the accuracy of the data, including its recent release of guidance on best practices that MAOs can implement to help with the process of submitting encounter data.

In reference to our finding that 28 percent of MA encounter records contained potential errors on required data, CMS stated that this finding is incorrect because the majority of the errors resulted from data being loaded incorrectly into its system. However, our analysis is based on the total percentage of potential errors that we identified in the MA encounter data that we extracted from CMS's IDR in August 2015. The 28-percent figure reflects all potential errors that OIG found at that time, regardless of the cause. We recognize that with the corrections that CMS reports as having made to that data since our review, only 5 percent of records would continue to contain a potential error.

CMS concurred with four of our seven recommendations. CMS agreed that it will:

- work to address potential errors in the MA encounter data by reviewing submission instructions for consistency and assessing the validity of the highest priority data elements;
- review the list of MAOs that submitted a higher percentage of the encounter records with potential errors identified and consider how to incorporate this information into its oversight activities;
- create an edit to check the validity of billing provider NPIs and monitor MAOs with potential issues; and
- continue its development and implementation of a plan for MA encounter data compliance (including performance thresholds) designed to validate the encounter data.

CMS did not concur with our recommendations to require MAOs to submit identifiers for ordering and referring providers and to ensure that MAOs submit identifiers for rendering providers for applicable records. For both recommendations, CMS noted that because MAOs do not always require these NPIs on their provider claims or encounter data, they often do not have this information available to report. CMS stated that it seeks to balance administrative burden on entities that are subject to reporting requirements, but it will explore whether identifiers for ordering and referring providers and

rendering providers are necessary for program integrity purposes and will consider requiring them in the future.

OIG understands CMS's need to balance administrative burden and reporting requirements with the program integrity benefits. With respect to requiring identifiers for ordering and referring providers, we believe that the program integrity benefits would be substantial. For example, these provider identifiers are critical for identifying questionable billing patterns and pursuing fraud investigations for ordering and referring providers. Collecting these identifiers is essential for MAOs to conduct their own oversight to prevent and detect fraud, waste, and abuse. DMEPOS, clinical laboratory services, imaging services, and home health services have a history of being vulnerable to fraud. If MAOs do not have information on NPIs for ordering and referring providers for these services, it is unclear how the MAOs are detecting and preventing fraud in these areas. In addition, the availability of identifiers for ordering and referring providers enhances CMS's ability to perform its own oversight and hold providers accountable for fraudulent and abusive practices. OIG continues to recommend that CMS require MAOs to submit ordering and referring provider identifiers for applicable records.

Likewise, having the identifiers for rendering providers is essential for MAOs and for CMS to be able to perform basic oversight and fraud detection analyses. For example, if records showed that a rendering provider performed more than 24 hours of services on the same day, this may indicate that some services were never actually performed. CMS stated in its technical comments that it requires MAOs to submit the rendering provider NPI when it is different from the billing provider NPI. We continue to recommend that CMS amend the *Encounter Data Minimum Data Elements* documentation to clearly delineate that rendering provider NPIs and names are required when they differ from those of the billing provider, and that CMS take any other steps it deems necessary to ensure that MAOs submit rendering provider identifiers for records when they are required.

CMS did not concur with our recommendation for it to track MAOs' response to reject edits. CMS stated that modifying its systems and requiring that MAOs modify their systems in order to track rejected records would be administratively burdensome to build and maintain. CMS believes that its plan for MA encounter data compliance, which prioritizes the overall completeness and volume of MA encounter data, is more comprehensive, more transparent, and less burdensome on CMS and MAOs.

By tracking MAOs' responses to reject edits, CMS could determine MAOs' capacity to submit corrected records, address any specific barriers that MAOs may encounter when responding to such edits, and ensure the completeness of the data. We support CMS's consideration of the most cost-effective ways to ensure the completeness and accuracy of the data.

In sum, OIG believes that implementation of our recommendations will improve the completeness and validity of the MA encounter data and greatly enhance the ability of MAOs, CMS, and OIG to combat fraud, waste, and abuse in Medicare. We look forward to updates from CMS on its efforts toward these ends.

The full text of CMS's comments can be found in Appendix E.



## APPENDIX A

### Methodology To Identify Potential Errors Related to the Completeness and Validity of Required Data Elements

For 102,382,853 encounter records from the first quarter of 2014, we assessed the extent to which there were potential errors related to the completeness and/or validity of 56 required data elements. Exhibit A-1 below outlines the required data elements included in our review and the three claim types—i.e., DMEPOS, professional, and/or institutional—to which these data elements are applicable.

*Completeness of required data elements.* To identify potential errors related to completeness, we determined whether required data elements were missing values for encounter records in which the data element was always required to be submitted by MAOs. For character variables, we considered the value to be missing if the data element was blank or contained the tilde (~) character, a default value that CMS uses to represent a lack of data or null values. For numeric and date variables, we considered the value to be missing if the data element was blank. Exhibit A-1 specifies whether required data elements were included in our completeness evaluation. Generally, we did not assess completeness for any data element that we could not definitively determine to be always required to be submitted by MAOs.

*Validity of required data elements.* Exhibit A-1 also specifies the criteria we used to identify potential errors related to the validity of selected required data elements. We identified potential validity errors for records in which these data elements contained nonmissing values.

**Exhibit A-1. Methods Used To Identify Potential Errors on 56 Required Data Elements in MA Encounter Data<sup>1</sup>**

Required Data Element	Definition	Claim Type Reviewed	Assessed Completeness	Criteria Used To Identify Validity Error
Admission date	The date the beneficiary was admitted to the medical facility	Institutional	Yes <sup>2</sup>	Date is before the beneficiary's birthdate or after the end date of service
Admission source code	The code indicating the source of the admission to the medical facility	Institutional	No	Value does not match a valid value in CMS's <i>IDR Data Dictionary</i>
Admission type code	The code indicating the type and priority of the inpatient admission associated with the service	Institutional	Yes <sup>2</sup>	Value does not match a valid value in CMS's <i>IDR Data Dictionary</i>
Begin date of service	The first day on the billing statement covering services rendered to the beneficiary	All	Yes	Date is after the end date of service
Beneficiary birthdate	The beneficiary's date of birth	All	Yes	Value does not match birthdate in the Medicare Enrollment Database (EDB) for the Health Insurance Claim Number (HICN) <sup>3</sup>
Beneficiary first name	The beneficiary's first name	All	Yes	Validity not assessed
Beneficiary sex code <sup>4</sup>	The beneficiary's sex	All	Yes	Value does not match the beneficiary's sex in the EDB for the HICN <sup>3</sup>

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**Exhibit A-1. Methods Used To Identify Potential Errors on 56 Required Data Elements in MA Encounter Data<sup>1</sup>**  
**(continued)**

Required Data Element	Definition	Claim Type Reviewed	Assessed Completeness	Criteria Used To Identify Validity Error
Beneficiary HICN	The number uniquely identifying the primary beneficiary	All	Yes	Value does not match a HICN in the EDB or CMS's IDR beneficiary records <sup>5</sup>
Beneficiary last name	The beneficiary's last name	All	Yes	Validity not assessed
Beneficiary local sex code <sup>4</sup>	The beneficiary's sex	All	Yes	Value does not match the beneficiary's sex in the EDB for the HICN <sup>3</sup>
Bill frequency code	The code indicating the sequence of a claim during the current period of care	All	Yes	Value does not match a valid value in CMS's <i>Encounter Data Minimum Data Elements</i> document
Billing provider name	The name of the billing provider on the claim	All	Yes	Validity not assessed
Billing provider NPI	The NPI number of the billing provider on the claim	All	Yes	Value does not match a valid NPI in the National Plan and Provider Enumeration System (NPPES) registry or matches an NPI in the NPPES registry that was inactive between the begin and end date of service <sup>6</sup>
Claim bill date	The date when the bill was created for a claim	All	Yes	Date is before the begin date of service
Contract name	The name of the MAO	All	Yes	Validity not assessed
Contract number <sup>7</sup>	The unique identification number for the MAO	All	Yes	Value does not match a contract number in CMS's MA/Part D Contract and Enrollment Data files
Diagnosis code one <sup>8</sup>	The code indicating the diagnosis, condition, or other reason that is chiefly responsible for the service provided	All	Yes	Value does not match a valid ICD-9 diagnosis code <sup>9</sup>
Discharge date	The date the beneficiary was discharged from the facility or died	Institutional	No	Date is before the begin date of service
Discharge status code	The code indicating the status of the patient as of the end date of service	Institutional	Yes <sup>2</sup>	Value does not match a valid value in CMS's <i>IDR Source to Target Mapping Spreadsheet</i> or in the <i>National Uniform Billing Committee (NUBC) UB-04 Data Specifications Manual</i>
Encounter filing organization type code	The code indicating the type of organization, plan, or provider filing a claim	All	Yes	Value does not match a valid value in CMS's <i>Encounter Data Minimum Data Elements</i> document
End date of service	The last day on the billing statement covering services rendered to the beneficiary	All	No	Date is before the begin date of service
Line begin date of service	The beginning date of a service for the claim line	All	Yes for DMEPOS & Professional	Date is not within the begin and end date of service or is after the line end date of service
Line diagnosis code <sup>10</sup>	The code indicating the diagnosis supporting the claim line	DMEPOS Professional	Yes	Value does not match a valid ICD-9 diagnosis code <sup>9</sup>
Line diagnosis qualifier code <sup>10</sup>	The code indicating whether the diagnosis is the primary or other diagnosis on the claim line	DMEPOS Professional	Yes	Value does not match a valid value in CMS's <i>IDR Source to Target Mapping Spreadsheet</i>
Line end date of service	The ending date of service for the claim line	All	Yes for DMEPOS & Professional	Date is not within the begin and end date of service or is before the line begin date of service
Line other diagnosis code one <sup>10</sup>	The code indicating the first diagnosis supporting the claim line	DMEPOS Professional	Yes	Value does not match a valid ICD-9 diagnosis code <sup>9</sup>

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**Exhibit A-1. Methods Used To Identify Potential Errors on 56 Required Data Elements in MA Encounter Data<sup>1</sup>**  
**(continued)**

Required Data Element	Definition	Claim Type Reviewed	Assessed Completeness	Criteria Used To Identify Validity Error
Line prescription date	The date the prescription was filled	DMEPOS Professional	No	Date is before the beneficiary's birthdate
Line procedure code	The code indicating the procedure, supply, product, or service that was rendered to the beneficiary	All	Yes for DMEPOS & Professional	Value does not match a valid Healthcare Common Procedure Coding System (HCPCS) code or a valid Health Insurance Prospective Payment System (HIPPS) code
Line procedure code modifier one	The first code indicating more specific procedure information for a procedure code	All	No	Value does not match a valid HCPCS modifier code
Line revenue code	The code indicating the revenue code for each cost center for which a separate charge is billed	Institutional	No	Value does not match a valid value in the <i>NUBC UB-04 Data Specifications Manual</i>
Occurrence span begin date	The date when a specific event related to an institutional claim began	Institutional	No	Date is after the occurrence span end date, is before the beneficiary's birthdate, or is after the end date of service for which the occurrence span code is a prior stay date (i.e., occurrence span codes 71, 78, or 80)
Occurrence span code	The code indicating a significant event related to an institutional claim; these codes are claim-related occurrences that are related to a time period	Institutional	No	Value does not match a valid value in CMS's <i>IDR Data Dictionary</i>
Occurrence span end date	The date when a specific event related to an institutional claim ended	Institutional	No	Date is before the occurrence span begin date, is before the beneficiary's birthdate, or is after the end date of service for which the occurrence span code is a prior stay date (i.e., occurrence span codes 71, 78, or 80) <sup>11</sup>
Original control number	The control number of the original record that has been adjusted	All	Yes <sup>12</sup>	Value is not blank on records submitted for the first time—i.e., records with a bill frequency code of 1 (original claim) in the header portion of the record
Patient control number	The patient's control number or the claim identifier used in the MAO's internal system	All	Yes	Validity not assessed
Place of service code	The code indicating the place where the service was performed	DMEPOS Professional	Yes	Value does not match valid value in CMS's <i>Medicare Claims Processing Manual</i> , chapter 26
Principal diagnosis code <sup>8</sup>	The code indicating the diagnosis, condition, or other reason that is chiefly responsible for the service provided	All	Yes	Value does not match a valid ICD-9 diagnosis code <sup>9</sup>
Procedure date one	On an institutional claim, the date on which the principal or other procedure was performed	Institutional	No	Date is not within the begin and end date of service <sup>13</sup>
Procedure date two	On an institutional claim, the date on which the principal or other procedure was performed	Institutional	No	Date is not within the begin and end date of service <sup>13</sup>
Procedure date three	On an institutional claim, the date on which the principal or other procedure was performed	Institutional	No	Date is not within the begin and end date of service <sup>13</sup>
Procedure date four	On an institutional claim, the date on which the principal or other procedure was performed	Institutional	No	Date is not within the begin and end date of service <sup>13</sup>

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**Exhibit A-1. Methods Used To Identify Potential Errors on 56 Required Data Elements in MA Encounter Data<sup>1</sup>**  
**(continued)**

Required Data Element	Definition	Claim Type Reviewed	Assessed Completeness	Criteria Used To Identify Validity Error
Procedure date five	On an institutional claim, the date on which the principal or other procedure was performed	Institutional	No	Date is not within the begin and end date of service <sup>13</sup>
Procedure date six	On an institutional claim, the date on which the principal or other procedure was performed	Institutional	No	Date is not within the begin and end date of service <sup>13</sup>
Procedure perform date	The date on which the principal or other procedure was performed	Institutional	No	Date is not within the begin and end date of service <sup>13</sup>
Product type code	The code indicating the type of procedure or diagnosis category	All	No	Value does not match a valid value in CMS's <i>IDR Source to Target Mapping Spreadsheet</i>
Provider accept assignment code	The code indicating the status of an assignment of benefits	All	Yes	Value does not match a valid value in CMS's <i>Encounter Data Minimum Data Elements</i> document
Provider assignment of benefits switch	An indicator showing whether the MAO has been authorized to pay the provider	All	Yes	Value does not match a valid value in CMS's <i>Encounter Data Minimum Data Elements</i> document
Provider signature switch	An indicator showing if a provider signature is on file	DMEPOS Professional	Yes	Value does not match a valid value in CMS's <i>IDR Data Dictionary</i>
Related-cause code one	The code indicating an associated cause of an illness, injury, or accident on a claim	DMEPOS Professional	No	Value does not match a valid value in CMS's <i>IDR Data Dictionary</i>
Related-cause code two	The code indicating an associated cause of an illness, injury, or accident on a claim	DMEPOS Professional	No	Value does not match a valid value in CMS's <i>IDR Data Dictionary</i>
Related-cause code three	The code indicating an associated cause of an illness, injury, or accident on a claim	DMEPOS Professional	No	Value does not match a valid value in CMS's <i>IDR Data Dictionary</i>
Related-cause date	The date of an associated cause of an illness, injury, or accident as reported on the claim	DMEPOS Professional	Yes <sup>14</sup>	Date is after the end date of service or is before the beneficiary's birthdate
Related condition code	The code indicating a condition related to a claim	Institutional	No	Value does not match a valid value in the <i>NUBC UB-04 Data Specifications Manual</i> or in CMS's <i>Medicare Claims Processing Manual</i> , chapter 25
Related occurrence code	The code indicating a significant event related to an institutional claim; these codes are claim-related occurrences that are related to a specific date	Institutional	No	Value does not match a valid value in CMS's <i>IDR Data Dictionary</i>
Related occurrence date	The date associated with a significant event related to an institutional claim	Institutional	No	Date is before the beneficiary's birthdate for records in which the related occurrence code was not a birthdate of the insured (i.e., not related occurrence codes A1, B1, or C1) or is after the end date of service for records in which the related occurrence code was an accident date or a birthdate of the insured (i.e., related occurrence codes 01, 02, 03, 04, 05, A1, B1, or C1) <sup>15</sup>

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**Exhibit A-1. Methods Used To Identify Potential Errors on 56 Required Data Elements in MA Encounter Data<sup>1</sup>**  
**(continued)**

Required Data Element	Definition	Claim Type Reviewed	Assessed Completeness	Criteria Used To Identify Validity Error
Submitter contract number <sup>7</sup>	The unique identification number for the MAO	All	Yes	Value does not match a contract number in CMS's MA/Part D Contract and Enrollment Data files

Source: OIG analysis of MA encounter data for January–March 2014 from CMS's IDR.

<sup>1</sup> Encounter records include a header portion of the record and one or more service lines. In this Appendix, data elements that MAOs submit in the service line portion of the record begin with the word "line." We counted an encounter record as having a potential error related to a service line data element if the record had at least one service line with a potential error for that data element.

<sup>2</sup> We assessed whether this data element had a missing value for claim type codes 4011 (hospital inpatient—including Medicare Part A), 4012 (hospital inpatient—Medicare Part B only), 4018 (hospital swing beds), 4021 (skilled nursing inpatient—including Medicare Part A), 4022 (skilled nursing inpatient—Medicare Part B only), 4041 (religious nonmedical health care institutions—hospital inpatient).

<sup>3</sup> We excluded records from this analysis if the beneficiary HICN was not contained in the EDB.

<sup>4</sup> In the data that we reviewed, the beneficiary sex code and beneficiary local sex code contained the same information using different codes.

<sup>5</sup> We excluded records from this analysis if the beneficiary HICN was a Railroad Retirement Board number.

<sup>6</sup> CMS has designated the values "1999999992," "1999999984," and "1999999976" as allowable default values for the NPI for DMEPOS, professional, and institutional claim types, respectively. We excluded records from this analysis if the value on a given record was the allowable default value for that claim type.

<sup>7</sup> In the data that we reviewed, the contract number and submitter contract number contained the same information.

<sup>8</sup> In the data that we reviewed, the diagnosis code one and principal diagnosis code contained the same information.

<sup>9</sup> We considered diagnosis codes to be valid if they matched an ICD-9-CM diagnosis code effective 10/1/2013 through 9/30/2014.

<sup>10</sup> We evaluated data contained in (1) the line diagnosis code and (2) the line diagnosis qualifier code for the first diagnosis listed on a record (i.e., the diagnosis for which the line diagnosis sequence number was one). In the data that we reviewed, the line diagnosis code for the first diagnosis listed on a record and the "line other diagnosis code one" contained the same information.

<sup>11</sup> We excluded records from this analysis if the occurrence span end date contained "12/31/9999" and the occurrence span from date was missing.

<sup>12</sup> We assessed whether the original control number was missing on replacement records—i.e., records with a bill frequency code of "7" (correct/replace) in the header portion of the record.

<sup>13</sup> We excluded records from this analysis if procedure dates contained "12/31/9999" and the corresponding procedure code was missing. If a procedure date contained "12/31/9999" and the corresponding procedure code was not missing, we considered the procedure date to be after the record's end date of service.

<sup>14</sup> We assessed whether the related-cause date had a missing value for records in which the related-cause code one, related-cause code two, or related-cause code three contained the codes "AA" (auto accident), "AB" (abuse), "AP" (another party responsible), or "OA" (other accident).

<sup>15</sup> We excluded records from this analysis if the related occurrence date contained "12/31/9999" or "12/31/8888" and the related occurrence code was missing. If a related occurrence date contained "12/31/9999" or "12/31/8888" and the corresponding related occurrence code was not missing, we considered the related occurrence date to be after the record's end date of service.

## APPENDIX B

### Methodology To Identify Potential Duplication of Services

As a part of our evaluation of the validity of MA encounter data, we determined the extent to which encounter records contained potentially duplicated services. We considered two service lines to be duplicated if they matched on service type, beneficiary, date, provider, diagnosis, and MAO. To determine the number of encounter records with a duplicated service, we counted the number of encounter records that contained at least one duplicated service line. Exhibit B-1 below outlines the data elements used in our evaluation of potential duplication by claim type.<sup>31</sup>

If a service took place at an ambulatory surgical center (ASC), contained any procedure modifier codes, or contained a line procedure code that was a methodology-based molecular pathology “stacking” code, we did not include the service line in our evaluation of potential duplication.<sup>32</sup> We also did not include encounter records that were missing a billing provider NPI. Of the total 102,382,853 encounter records from the first quarter of 2014, 58,982,385 had at least one service line included in our evaluation of potential duplication.<sup>33</sup>

**Exhibit B-1. Data Elements Used To Identify Potential Duplication in MA Encounter Data**

DMEPOS and Professional Records		Institutional Records	
<b>Service type</b>	Claim type code	<b>Service type</b>	Claim type code
	Line procedure code		Line procedure code
	Place of service code		Revenue code
<b>Beneficiary</b>	Beneficiary HICN		Bill facility type code <sup>1</sup>
	Beneficiary last name		Bill classification code <sup>2</sup>
<b>Date</b>	Line begin date of service	<b>Beneficiary</b>	Beneficiary HICN
	Line end date of service		Beneficiary last name
<b>Provider</b>	Billing provider NPI	<b>Date</b>	Line begin date of service <sup>3</sup>
	Rendering provider NPI		Line end date of service <sup>3</sup>
<b>Diagnosis</b>	Line other diagnosis code one	<b>Provider</b>	Billing provider NPI
<b>MAO</b>	Submitter contract number		Rendering provider NPI
		<b>Diagnosis</b>	Diagnosis code one
		<b>MAO</b>	Submitter contract number

Source: OIG analysis of MA encounter data for January–March 2014 from CMS’s IDR.

<sup>1</sup> The bill facility type code is the first digit of the type of bill used to identify the type of facility that provided care to the beneficiary.

<sup>2</sup> The bill classification code is the second digit of the type of bill to indicate the classification of the type of service provided.

<sup>3</sup> If an institutional service line was missing a line begin date of service and/or a line end date of service, we matched on the begin date of service and/or end date of service from the header portion of the record.

<sup>31</sup> The edit that CMS’s EDPS uses to reject duplicated services includes payment data elements that were not available to OIG at the time of our review.

<sup>32</sup> We excluded service lines in which the service took place at an ASC because ASCs that perform a procedure bilaterally in the same operative session may report it on two separate service lines with the same procedure code. We excluded service lines that contained any procedure modifier codes or contained a line procedure code that was a laboratory stacking code because these may be used to indicate repeat or distinct procedures and tests.

<sup>33</sup> When we requested from CMS the logic necessary for differentiating service lines that were denied payment by the MAO, CMS was unable to provide this. Therefore, it is possible that these service lines may have been included in our evaluation of potential duplication.

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## APPENDIX C

### Methodology To Evaluate Identifiers for Ordering/Referring and Rendering Providers and Timeliness of Data Submission

We used the methods outlined below to determine the extent to which encounter records contained NPIs for ordering/referring providers and rendering providers and to review the timeliness of data submissions.

Completeness of ordering/referring provider NPIs. Ordering/referring providers are all physicians and nonphysician practitioners who order and/or refer DMEPOS, clinical laboratory and imaging services, and home health agency services. In fee-for-service Medicare, CMS denies claims that lack a valid ordering/referring provider NPI for these types of services. For the 4.4 million DMEPOS records, 32 million clinical laboratory and imaging records, and 395,022 home health records in our review, we identified missing values in the ordering/referring provider NPI data element.<sup>34, 35</sup>

Completeness of rendering provider NPIs. Rendering providers are the providers who actually performed—or “rendered”—the service. They may or may not be distinct from billing providers, which are the individuals or organizations billing for the services provided. To determine the extent to which rendering provider NPIs were missing on records in which they would be distinct from the billing provider NPIs, we evaluated the subset of evaluation and management records that had a billing provider NPI registered in NPPES as “entity type 2,” i.e., an organization health care provider. Evaluation and management services are beneficiary visits to physicians and nonphysician practitioners to assess and manage their health. Generally, for evaluation and management records in which the billing provider is an organization, the rendering provider NPI is needed to identify the *individual* who saw the patient.<sup>36</sup> For the 23 million evaluation and management records that had an organization billing provider (i.e., entity type 2),

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<sup>34</sup> We considered all professional records with Berenson-Eggers Type of Service (BETOS) codes T1A through T1H to be clinical laboratory records. We considered all professional records with BETOS codes I1A through I4B to be imaging records. We considered all institutional records with claim type codes 4032 (home health and inpatient (Medicare Part B only)), 4033 (home health and outpatient), or 4034 (home health and laboratory services provided to nonpatients to be home health records.

<sup>35</sup> Data elements for the ordering/referring provider NPI are located in both the header and service line portion of the record. For records for DMEPOS, clinical laboratory services, and imaging services, we counted an encounter record as having a missing ordering/referring provider NPI if it was missing an ordering/referring provider NPI from the header portion of the record and missing a line ordering/referring provider NPI from at least one service line. For home health records, we counted an encounter record as having a missing ordering/referring provider NPI if it was missing an ordering/referring provider NPI, an attending provider NPI, and an “other provider” NPI from the header portion of the record.

<sup>36</sup> On records where the billing provider is registered in NPPES as “entity type 1”—an individual or sole proprietor—the rendering provider would be the same as the billing provider.



we identified missing values in the data element for the rendering provider NPI.<sup>37, 38</sup>

*Data submission timeliness.* To review the timeliness of data submissions, we evaluated records submitted by MAOs for the first time—initial submissions.<sup>39</sup> For 97 million initial submission records, we calculated the length of time that elapsed between the last day covering services rendered to the beneficiary (the end date of service on the header portion of the record) and the date the MAO submitted the record to CMS (the submission date on the header portion of the record).

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<sup>37</sup> We considered all professional records with BETOS codes M1A through M6 to be evaluation and management records.

<sup>38</sup> Data elements for the rendering provider NPI are located in both the header and service line portion of the record. We counted an encounter record as having a missing rendering provider NPI if it was missing from the header portion of the record and missing from at least one service line.

<sup>39</sup> To identify encounter records submitted by MAOs for the first time, we identified encounter records with a bill frequency code of “1” (original claim).







## APPENDIX D

### Number of Encounter Records Affected by Each Potential Error, by Claim Type





We assessed the completeness and validity of the MA encounter data for 102,382,853 encounter records from the first quarter of 2014. Exhibit D-1 outlines the number of records affected by each potential error by claim type: DMEPOS, professional, and institutional. We have categorized the potential errors that we identified into eight error types. In total, there were 4,409,353 DMEPOS records, 85,696,173 professional records, and 12,277,327 institutional records included in our review, but not all records were included in each evaluation of potential errors. Appendices A and B contain a detailed description of the methods used to identify potential data errors.

**Exhibit D-1. Number of MA Encounter Records With Potential Errors, by Claim Type**

Potential Error Identified	DMEPOS 		Professional 		Institutional 		Total 	
	Records Evaluated	Records with Error	Records Evaluated	Records with Error	Records Evaluated	Records with Error	Records Evaluated	Records with Error
<b>Inactive or invalid billing provider identifiers</b>								
Inactive or invalid billing provider NPI <sup>1</sup>	3,715,191	8,986	63,963,932	73,460	10,354,959	14,524	78,034,082	<b>96,970</b>
<b>Duplicated services</b>								
Record contained duplicated service line(s)	674,198	32,912	48,892,031	1,688,478	9,416,156	667,485	58,982,385	<b>2,388,875</b>
<b>Missing values—billing provider identifiers</b>								
Missing billing provider NPI	4,409,353	685,036	85,696,173	21,301,561	12,277,327	1,897,235	102,382,853	<b>23,883,832</b>
Missing billing provider name	4,409,353	685,036	85,696,173	21,301,561	12,277,327	1,897,235	102,382,853	<b>23,883,832</b>
<b>Missing values—other data</b>								
Missing beneficiary last name	4,409,353	9,844	85,696,173	186,238	12,277,327	22,676	102,382,853	<b>218,758</b>
Missing admission date <sup>2</sup>	N/A	N/A	N/A	N/A	1,038,729	31,846	1,038,729	<b>31,846</b>
Missing place of service code	4,409,353	5	85,696,173	1,242	N/A	N/A	90,105,526	<b>1,247</b>
Missing discharge status code <sup>2</sup>	N/A	N/A	N/A	N/A	1,038,729	371	1,038,729	<b>371</b>
Missing line procedure code	4,409,353	66	85,696,173	59	N/A	N/A	90,105,526	<b>125</b>
<b>Inconsistent date values</b>								
Claim bill date before begin date of service	4,409,353	10,907	85,696,173	54,258	12,277,327	15,025	102,382,853	<b>80,190</b>
Related occurrence date before birthdate or after end date	N/A	N/A	N/A	N/A	5,573,532	27,318	5,573,532	<b>27,318</b>
Line end date not within begin and end date of service	4,409,353	0	85,696,173	0	10,125,345	16,166	100,230,871	<b>16,166</b>
Procedure perform date not within begin and end date of service	N/A	N/A	N/A	N/A	439,832	9,756	439,832	<b>9,756</b>
Line begin date not within begin and end date of service	4,409,353	0	85,696,173	0	10,125,345	9,401	100,230,871	<b>9,401</b>





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**Exhibit D-1. Number of MA Encounter Records With Potential Errors, by Claim Type (continued)**

Potential Error Identified	 <b>DMEPOS</b>		 <b>Professional</b>		 <b>Institutional</b>		 <b>Total</b>	
	Records Evaluated	Records with Error	Records Evaluated	Records with Error	Records Evaluated	Records with Error	Records Evaluated	Records with Error
<b>Inconsistent date values (continued)</b>								
Procedure date one not within begin and end date of service	N/A	N/A	N/A	N/A	439,825	6,943	439,825	<b>6,943</b>
Procedure date two not within begin and end date of service	N/A	N/A	N/A	N/A	272,742	4,443	272,742	<b>4,443</b>
Procedure date three not within begin and end date of service	N/A	N/A	N/A	N/A	172,154	2,745	172,154	<b>2,745</b>
Procedure date four not within begin and end date of service	N/A	N/A	N/A	N/A	110,956	1,731	110,956	<b>1,731</b>
Procedure date five not within begin and end date of service	N/A	N/A	N/A	N/A	74,469	1,091	74,469	<b>1,091</b>
Procedure date six not within begin and end date of service	N/A	N/A	N/A	N/A	52,694	777	52,694	<b>777</b>
Admission date after the end date of service or before birthdate	N/A	N/A	N/A	N/A	2,150,555	680	2,150,555	<b>680</b>
Related cause date after end date of service or before birthdate	9,580	5	649,714	656	N/A	N/A	659,294	<b>661</b>
Occurrence span end date before birthdate or after end date of service	N/A	N/A	N/A	N/A	94,386	27	94,386	<b>27</b>
Occurrence span begin date before birthdate or after end date of service	N/A	N/A	N/A	N/A	94,386	21	94,386	<b>21</b>
Line prescription date before birthdate	11,632	0	20,890	1	N/A	N/A	32,522	<b>1</b>
<b>Inappropriate codes</b>								
Discharge status code not formatted as two positions	N/A	N/A	N/A	N/A	12,276,154	306,784	12,276,154	<b>306,784</b>
Invalid line procedure code modifier one	3,608,211	1	28,426,934	1,064	3,290,608	9	35,325,753	<b>1,074</b>
Invalid principal diagnosis code	4,409,353	2	85,696,173	129	12,277,327	202	102,382,853	<b>333</b>
Invalid diagnosis code one	4,409,353	2	85,696,173	129	12,277,327	202	102,382,853	<b>333</b>
Invalid line procedure code	4,409,314	3	85,696,159	289	11,177,985	204	101,283,458	<b>496</b>
Invalid line diagnosis code	4,409,353	2	85,696,173	136	N/A	N/A	90,105,526	<b>138</b>
Invalid line other diagnosis code one	4,409,353	2	85,696,173	136	N/A	N/A	90,105,526	<b>138</b>
Invalid admission source code	N/A	N/A	N/A	N/A	12,249,902	8	12,249,902	<b>8</b>
Invalid line revenue code	N/A	N/A	N/A	N/A	12,276,069	3	12,276,069	<b>3</b>

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**Exhibit D-1. Number of MA Encounter Records With Potential Errors, by Claim Type (continued)**

Potential Error Identified	DMEPOS 		Professional 		Institutional 		Total 	
	Records Evaluated	Records with Error	Records Evaluated	Records with Error	Records Evaluated	Records with Error	Records Evaluated	Records with Error
<b>Incorrect original control numbers</b>								
Original control number not blank on initial submission	4,215,403	56,891	81,327,465	1,816,867	11,193,503	204,777	96,736,371	<b>2,078,535</b>
<b>Beneficiary data that did not match CMS's records</b>								
Beneficiary birthdate does not match CMS records	4,375,889	967	85,034,239	20,362	12,180,900	2,529	101,591,028	<b>23,858</b>
Beneficiary sex code does not match CMS records	4,375,889	175	85,034,239	3,162	12,180,900	451	101,591,028	<b>3,788</b>
Beneficiary sex gender code does not match CMS records	4,375,889	175	85,034,239	3,162	12,180,900	451	101,591,028	<b>3,788</b>

Source: OIG analysis of MA encounter data for January–March 2014 from CMS's IDR.

<sup>1</sup> CMS has designated the values "1999999992," "1999999984," and "1999999976" as allowable default values for the NPI for DMEPOS, professional, and institutional claim types, respectively. We excluded records from this analysis if the value on a given record was the allowable default value for that claim type.

<sup>2</sup> We assessed whether the admission date and the discharge status code had missing values for claim type codes 4011 (hospital inpatient—including Medicare Part A), 4012 (hospital inpatient—Medicare Part B only), 4018 (hospital swing beds), 4021 (skilled nursing inpatient—including Medicare Part A), 4022 (skilled nursing inpatient—Medicare Part B only), 4041 (religious nonmedical health care institutions—hospital inpatient).

## APPENDIX E

### Agency Comments




DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Medicare & Medicaid Services

200 Independence Avenue SW  
Washington, DC 20201

**DATE:** DEC - 8 2017

**TO:** Daniel R. Levinson  
Inspector General

**FROM:** Seema Verma   
Administrator

**SUBJECT:** Office of Inspector General (OIG) Draft Report: Medicare Advantage Encounter Data Shows Promise for Program Oversight but Improvements Are Needed (OEI-03-15-00060)

The Centers for Medicare & Medicaid Services (CMS) appreciates the opportunity to review and comment on the Office of Inspector General's (OIG) draft report on Medicare Advantage encounter data. CMS is committed to combatting fraud, waste, and abuse in Medicare and ensuring the accuracy of Medicare Advantage encounter data for payment purposes is an essential part of this effort.

CMS's Encounter Data System has a number of functions that facilitate encounter data accuracy. For example, CMS has reject edits in place, meaning that CMS does not accept records that fail certain criteria. If their data is rejected, Medicare Advantage organizations are instructed to submit a new record with the correct information. Because plan payments are based in part on encounter data submissions, plans have an incentive to respond to a reject edit by submitting corrected encounter data.

CMS also performs informational edits that do not reject a record, but identify errors that do not follow best practices, which plans should review for data accuracy purposes. CMS performs data analysis and monitoring to ensure that the data was formatted and stored correctly, and that each plan's submission volume is reasonable given the number of encounters expected.

Since the agency began collecting encounter data, CMS has greatly increased efforts to improve the accuracy of the data that it accepts, including by enhancing monitoring, communications and technical assistance outreach activities, and working directly with plans in a variety of ways. CMS follows up with Medicare Advantage organizations on a variety of levels when errors are identified through automated reports as well as by direct one-on-one communication. For example, CMS issues quarterly report cards to plans, conducts on-site visits, holds monthly user group calls, and responds to plan inquiries. Furthermore, CMS recently released guidance regarding best practices that plans can implement to help with the encounter data submission process.

In addition, it is important to note that OIG's finding that 28 percent of records in the first quarter of 2014 contained a potential error is incorrect. The majority of these potential errors were related to missing billing provider identifiers, which had been present on the records but were not loaded into CMS's data system correctly. As OIG notes, CMS has since corrected the issue and, after updating the data, only 5 percent of records contain a potential error.

When undertaking a complex data collection effort such as this one, CMS is mindful of balancing immediate needs with long-term goals for use of the data, as well as provider and plan burden. Therefore, while there are additional data fields that may be helpful for study, CMS must focus on development of fields necessary for payment purposes before broadening the scope of collection and validation.

OIG's recommendations and CMS's responses are below.

**OIG Recommendation**

CMS should take actions as appropriate to address potential errors in the Medicare Advantage encounter data.

**CMS Response**

CMS concurs with this recommendation. Both the quality and volume of the Medicare Advantage encounter data have improved notably since 2014. In 2016 and 2017, CMS conducted an independent assessment of high-priority data elements as part of the ongoing Medicare Advantage encounter data integrity plan. The percentage of invalid values ranged from 0 to under 1 percent. CMS will continue to work to address potential errors in the Medicare Advantage encounter data by reviewing submission instructions for consistency and continuing to assess the validity of the highest priority data elements.

**OIG Recommendation**

CMS should provide targeted oversight of Medicare Advantage Organizations that submitted a higher percentage of encounter records with potential errors.

**CMS Response**

CMS concurs with this recommendation. CMS currently reaches out to Medicare Advantage Organizations to discuss frequently occurring edits and errors, as well as issuing quarterly report cards to plans, conducting on-site visits, holding monthly user group calls, and responding to inquiries. CMS's contractor also provides technical assistance outreach with submitters when issues arise. Furthermore, CMS recently released guidance regarding best practices that plans can implement to help with the encounter data submission process.

CMS will review the list of Medicare Advantage Organizations that submitted a higher percentage of the encounter records with potential errors identified in OIG's review and consider how to incorporate this information into our already extensive oversight activities.

**OIG Recommendation**

CMS should ensure that billing provider identifiers are valid and active on all records in the Medicare Advantage encounter data.

**CMS Response**

CMS concurs with this recommendation. CMS monitors the accuracy of this field and found that 99.8 percent of billing National Provider Identifiers for dates of service in 2014 and 2015 were active and valid. However, CMS will create an edit to check the validity of billing National Provider Identifiers and monitor organizations with potential issues.

**OIG Recommendation**

CMS should require Medicare Advantage Organizations to submit ordering and referring provider identifiers for applicable records.

**CMS Response**

CMS does not concur with this recommendation. CMS seeks to balance administrative burden on entities subject to reporting requirements. Because Medicare Advantage Organizations do not always require the ordering, operating, or facility National Provider Identifiers on their provider claims or encounter data, the Medicare Advantage Organizations often do not collect this information on their claims and therefore do not have this data available to report. However, CMS will explore whether ordering and referring provider identifiers are necessary for program integrity purposes and will consider requiring their inclusion in the future.

**OIG Recommendation**

CMS should ensure that Medicare Advantage Organizations submit rendering provider identifiers for applicable records.

**CMS Response**

CMS does not concur with this recommendation. CMS seeks to balance administrative burden on entities subject to reporting requirements. Because Medicare Advantage Organizations do not always require the ordering, operating, or facility National Provider Identifiers on their provider claims or encounter data, the Medicare Advantage Organizations often do not have the rendering National Provider Identifiers from their claims and therefore do not have this data available to report. However, CMS will explore whether rendering provider identifiers are necessary for program integrity purposes and will consider requiring its inclusion in the future.

**OIG Recommendation**

CMS should track Medicare Advantage Organizations' response to reject edits.

**CMS Response**

CMS does not concur with this recommendation. Modifying our systems, as well as requiring that Medicare Advantage Organizations modify each of their own systems to track rejected records and tie resubmissions to rejected records is administratively burdensome both to build and maintain, and would redirect limited resources away from regular submissions, which could ultimately reduce submission completeness.

CMS's compliance plan takes a higher level approach of first prioritizing overall completeness and volume of data. CMS is developing completeness thresholds for Medicare Advantage encounter data and believes this approach is more comprehensive, more transparent, and less burdensome on both CMS and Medicare Advantage Organizations.

**OIG Recommendation**

CMS should establish and monitor Medicare Advantage encounter data performance thresholds related to Medicare Advantage Organizations' submission of records with complete and valid data.

**CMS Response**

CMS concurs with this recommendation. CMS has begun developing thresholds for monitoring, which includes encounter data system review and updates, technical assistance and guidance to plans, analysis for monitoring and compliance, and development and implementation of a compliance plan (including performance thresholds) designed to validate Medicare Advantage encounter data. The framework for the encounter data compliance plan was described in the 2018 Call Letter.

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This report was prepared under the direction of Linda Ragone, Regional Inspector General for Evaluation and Inspections in the Philadelphia regional office, and Tara Bernabe, Deputy Regional Inspector General.

To obtain additional information concerning this report or to obtain copies, contact the Office of Public Affairs as [Public.Affairs@oig.hhs.gov](mailto:Public.Affairs@oig.hhs.gov).



# Office of Inspector General

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