U.S. Department of Health and Human Services

Office of Inspector General

Data Brief

February 2021, OEI-02-18-00380

Trend Toward More Expensive Inpatient Hospital Stays in Medicare Emerged Before COVID-19 and Warrants Further Scrutiny

Key Takeaways

- ✓ Hospitals increasingly billed for inpatient stays at the highest severity level—the most expensive level—from FY 2014 through FY 2019.
- ✓ There are indications that these stays are vulnerable to inappropriate billing practices, such as upcoding.
- ✓ We recommend that CMS conduct targeted reviews of MS-DRGs and stays that are vulnerable to upcoding, as well as the hospitals that frequently bill for them.

Why OIG Did This Review

Hospitals have long been essential providers in our healthcare system. Medicare payments reflect their importance: nearly one-fifth of all Medicare payments are for inpatient hospitalizations. In fiscal year (FY) 2019—prior to the COVID-19 pandemic—Medicare spent $109.8 billion for 8.7 million inpatient hospital stays. Trends in inpatient hospitalizations from FY 2014 through FY 2019 provide important lessons for improving the accuracy of inpatient hospital billing. From this information, stakeholders can gain a better understanding of how hospitals bill Medicare and of vulnerabilities that Medicare should address. The pandemic has placed unprecedented stress on the country's health care system, making it more important than ever to ensure that Medicare dollars are spent appropriately.

How OIG Did This Review

We analyzed paid Medicare Part A claims for inpatient hospital stays from FY 2014 through FY 2019. We identified trends in hospital billing and Medicare payments for stays at the highest severity level. Severity levels are determined by the Medicare Severity Diagnosis Related Group (MS-DRG).

What OIG Found

Hospitals are increasingly billing for inpatient stays at the highest severity level, which is the most expensive one. The number of stays at the highest severity level increased almost 20 percent from FY 2014 through FY 2019, ultimately accounting for nearly half of all Medicare spending on inpatient hospital stays. The number of stays billed at each of the other severity levels decreased. At the same time, the average length of stay decreased for stays at the highest severity level, while the average length of all stays remained largely the same.

Stays at the highest severity level are vulnerable to inappropriate billing practices, such as upcoding—the practice of billing at a level that is higher than warranted. Specifically, nearly a third of these stays lasted a particularly short amount of time and over half of the stays billed at the highest severity level had only one diagnosis qualifying them for payment at that level. Further, hospitals varied significantly in their billing of these stays, with some billing much differently than most.

What OIG Recommends

Oversight is essential to ensuring that Medicare dollars are spent appropriately. Inpatient hospital billing in the years leading up to the pandemic indicates that some stays at the highest severity level could be susceptible to inappropriate billing. Accordingly, we recommend that the Centers for Medicare & Medicaid Services (CMS) conduct targeted reviews of MS-DRGs and stays that are vulnerable to upcoding, as well as the hospitals that frequently bill them. CMS did not concur but acknowledged that there is more work to be done to determine conclusively which changes in billing are attributable to upcoding. We also think more work needs to be done; therefore, we continue to recommend that CMS conduct targeted reviews to identify stays involving upcoding and hospitals with patterns of upcoding.

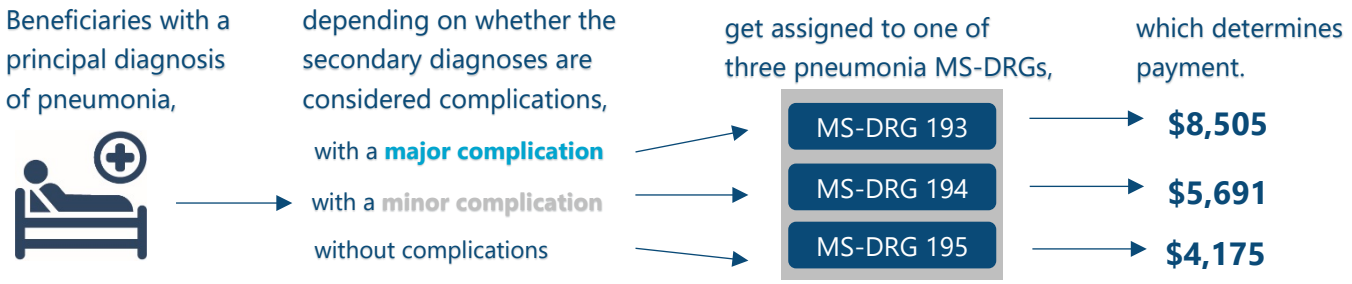
Primer on Billing for Medicare Inpatient Hospital Stays

Prospectively Set Rates

- For inpatient stays, Medicare pays hospitals rates that are set prospectively (i.e., in advance). For each stay, the hospital determines the beneficiary's diagnoses and procedures. These are used to classify the stay into a Medicare Severity Diagnosis Related Group (MS-DRG). Medicare pays a different amount for each MS-DRG.
- The set rate for each MS-DRG reflects the average resources used to care for a beneficiary in that MS-DRG. Medicare pays the rate regardless of how many days the beneficiary stays in the hospital.[1]
- The intent of this system is to encourage hospitals to treat beneficiaries efficiently and effectively without unnecessary services or delays in care.

Medicare Severity Diagnosis Related Groups

- Each MS-DRG is associated with a base Diagnosis Related Group (DRG). Base DRGs indicate the primary reason—often based on the principal diagnosis—a beneficiary requires a hospital stay. Most base DRGs are further divided into two or three MS-DRGs that reflect the severity level of the stay. For FY 2019, there were 335 base DRGs split into a total of 761 MS-DRGs.
- The severity levels account for whether a beneficiary has any secondary diagnoses that are considered complications. Hospitals can submit up to 24 secondary diagnoses per stay and generally, the secondary diagnosis that is considered the most complicated determines the severity level of the entire stay. The severity levels are as follows:
  - High: At least one secondary diagnosis that is considered a major complication.[2]
  - Medium: At least one secondary diagnosis that is considered a minor complication.[3]
  - Low: No secondary diagnosis that is considered a complication.
  - Other: Some MS-DRGs are not divided by severity level.
- Examples of diagnoses considered to be major complications include acute respiratory failure and sepsis. Examples of diagnoses considered to be minor complications include asthma with (acute) exacerbation and Lyme disease. Examples of diagnoses that are not considered to be complications include essential hypertension and general anemia.
- Medicare pays hospitals more for beneficiaries in MS-DRGs with higher severity levels because they are typically more costly to treat. See the following example of how the presence of complications can affect Medicare payment for three beneficiaries with the same principal diagnosis:



[1] Note that certain stays, such as those subject to the transfer policy or qualifying for outlier payments, may have their payment amounts altered, but the MS-DRG and its associated payment rate remain the same.
[2] CMS refers to these as "major complications or comorbidities" or "MCCs."
[3] CMS refers to these as "complications or comorbidities" or "CCs."

RESULTS

Stays billed at the highest severity level accounted for nearly half of Medicare's total spending for all inpatient hospital stays in FY 2019

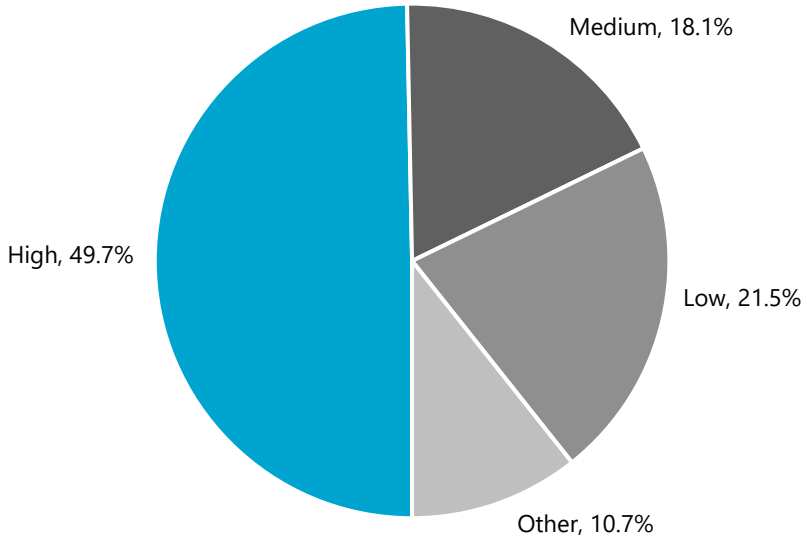
Hospitals billed Medicare for 8.7 million inpatient hospital stays in FY 2019. About 40 percent of them—3.5 million stays—were billed at the highest severity level. These are generally stays for which the hospital bills at least one major complication.[4]

Medicare spent $109.8 billion for inpatient hospital stays in FY 2019, and nearly half of that—$54.6 billion—was for stays billed at the highest severity level. Medicare paid an average of $15,500 per stay billed at the highest severity level.

The most frequently billed MS-DRG in FY 2019 was septicemia or severe sepsis with a major complication (MS-DRG 871).* Hospitals billed for 581,000 of these stays, for which Medicare paid $7.4 billion.

*See Appendix A for the full titles of the MS-DRGs referred to in this report.

Exhibit 1: Nearly half of the $109.8 billion that Medicare spent on inpatient hospital stays in FY 2019 was for stays at the highest severity level.



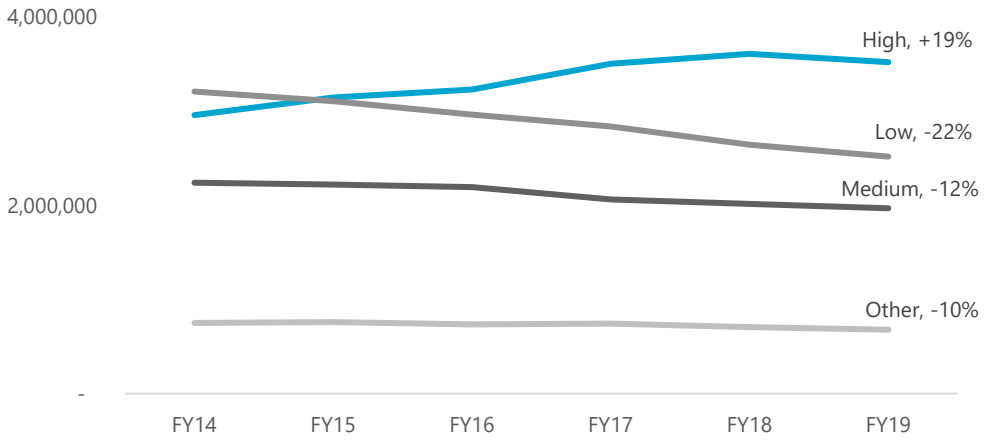
Source: OIG analysis of CMS data, 2020.

[4] For some MS-DRGs at the highest severity level, hospitals may bill for at least one minor complication or major complication. For others, hospitals may bill for at least one complication or specifics related to a surgical procedure. See the methodology for more information about how we analyzed stays in these MS-DRGs.

Stays billed at the highest severity level increased substantially in both number and cost, while stays billed at lower severity levels decreased

The number of stays billed at the highest severity level has increased over the last several years. From FY 2014 through FY 2019, it increased almost 20 percent. The number of stays billed at each of the other severity levels decreased during the same period. Total inpatient stays decreased by 5 percent.

Exhibit 2: The number of stays at the highest severity level increased while stays at each of the other severity levels decreased from FY 2014 through FY 2019.



Source: OIG analysis of CMS data, 2020

Similarly, Medicare payments for stays at the highest severity level increased steadily every year. Over the 6 years, the increases amounted to more than $10 billion, or 24 percent. Overall, Medicare payments for inpatient hospital stays increased by 8 percent during the same time period.

At the same time, the average length of stays at the highest severity level decreased, while the average length of all stays remained largely the same

The average length of stays billed at the highest severity level decreased half a day—from 6.9 to 6.4 days—from FY 2014 through FY 2019. Stays billed at the other severity levels also decreased in length, but by shorter amounts of time. The average length of all stays remained largely the same, decreasing by 0.1 days.

Exhibit 3: Average length of stays at the highest severity level decreased by half a day from FY 2014 through FY 2019, while the average length of all stays remained largely the same.

Severity Level	Average Length of Stay, FY 2014 (in Days)	Average Length of Stay, FY 2019 (in Days)	Change* (in Days)
High	6.9	6.4	-0.5
Medium	4.7	4.3	-0.4
Low	3.3	3.0	-0.3
Other	6.5	6.1	-0.3
All stays	5.1	4.9	-0.1

* Because of rounding, the number in the Change column may not equal the difference between the numbers in the FY 2019 and FY 2014 columns.

Source: OIG analysis of CMS data, 2020.

The increase in the *number* of stays billed at the highest severity level implies that beneficiaries were sicker overall. However, the decrease in the average *length* of stays at the highest severity level potentially undermines that idea because it is not consistent with sicker beneficiaries. Length of stay generally has a positive relationship to severity of stay; sicker beneficiaries stay in the hospital longer.

In addition, the average length of *all* stays remained largely the same from FY 2014 through FY 2019, which suggests that there were not significant changes in the beneficiary population overall (i.e., that beneficiaries in general were not sicker in FY 2019 than they had been in past years). Given the decrease in the average length of stays at the highest severity level and the indication that beneficiaries in general were not sicker, the increase in stays billed at the highest severity level likely was driven by changes in hospital billing practices rather than by changes in the beneficiary population.

Almost 30 percent of stays billed at the highest severity level lasted a particularly short amount of time

Medicare pays hospitals for each inpatient stay based on the assigned MS-DRG, not on the amount of time the beneficiary spends in the hospital.

Almost 30 percent of stays billed at the highest severity level—almost a million of them—lasted a particularly short amount of time. That is, they were more than 20 percent shorter than the mean length of stay for the assigned MS-DRG. Shorter stays are not inherently problematic, but the number of these stays raises questions about the accuracy and appropriateness of the complications billed by the hospital. Although the complications billed suggest sicker beneficiaries, the shorter lengths of stay point to beneficiaries who are *less* sick. For this reason, these stays

Upcoding occurs when a hospital bills Medicare for codes that are not appropriate for the beneficiary's condition. It can take different forms, such as adding or miscoding diagnoses. Upcoding can result in an MS-DRG that has a higher severity level and therefore a higher payment. Indications that this may be happening include:

- Stays at the highest severity level that last a shorter amount of time than the mean length of stay for the given MS-DRG. This may point to the beneficiary's being less sick than the coding signifies.
- Stays that reach the highest severity level because of just one diagnosis. This could mean that the stay was assigned an inappropriately high severity level.

suggest potential upcoding. (See text box on upcoding.) It is important to note that we excluded from this analysis certain stays that could be expected to be shorter, such as stays during which the beneficiary died.

Collectively, Medicare paid hospitals approximately $14.5 billion for stays that lasted a particularly short amount of time. That is $4.9 billion more than it would have paid if these stays had been billed at the next lower severity level. Medicare potentially overpaid hospitals by a significant amount if even a small fraction of these stays were billed inappropriately.

Certain high-severity MS-DRGs are more likely than others to have stays that lasted a particularly short amount of time. For example, about a third of stays for heart failure and shock (MS-DRG 291), pneumonia (MS-DRG 193), and renal failure (MS-DRG 682) had comparatively short lengths of stay.

Example of a Stay That Is Particularly Short

The following example illustrates the concern with stays that are particularly short.

An inpatient stay was assigned to MS-DRG 291 for heart failure and shock with major complication. Though the mean length of stay for MS-DRG 291 is 4 days, this stay lasted 2 days—50 percent shorter than the mean. The hospital was paid $9,100 for this stay, the average payment for this MS-DRG.

If this stay had been billed to the next lower severity level, it would have been assigned to the MS-DRG for heart failure and shock with minor complication (MS-DRG 292). The hospital would have received approximately $2,900 less.

Over half of the stays billed at the highest severity level reached that level because of only one diagnosis

Over half of the stays billed at the highest severity level in FY 2019—54 percent—reached that level because of just one diagnosis. A hospital can submit up to 24 secondary diagnoses for each stay.[5] Medicare considers each secondary diagnosis to be a major complication, a minor complication, or not a complication. Generally, the secondary diagnosis that is considered the most complicated determines the severity level of the entire stay.

[5] Stays billed at the highest severity level in FY 2019 had an average of 18 secondary diagnoses submitted per stay.

Stays that reach the highest severity level because of one diagnosis are particularly vulnerable to upcoding. Previous OIG work has found that inappropriate billing of a single major complication can lead to significant Medicare overpayments.[6] In addition, CMS states that a high amount of stays with a single major complication could indicate "over-coding" (i.e., upcoding) of the complications.[7]

In total, nearly 2 million stays had just 1 diagnosis—i.e., 1 major complication—that qualified the stay for the highest severity level. The rest of the submitted diagnoses for these stays were considered to be either minor complications or not complications. This means that the highest severity level of each of these stays—and the higher payment associated with that severity level—was determined entirely by a single diagnosis. If that diagnosis were not accurate or appropriate, the higher payment would not be warranted.

Collectively, Medicare paid hospitals $26.8 billion for stays that reached the highest severity level with only one diagnosis that was considered a major complication. This is approximately $10 billion more than Medicare would have paid if these stays had been billed without the single major complication. It is possible that Medicare overpaid hospitals by a significant amount if even a small fraction of these stays were billed inappropriately.

Certain high-severity MS-DRGs are more likely than others to have stays billed with just one major complication. For example, more than 80 percent of stays for kidney and urinary tract infections (MS-DRG 689) had just one major complication. Nearly 70 percent of stays for pneumonia (MS-DRG 193), chronic obstructive pulmonary disease (MS-DRG 190), and renal failure (MS-DRG 682) also had just one major complication.

Example of a Stay with One Major Complication

The following example illustrates the concern with stays with one major complication.

For an inpatient stay, the hospital submitted a principal diagnosis of pneumonia and 24 secondary diagnoses, 23 of which were either minor complications or not complications at all. Based on just one secondary diagnosis that was considered a major complication, the stay was assigned to the pneumonia base DRG's highest severity MS-DRG (i.e., MS-DRG 193). The hospital was paid $8,500 for this stay.

If that single diagnosis was not billed appropriately, the stay should have been assigned to the lower severity level MS-DRG for pneumonia with minor complication (MS-DRG 194). The hospital would have received approximately $2,800 less.

[6] OIG, *Hospitals Overbilled Medicare $1 Billion By Incorrectly Assigning Severe Malnutrition Diagnosis Codes to Inpatient Hospital Claims* (A-03-17-00010), July 2020.

[7] CMS, *Short-Term Acute Care Program for Evaluating Payment Patterns Electronic Report, User's Guide Twenty-Ninth Edition*, p. 17. Accessed at https://pepper.cbrpepper.org/Portals/0/Documents/PEPPER/ST/STPEPPERUsersGuide-Edition29-508.pdf on August 26, 2020.

Hospitals varied significantly in their billing of stays at the highest severity level, with some billing far differently than most

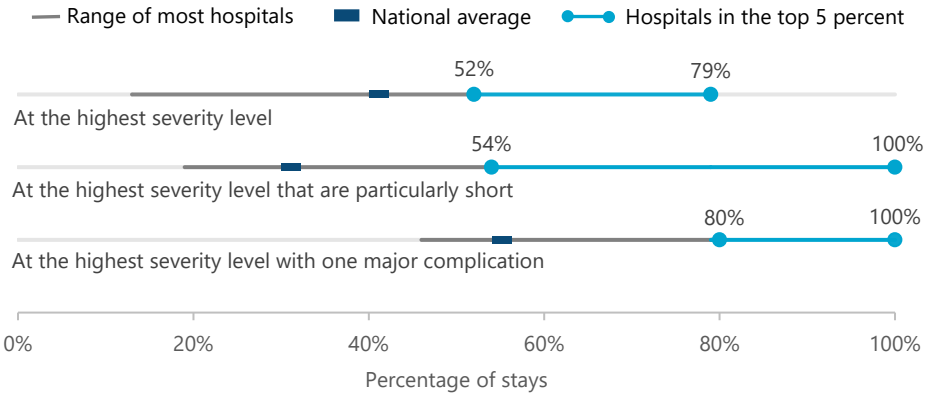
Hospitals varied significantly in their billing of stays at the highest severity level in FY 2019.[8] Some variation is to be expected given the different populations of beneficiaries that hospitals treat. However, the amount of variation and the differences seen in some hospitals are further indications that stays with certain characteristics are vulnerable to inappropriate billing practices, such as upcoding.

First, hospitals vary in the percentage of their claims billed at the highest severity level. As indicated above, 40 percent of all inpatient stays were billed at the highest severity level. However, for most hospitals this percentage ranged from 13 to 52 percent. Further, 5 percent of hospitals billed between 52 and 79 percent of their stays at the highest severity level.

Second, some hospitals had larger percentages of their stays at the highest severity level with a short length of stay. As indicated above, almost 30 percent of stays at the highest severity level were particularly short. However, among most hospitals, this ranged from 19 to 54 percent. Further, 5 percent of hospitals billed between 54 and 100 percent of their stays at the highest severity level with a comparatively short length of stay.

Finally, hospitals also vary in their percentage of stays at the highest severity level with only one major complication. As indicated above, 54 percent of stays at the highest severity level had just one major complication. However, for most hospitals this ranged from 46 to 80 percent. Further, for 5 percent of hospitals, 80 to 100 percent of their stays at the highest severity level were billed with only one major complication.

Exhibit 4: Hospitals varied significantly on three measures of billing stays at the highest severity level, with some billing far differently than most.



Source: OIG analysis of CMS data, 2020.

[8] We included all hospitals with 50 or more stays in FY 2019 in this analysis.

RECOMMENDATION

In FY 2019, Medicare paid hospitals $109.8 billion for 8.7 million inpatient stays. These numbers reflect an 8-percent *increase* in total payments and a 5-percent *decrease* in total stays from FY 2014. Hospitals are increasingly billing for stays at the highest severity level, which is the most expensive one. In fact, stays at the highest severity level increased almost 20 percent over those 6 years to account for nearly half of all Medicare spending on inpatient hospital stays. Stays billed at each of the other severity levels decreased.

As we look more closely at stays at the highest severity level, we see indications that these stays are vulnerable to inappropriate billing practices, such as upcoding. Specifically: nearly a third of these stays lasted a particularly short amount of time and over half of them had only one diagnosis qualifying them for payment at the highest severity level. Further, hospitals varied significantly in their billing of these stays, with some billing far differently than most. For example, 5 percent of hospitals billed between 80 and 100 percent of their stays at the highest severity level with only one major complication.

The COVID-19 pandemic has placed a financial strain on the country's health care system, making it more important than ever to ensure that Medicare dollars are spent appropriately. Oversight is essential, particularly for inpatient hospital stays, which account for a significant share of Medicare spending. Inpatient hospital billing in the years prior to the pandemic indicate that, going forward, attention should be paid to billing of stays at the highest severity level.

We recommend that CMS:

Conduct targeted reviews of MS-DRGs and stays that are vulnerable to upcoding, as well as the hospitals that frequently bill for them

CMS should conduct targeted reviews of MS-DRGs and hospital stays that are vulnerable to upcoding—i.e., those that are billed at the highest severity level—and the hospitals that frequently bill for them. Specifically, CMS should target stays at the highest severity level with certain characteristics, such as those that are particularly short or that have only one major complication. CMS should also focus on MS-DRGs that have a high proportion of stays with these characteristics and on the hospitals that frequently bill them. CMS's Recovery Audit Contractors currently conduct coding validation reviews that incorporate some of these targeting strategies. However, stays billed at the highest severity level continue to increase and more must be done. For example, other contractors—such as the Supplemental Medical Review Contractor—could be involved or additional targeting or analysis could be done, including the

analysis we conducted in this report. CMS should also consider conducting more in-depth reviews of the medical record that look for inconsistencies in the diagnoses that call into question the appropriateness of the coding. In addition to using the results of the reviews to recoup overpayments, CMS should use them to educate hospitals about appropriate billing, modify coding policies, and consider whether further steps should be taken to disincentivize inappropriate billing.

AGENCY COMMENTS AND OIG RESPONSE

CMS did not concur with our recommendation for it to conduct targeted reviews of MS-DRGs and stays that are vulnerable to upcoding, as well as the hospitals that frequently bill for them. CMS stated that there is more work to be done to determine conclusively which changes in billing are attributable to upcoding. CMS also said that it would share our findings with its Recovery Audit Contractors for their consideration in updating their strategies for reviewing MS-DRGs. In addition, CMS stated that it will continue its monitoring for potential upcoding as part of its program integrity strategy and continue to educate providers about appropriate Medicare billing.

We also think that more work needs to be done to determine conclusively which stays at the highest MS-DRG levels involved upcoding and which hospitals have patterns of upcoding—these are the types of targeted reviews that OIG recommends that CMS conduct. We appreciate the steps that CMS has previously taken—and has pledged to continue taking—as part of its program integrity strategy to monitor for potential upcoding and to educate providers. However, CMS's program integrity strategy was in place at the time that these concerning trends emerged, signaling that CMS should strengthen its approach.

As such, we continue to recommend that CMS conduct targeted reviews of MS-DRGs and hospital stays that are vulnerable to upcoding—i.e., those that are billed at the highest severity level—and the hospitals that frequently bill for them.

See Appendix B for the full text of CMS's comments.

METHODOLOGY

Data source

We based this study on an analysis of paid Medicare Part A claims from the National Claims History file with dates of service in FY 2014 through FY 2019. We excluded claims from hospitals that were not paid under the Inpatient Prospective Payment System (IPPS), such as long-term care hospitals, critical access hospitals, and hospitals in Maryland.

Analysis of stays and payments by severity level

We first determined the total number of inpatient hospital stays in FY 2019 and the change from FY 2014.[9] We also calculated total Medicare payments in FY 2019, as well as the change from FY 2014.

Next, we determined the number of stays that were billed at the highest severity level and each of the other levels. To do this, we used information in each MS-DRG description regarding the MCC (major complication or comorbidity) and CC (complication or comorbidity) classification to identify the severity level of each MS-DRG.[10] We then calculated the number and percentage of stays by severity level in each FY, as well as the change from FY 2014 through FY 2019. We did the same for Medicare payments.

In addition, we calculated the average length of stay overall and by severity level in FY 2014 and FY 2019 and determined the difference between the 2 fiscal years.[11]

Analysis of stays at the highest severity level with a particularly short length of stay

We determined the number and percentage of stays at the highest severity level that had a short length. We used information published by CMS to identify the geometric mean length of stay for each MS-DRG.[12] We then used this information to identify

[9] For the purposes of this report, we considered each hospital claim to be a hospital stay.

[10] Base DRGs may be split into two or three MS-DRGs. We considered a MS-DRG to have a "low" severity level when the description included "w/o CC/MCC," a "medium" severity level when the description included "w/CC," and a "high" severity level when the description included "w/MCC." Base DRGs with a two-way split received severity levels of "low" and "high." Base DRGs with no split were not assigned a severity level. See CMS, FYs 2014-2019 IPPS final rules, Table 5. For more on MCCs and CCs, see the Primer on page 2.

[11] We used the claim admission date and claim through date to calculate the length of each stay.

[12] CMS, FY 2019 IPPS Final Rule, Table 5. Geometric means are calculated differently from arithmetic means and are less sensitive to outliers.

stays that were particularly short compared to the average. We defined a particularly short stay as one where the length is more than 20 percent shorter than the geometric mean length of stay for the applicable MS-DRG. We excluded from this analysis all stays that could be expected to be relatively short—i.e., those with discharge codes indicating that the beneficiary died, was transferred to another acute-care facility, left against medical advice, or elected hospice care; and those with admission source codes indicating that the beneficiary transferred from another acute-care hospital.

We summed the Medicare payment associated with each short stay to determine total Medicare payments for these stays. We then estimated how much Medicare would have paid for these stays if each had instead been assigned to the same base MS-DRG, but at the next lower severity level. To do this, we first calculated the average Medicare payment for each MS-DRG. We then used this average Medicare payment for the MS-DRG at the next lower severity level for each short stay. We calculated the difference between the actual payment and the average payment for the MS-DRG at the next lower severity level. We summed these amounts to estimate how much more Medicare paid for these stays at the highest severity level. We note that if a stay was inappropriately billed, the appropriate MS-DRG may or may not be the one at the next lower severity level.

Finally, we determined whether high-severity stays with short lengths of stay were concentrated in certain MS-DRGs. To do this, we calculated the number and percentage of stays within each high-severity MS-DRG that had a short length of stay.

Analysis of stays at the highest severity level with only one major complication

We used tables published annually by CMS to identify whether each diagnosis submitted for each inpatient stay was a major complication, a minor complication, or not a complication.[13] We used this information to calculate the number and percentage of stays at the highest severity level that had exactly one major complication; i.e., one diagnosis qualifying the stay for payment at that severity level.[14,15]

[13] We used Tables 6I, 6J, and 6K published in CMS's FY 2019 IPPS final rule, as well as the "present on admission" indicators and information on hospital-acquired conditions. See https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalAcqCond/icd10_hacs.

[14] Some MS-DRGs are structured so that a stay with a minor complication is assigned to the same MS-DRG as a stay with a major complication. We accounted for this in our calculations; i.e., for stays in these MS-DRGs, we identified those that had exactly one minor or major complication.

[15] We note that several surgical MS-DRGs are assigned a severity level based on the presence of complications or specifics related to the surgical procedure (e.g., MS-DRG 129, major head and neck procedures with CC/MCC or major device). We did not account for the latter; less than 3 percent of the stays at the highest severity level with exactly one major complication are potentially affected.

We summed the Medicare payments associated with each stay that had exactly one major complication to determine total Medicare payments for these stays. We used the same method as for the short stays to estimate what Medicare would have paid for these stays if the single major complication were not appropriate and they had instead been billed at the next lower severity level. We calculated the difference between the actual payments and the estimated payments.

We then determined whether high-severity stays with one major complication were concentrated in certain MS-DRGs. To do this, for each high-severity MS-DRG we calculated the number and percentage of stays within each high-severity MS-DRG that had exactly one qualifying diagnosis.

We also calculated the average number of diagnoses per stay at the highest severity level.

Analysis of hospital billing for stays at the highest severity level

For each hospital with at least 50 stays in FY 2019, we analyzed billing for stays at the highest severity level. To do this, we calculated the (1) percentage of stays at the highest severity level, (2) percentage of stays at the highest severity level that were particularly short, and (3) percentage of stays at the highest severity level with exactly one major complication.

We then calculated the distribution of hospitals based on these indicators. The ranges presented in the report reflect the percentages associated with hospitals at the 5th and 95th percentiles among all hospitals.

Limitations

This study is based on analysis of claims data; we did not conduct medical record reviews. Such reviews would be necessary to determine whether individual stays were inappropriately billed.

Many factors may affect hospital billing. We took steps to understand the impact of these other factors where possible. For example, CMS updates the MS-DRGs each year. We found that 731 of the 761 MS-DRGs in FY 2019 were unchanged from FY 2014 and the changes that did occur affected the severity level of a relatively small percentage of stays. Other factors we considered include: the transition to ICD-10, the 2-midnight policy, shifts of surgical procedures to the outpatient setting, increases in efficiencies of care, and advancements in technology.[16] None fully account for the trends described in the report. For example, the fact that the average length of all

[16] The transition to ICD-10 occurred in FY 2016. ICD-10 greatly increased the number of diagnosis codes as compared to the previous version, ICD-9, and was expected to improve coding accuracy. The 2-midnight policy was enacted in FY 2014 and established that inpatient payment is generally appropriate if physicians expect beneficiaries' care to last at least 2 midnights; otherwise, outpatient payment would generally be appropriate. Previous OIG work showed that under this policy, billing for inpatient stays—particularly those with a short length of stay—decreased. OIG, *Vulnerabilities Remain Under Medicare's 2-Midnight Hospital Policy* (OEI-02-15-00020), December 2016.

hospital stays largely remained the same undermines the idea that efficiencies of care or advancements in technology are driving factors. In addition, the billing trends described in this report began before the transition to ICD-10 in FY 2016 and continued well after, refuting that as a significant factor as well.

Standards

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

APPENDIX A

MS-DRG Titles

MS-DRG	Title
190	Chronic obstructive pulmonary disease with MCC
193	Simple pneumonia and pleurisy with MCC
194	Simple pneumonia and pleurisy with CC
195	Simple pneumonia and pleurisy without CC/MCC
291	Heart failure and shock with MCC
292	Heart failure and shock with CC
682	Renal failure with MCC
689	Kidney and urinary tract infections with MCC
871	Septicemia or severe sepsis without mechanical ventilation >96 hours with MCC

Source: CMS, FY 2019 IPPS Final Rule, Table 5.

APPENDIX B

Agency Comments

DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Medicare & Medicaid Services

Administrator
Washington, DC 20201

DATE: January 11, 2021

TO: Suzanne Murrin
Deputy Inspector General for Evaluation and Inspections
Office of the Inspector General

FROM: Seema Verma
Administrator
Centers for Medicare & Medicaid Services

SUBJECT: Office of Inspector General (OIG) Draft Data Brief: Trend Toward More Expensive Inpatient Hospital Stays in Medicare Emerged Before COVID-19 and Warrants Further Scrutiny (OEI-02-18-00380)

The Centers for Medicare & Medicaid Services (CMS) appreciates the opportunity to review and comment on the Office of Inspector General's (OIG) draft report. CMS recognizes the importance of providing Medicare beneficiaries with access to medically necessary services and, at the same time, protecting the Medicare Trust Funds from improper payments through program integrity initiatives that minimize provider burden.

CMS uses a robust program integrity strategy to reduce and prevent Medicare improper payments, including automated system edits within the claims processing system and prepayment and postpayment medical reviews. CMS also uses the Fraud Prevention System to analyze Medicare fee-for-service claims using sophisticated algorithms to target investigative resources, generate alerts for suspect claims or providers and suppliers, and provide information to facilitate and support investigations of the most egregious, suspect, or aberrant activity. CMS uses the Fraud Prevention System information to prevent and address improper payments using a variety of administrative tools and actions, including claims denials, payment suspensions, Medicare billing privilege revocations, and law enforcement referrals. In an effort to identify and prevent Medicare abuse, CMS implemented several Fraud Prevention System models that identify inpatient hospital billing providers engaging in potential Diagnosis Related Group (DRG) upcoding, which is when a provider assigns an inaccurate billing code for a medical diagnosis, procedure or treatment that is not supported by medical record documentation to increase payment.

Additionally, CMS has taken action to prevent improper Medicare payments by educating health care providers on proper billing. CMS educates health care providers on appropriate Medicare billing through various channels including the Medicare Learning Network (MLN), weekly electronic newsletters, and quarterly compliance newsletters. For example, in February 2019, CMS issued an MLN Booklet dedicated to Medicare Fraud and Abuse, which included a section dedicated to Upcoding and Accurate Coding and Billing.[1]

[1] https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/Fraud-Abuse-MLN4649244.pdf

As part of CMS's program integrity efforts, Recovery Audit Contractors (RACs) review claims on a post-payment basis to detect and correct past improper payments as part of the Medicare Fee-for-Service (FFS) Recovery Audit Program.[2] The national Recovery Audit Program seeks to identify and correct Medicare improper payments through the efficient detection and collection of overpayments made on claims of health care services provided to Medicare beneficiaries and the identification of underpayments to providers, so that CMS can implement actions that will prevent future improper payments. The Medicare FFS RACs have conducted Medicare Severity DRG (MS-DRG) validation reviews since inception of the RAC Program. The RACs are paid on a contingency fee basis and their contingency fee is a percentage of the improper payment recovered from, or reimbursed to, providers. RACs are thereby incentivized to conduct targeted reviews of higher paying MS-DRGs, such as those the OIG identifies as being billed at the highest severity level. Additionally, per the RACs' institutional risk-based Additional Documentation Request (ADR) limit methodology, providers with higher denial rates will have higher ADR limits, allowing the RACs to conduct further reviews of those providers.[3] The RACs are also required to refer any findings of suspected fraud, which would include intentional egregious upcoding, to the Unified Program Integrity Contractor (UPIC) for further audit activities.[4]

CMS regularly monitors for potential upcoding as part of our comprehensive program integrity strategy and takes action when needed. As discussed above, CMS continues to have RACs conduct MS-DRG assignment validation as part of their DRG validation process to verify that the code as reported on the hospital claim is supported by the documentation contained in the beneficiary's medical record. This process includes reviewing principal and secondary diagnoses, as well as any procedures performed during the hospitalization. CMS also publishes improper payment rate data yearly as part of the Comprehensive Error Rate Testing program.[5] As part of these reports, CMS publishes the types of services with upcoding errors and the corresponding improper payment rates. CMS has seen a decrease in the improper payment rates for upcoding errors in the Part A hospital inpatient prospective payment system (IPPS) services over the past several years, with the 2020 improper payment rate for upcoding errors in the Part A hospital IPPS reported as 0.2 percent.[6]

CMS appreciates OIG's efforts in assessing inpatient hospital billing to determine whether upcoding is occurring, but believes there is more work to be done to conclusively determine if the increase in stays at the highest severity level and the decrease in stays at other severity levels, as well as changes in average length of stay, can be attributed to upcoding. Hospitals vary by geographic location, bed size, teaching status and ownership; therefore, detailed data regarding the specific type of hospital analyzed and the associated results is needed to determine how the billing trends are affected by these factors. For example, some hospitals provide more lines of specialty services and therefore are more equipped to treat high acuity cases. These hospitals typically have a higher proportion of inpatient admissions for patients with a complication or comorbidity or major complication or comorbidity than other hospitals, due not to upcoding, but rather to the types of specialty services available.

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[2] https://www.cms.gov/Research-Statistics-Data-and-Systems/Monitoring-Programs/Medicare-FFS-Compliance-Programs/Recovery-Audit-Program

[3] https://www.cms.gov/Research-Statistics-Data-and-Systems/Monitoring-Programs/Medicare-FFS-Compliance-Programs/Recovery-Audit-Program/Downloads/Additional-Documentation-Request-Limits-.pdf

[4] https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/pim83c09.pdf

[5] https://www.cms.gov/Research-Statistics-Data-and-Systems/Monitoring-Programs/Improper-Payment-Measurement-Programs/CERT

[6] https://www.cms.gov/restricted-access-vbdlvcertreportsdl/2020-medicare-fee-service-supplemental-improper-payment-data

Additionally, the OIG found that the average length of stay decreased from fiscal year (FY) 2014 to FY 2019 for all severity levels (high, medium, low, other), with the average length of stay at the highest severity level decreasing by half a day. Without conducting targeted medical review, it is unclear whether the trend could be explained by other factors such as increases in efficiencies of care, advancements in technology, the transition to the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Clinical Modification (ICD-10-CM), or other changes during this period. These factors are important to consider when analyzing billing trends. For instance, patterns of care for conditions such as neoplasms, orthopedics and structural heart disease, have recently transformed due to advancements in biomedicine, resulting in improved clinical outcomes for patients. These advancements in biomedicine have been accompanied by further advancements in medical coding practices and the 2015 implementation of ICD-10-CM. Improvements to coding software have promoted coding sophistication in recent years to accommodate the new diagnosis classification introduced by ICD-10-CM, and led to the nationwide expansion of clinical documentation specialists that utilize medical record documentation review to ensure that all relevant conditions throughout the patient's hospitalization are accurately captured in medical records. CMS remains committed to supporting significant advancements in biomedicine that are changing healthcare delivery for the better, as new technologies can increase efficiency in healthcare by promoting cost-effective care and improving outcomes.

OIG's recommendation and CMS's response are below.

OIG Recommendation

Conduct targeted reviews of MS-DRGs and stays that are vulnerable to upcoding, as well as the hospitals that frequently bill them.

CMS Response

CMS does not concur with this recommendation. CMS appreciates OIG's efforts in assessing inpatient hospital billing to determine whether upcoding is occurring, However, as stated above, in the absence of medical record reviews conducted by the OIG, CMS believes there is more work to be done to conclusively determine if the increase in stays at the highest severity level and the decrease in stays at other severity levels, as well as changes in average length of stay, can be attributed to upcoding. As OIG noted, CMS's Recovery Audit Contractors (RACs) currently conduct MS-DRG validation reviews that incorporate some of OIG's targeting strategies. CMS will share OIG's findings with the RACs, who conduct similar reviews, for their consideration in updating their review strategies. CMS will continue to monitor for potential upcoding as part of our comprehensive program integrity strategy and, if needed, take action in a manner that minimizes provider burden. CMS will also continue to educate health care providers on appropriate Medicare billing through various channels including the Medicare Learning Network (MLN), weekly electronic newsletters, and quarterly compliance newsletters.

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This report was prepared under the direction of Jodi Nudelman, Regional Inspector General for Evaluation and Inspections in the New York regional office, and Nancy Harrison and Meridith Seife, Deputy Regional Inspectors General.

Contact

To obtain additional information concerning this report, contact the Office of Public Affairs at Public.Affairs@oig.hhs.gov. OIG reports and other information can be found on the OIG website at oig.hhs.gov.

Office of Inspector General
U.S. Department of Health and Human Services
330 Independence Avenue, SW
Washington, DC 20201