## U.S. Department of Health and Human Services

# Office of Inspector General

**Issue Brief** 

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# Medicare and Beneficiaries Pay More for Preadmission Services at Affiliated Hospitals Than at Wholly Owned Settings

## Key Results

Medicare's DRG window policy defines when certain outpatient services are covered by the diagnosis-related group (DRG) payment for inpatient services. Congress has previously expanded the DRG window policy to cover settings "wholly owned" by the admitting hospital. However, it has not yet expanded the policy to cover *affiliated* settings—including hospitals owned by the same group—even though affiliated settings are similar to wholly owned settings in several key ways. As a result, in 2019 Medicare and beneficiaries paid affiliated hospitals approximately \$168 million and \$77 million, respectively, for 3.3 million admission-related outpatient services that—if they had been provided at wholly owned hospitals—would not have required separate outpatient payments.

#### The Issue and Its Impact

Medicare's DRG window policy states that if a beneficiary is furnished outpatient hospital services and is admitted to the hospital shortly afterward for the same condition, the outpatient services are considered part of the admission and are included in the pre-set inpatient payment amount, rather than resulting in separate payments for the outpatient services. Since 1990, this policy has covered all settings wholly owned or operated by the admitting hospital.

The DRG window policy does not apply to one common hospital ownership structure that is similar to wholly owned or operated settings: affiliated settings. Affiliated settings are health care settings such as hospitals—that are owned by the same affiliated group. OIG found that in 2019, Medicare paid \$168 million and beneficiaries paid approximately \$77 million for 3.3 million admission-related outpatient services provided during the DRG-window-covered days at hospitals affiliated with the admitting hospitals. This total of \$245 million for 2019 is more than 5 times the estimated \$45 million that Medicare and beneficiaries paid for nearly 800,000 outpatient services related to inpatient admissions at affiliated hospitals when OIG examined this issue in 2011. Further, beneficiaries who received admission-related outpatient services at affiliated critical access hospitals paid particularly high amounts for those services—about six times as much as beneficiaries who received similar services at other affiliated hospitals. (Critical access hospitals are a type of small, rural hospital that Medicare reimburses based on the hospital's reasonable costs, which are typically higher than the rates set by prospective payment systems or fee schedules.)

#### Why This Issue Is Important

Because the DRG window policy does not cover affiliated settings—despite the similarities of those settings to wholly owned settings—beneficiaries who receive admission-related outpatient services at affiliated hospitals must pay separately for those services. For some beneficiaries—including rural beneficiaries who receive services at critical access hospitals—the costs of these services can be burdensome, with per-beneficiary amounts running into hundreds or thousands of dollars in just a year.

#### What OIG Recommends and How the Agency Responded

We recommend that CMS evaluate the potential impact of updating the DRG window policy to include affiliated hospitals, and that it seek the necessary legislative authority to update the policy as appropriate. CMS neither concurred nor nonconcurred with our recommendation.

# **BACKGROUND**

# The DRG Window Policy

In 1983, CMS introduced the Inpatient Prospective Payment System (IPPS). Under this payment system, CMS pays hospitals a fixed sum for each inpatient admission. This fixed sum, known as the Medicare Severity Diagnosis Related Groups (MS-DRG, abbreviated hereinafter as DRG) payment, represents all operating costs associated with the inpatient admission. These operating costs include services provided *during* the admission—such as nursing, radiology, and laboratory services—as well as related outpatient services provided *prior* to the admission.<sup>1, 2</sup>

The DRG window policy defines when CMS considers an outpatient service to be a part of a hospital's inpatient operating costs and therefore the service is covered by the inpatient payment rather than being paid for separately.<sup>3</sup> Outpatient services are covered by the DRG window policy if they (1) are provided within the 3 days immediately preceding an inpatient admission to an acute-care hospital; (2) are diagnostic services or admission-related nondiagnostic services; and (3) are provided by the admitting hospital or by an entity wholly owned or operated by the admitting hospital.<sup>a, 4</sup>

#### Covered services

CMS uses different methods to determine whether preadmission diagnostic or nondiagnostic services are covered by the DRG window. CMS considers all diagnostic services (such as laboratory tests or imaging services) provided during the 3 days immediately preceding the admission, or on the date of the admission, to be part of the hospital's operating costs and therefore covered by the DRG window. CMS defines diagnostic services using specific revenue codes and Current Procedural Terminology (CPT) codes. CMS also considers all nondiagnostic services (such as office visits or minor surgical procedures) provided during the 3 days immediately preceding the admission or on the date of the admission to be related to that admission and therefore covered by the DRG window, unless the hospital determines that the service is clinically unrelated to the admission and attests to this by adding the appropriate condition code to the claim for those outpatient services.

<sup>&</sup>lt;sup>a</sup> Certain hospitals (including psychiatric hospitals, rehabilitation hospitals, and children's hospitals) are subject to a DRG window of only 1 day. Social Security Act §§ 1886(a)(4) and (d)(1)(B). Further, critical access hospitals (CAHs) are not subject to any payment window when they provide inpatient services to beneficiaries because CAHs are not covered under the IPPS. Social Security Act §§ 1886(a)(4) and 1814(l)(1).

## Wholly owned or operated

The DRG window policy applies to preadmission diagnostic services and admission-related nondiagnostic services that were performed at an entity that is wholly owned or operated by the admitting hospital. CMS considers an entity to be wholly owned if the admitting hospital is the sole owner of the entity. CMS considers an entity to be wholly operated if the admitting hospital has exclusive responsibility for conducting and overseeing the entity's routine operations.<sup>9</sup>

The method that CMS uses to determine whether an entity is wholly owned or operated (hereinafter referred to as "wholly owned") depends on the type of entity. For hospital outpatient settings, CMS staff reported that to identify claims for which the outpatient setting is owned by the admitting hospital, they use the identification number unique to each hospital. When billing for a service that is subject to the DRG window policy, physicians' offices must indicate with a payment modifier on the claims whether their offices are wholly owned by the admitting hospital. <sup>10</sup>

# **Outpatient Service Payments Outside of the DRG Window**

Medicare and beneficiaries must pay separately for most outpatient services, including admission-related outpatient services that are not covered by the DRG window. For outpatient services provided at most acute-care hospitals, Medicare and beneficiaries pay fixed amounts determined by the Outpatient Prospective Payment System (OPPS). In contrast, for outpatient services provided at critical access hospitals (CAHs)—small, rural hospitals whose CAH designation gives them a more generous reimbursement methodology and is thereby intended to help ensure access to hospital services for rural beneficiaries—Medicare and beneficiaries pay 101 percent of the hospitals' reasonable costs for those services rather than the OPPS rates.<sup>11</sup>

The methods used to calculate the amounts beneficiaries that pay for outpatient services differ between CAHs and other acute-care hospitals. At CAHs, beneficiaries pay 20 percent of the CAH's *charges* for the services, which are typically higher than the *reasonable cost amounts* that the CAHs ultimately receive. In contrast, beneficiaries who receive outpatient services at most other acute-care hospitals typically pay about 20 percent of the OPPS rates.<sup>12</sup>

These different methods for calculating beneficiaries' shares of payments typically mean that beneficiaries pay more—both proportionally and in absolute amounts—for outpatient services received at CAHs. For example, the Office of Inspector General (OIG) found that in 2012 beneficiaries paid nearly *half* the costs for outpatient services at CAHs, <sup>13</sup> compared to just 22 percent of the costs for outpatient services at most other acute-care hospitals. <sup>14</sup> OIG also found that for 10 common outpatient services, the average beneficiary payment at CAHs was between 2 and 6 times the average payment at most other acute-care hospitals. <sup>15</sup>

# **Affiliated Settings**

The term "affiliated settings" refers to a collection of health care entities owned by the same organization (hereinafter referred to as an "affiliated group"). Affiliated settings can include multiple types of health care entities, such as hospitals, physicians' offices, and ambulatory surgical centers. In 2018, the Department of Health and Human Services' Agency for Healthcare Research and Quality found that 3,419 general acute-care hospitals could be considered affiliated settings. That is, these hospitals belonged to affiliated groups that included at least one or more general acute-care hospitals and at least one or more physician groups. Nearly all these hospitals—approximately 92 percent—belonged to affiliated groups that included 2 or more hospitals. Affiliated settings are similar to wholly owned settings in several key ways, although the owners of affiliated groups are entities other than the admitting hospitals.

Hospitals that belong to an affiliated group make up an increasingly large portion of the current hospital market. In 1982, one year before Congress established the DRG window policy, approximately one-third of all hospitals were part of an affiliated group. In contrast, by 2018, the balance had shifted in the other direction—approximately 72 percent of general acute-care hospitals belonged to affiliated groups. This trend in increasing affiliations, or consolidation, also exists for rural hospitals, including CAHs. Further, consolidation has continued during the COVID-19 pandemic, primarily through affiliated groups purchasing hospitals from one another or merging to build more concentrated networks of hospitals in certain geographic regions. Covided to a filliated groups purchasing hospitals in certain geographic regions.

## Payments to affiliated settings under the DRG window policy

In contrast to outpatient services provided at wholly owned settings, outpatient services provided at *affiliated* settings are not covered by the DRG window policy.<sup>21</sup> When a beneficiary receives admission-related outpatient services at an affiliated hospital, the affiliated group that owns the hospitals benefits financially from both the outpatient services and the inpatient admission. In contrast, if the beneficiary receives related outpatient services at a wholly owned setting, those outpatient services are considered part of the inpatient admission and the admitting hospital receives only the pre-set inpatient payment.

# Affiliated settings are similar to wholly owned settings in three key ways:



Each setting has an entity (the "umbrella entity") that benefits financially from inpatient and outpatient services provided at all locations.

- ➤ In the case of affiliated settings, the umbrella entity can be an organization such as an investor-owned corporation or a private equity group.
- ➤ In the case of wholly owned settings, the umbrella entity is the hospital.



The umbrella entity for each setting typically has some level of administrative or operational control over its facilities.

- ➤ The umbrella entity for each setting may determine the types of services made available at the facilities throughout its network.
- Additionally, the umbrella entity for each setting may offer centralized administrative services, such as accounting and purchasing.



Facilities in both settings can vary in the types of services they provide.

- Across both wholly owned and affiliated settings, facilities can offer inpatient services, outpatient services, or both. Smaller facilities in each setting—such as CAHs or physician practices—may provide more limited services compared to bigger facilities, such as large urban hospitals.
- ➤ For example, CAHs do not always offer some specialty services commonly available at larger hospitals, such as intensive care services and hip and knee replacements.

# Past Updates to the DRG Window

Congress has updated the DRG window policy twice since it was established in 1983. Congress first updated the policy with the Omnibus Budget Reconciliation Act of 1990 (OBRA) to cover more outpatient settings, days, and types of outpatient services. Congress updated the policy again with the Preservation of Access to Care for Medicare Beneficiaries and Pension Relief Act of 2010 (PACMBPRA) to cover even more outpatient services.

## The Omnibus Budget Reconciliation Act of 1990

In 1990, Congress updated several aspects of the DRG window policy to address a vulnerability. Congress recognized that in order to bill Medicare for more services, hospitals may move certain services included in the inpatient DRG payment, offering them as outpatient services on days or at settings not covered by the DRG window. Hospitals were able to bill Medicare separately for these outpatient services while still receiving the fixed-amount inpatient payment. To address this, Congress expanded the number of days covered by the window from 1 to 3. It also distinguished between *diagnostic* services (all covered by the DRG window) and other services related to the admission (i.e., nondiagnostic services, which are covered by the DRG window only if the entity reports the same diagnosis codes on both the outpatient and inpatient claims). Finally, it expanded the settings that were subject to the DRG window from just the admitting hospitals to settings wholly owned or operated by the admitting hospitals.<sup>22</sup>

# The Preservation of Access to Care for Medicare Beneficiaries and Pension Relief Act of 2010

In 2010, Congress updated the definition of related nondiagnostic services covered by the DRG window to include any nondiagnostic service that is *clinically related* to the admission, rather than only services with diagnosis codes that were an exact match.<sup>23</sup> CMS considers all nondiagnostic services provided during the DRG window to be related to the inpatient admission unless the hospital attests that the services are *not* related.

## **Previous OIG Work**

OIG has an extensive body of work—spanning over 25 years—related to the DRG window. During this time, OIG has issued three reports examining the potential savings that Medicare and beneficiaries could realize if the DRG window were expanded to include more days or more hospital ownership structures. In 2014, OIG found that Medicare and beneficiaries paid an estimated \$263 million for 4.3 million related outpatient services provided at settings owned by admitting hospitals in the 11 days prior to the DRG window, as well as an estimated \$45 million for nearly 800,000 related outpatient services provided at hospitals affiliated with, but not

owned by, admitting hospitals during the 3 days prior to inpatient admissions.<sup>24</sup> In 2003, OIG found that for 10 select DRGs, Medicare and beneficiaries paid \$72 million for hospital outpatient services rendered in the 11 days prior to the DRG window.<sup>25</sup> Similarly, in 1994, OIG found that Medicare and beneficiaries paid \$121 million for hospital outpatient services in the 4 days prior to the DRG window.<sup>26</sup>

On the basis of its findings, OIG has recommended that CMS seek legislative authority to expand the DRG window. On the basis of its 2014 findings, OIG recommended that CMS seek legislative authority to expand the DRG window to include (1) additional days prior to the inpatient admission and (2) other hospital ownership arrangements, such as affiliated hospital groups. CMS did not concur with either recommendation. Both the 2003 and 1994 reports recommended expanding the number of days covered by the DRG window. CMS concurred with the recommendation made in the 2003 report, but to date Congress has not authorized CMS to expand the DRG window beyond 3 days.

Finally, in 2020 OIG found that Medicare and beneficiaries inappropriately paid approximately \$3.7 million in 2016 and 2017 for outpatient services that were covered by the DRG window policy.<sup>27</sup>

# **RESULTS**

Medicare paid \$168 million and beneficiaries paid \$77 million in 2019 for admission-related outpatient services provided at affiliated hospitals, which are not covered by the DRG window policy

In 2019, approximately 218,000 beneficiaries received a total of 3.3 million admission-related outpatient services at affiliated hospitals, which are not covered by the DRG window policy. These services were received either during the 3 days prior to the date of the beneficiaries' inpatient admissions or on the dates of those admissions. Medicare paid \$168 million to affiliated hospitals for these services, and beneficiaries paid an additional \$77 million.<sup>b, 28</sup> If these outpatient services had been provided at the admitting hospitals or at other wholly owned settings, they would have been covered by the DRG window policy and Medicare and beneficiaries would not have made separate payments for them.

These 3.3 million outpatient services were associated with approximately 244,000 inpatient admissions. For these outpatient services, the most common types of associated inpatient admissions were sepsis, heart failure, coronary angioplasty/stenting, brain hemorrhage, and psychoses. Prior to each inpatient admission, beneficiaries typically received multiple outpatient services, including visits with a physician or other medical professional; diagnostic

tests, such as lab tests and imaging; and injections or IV infusions.<sup>29</sup> The median amount (per beneficiary, per admission) that beneficiaries paid to affiliated hospitals for these preadmission outpatient services was \$146, and the median amount that Medicare paid was \$489.

However, some beneficiaries paid particularly high amounts for admission-related outpatient services. Nearly 21,000 beneficiaries—about 10 percent of all beneficiaries who received admission-related outpatient services at affiliated hospitals—paid \$1,000 or more for those services in 2019. The median amount that these beneficiaries paid for admission-related outpatient services in 2019 was \$1,515,



Approximately 1 in 10 beneficiaries paid particularly high amounts for admission-related outpatient services at affiliated hospitals.

<sup>&</sup>lt;sup>b</sup> Beneficiaries with supplemental coverage may not be responsible for paying the full cost-sharing amount for admission-related outpatient services received at affiliated hospitals. In 2018, the majority of Medicare beneficiaries had supplemental coverage. However, nearly one in five beneficiaries did not have supplemental coverage. See Kaiser Family Foundation, A Snapshot of Sources of Coverage Among Medicare Beneficiaries in 2018. Accessed at <a href="https://www.kff.org/medicare/issue-brief/a-snapshot-of-sources-of-coverage-among-medicare-beneficiaries-in-2018/">https://www.kff.org/medicare/issue-brief/a-snapshot-of-sources-of-coverage-among-medicare-beneficiaries-in-2018/</a> on August 25, 2021.

but one beneficiary paid nearly \$44,000. Although some of these beneficiaries paid for outpatient services associated with multiple different hospital admissions, most paid more than \$1,000 for services associated with just a single admission.

# One beneficiary paid nearly \$1,400 for services not covered by the DRG window policy.



This beneficiary had a heart attack and received outpatient services at the local hospital's emergency department.



Later that day, the local hospital transferred the beneficiary to a nearby affiliated hospital for inpatient admission.



The beneficiary paid \$1,377 to the local hospital for the outpatient services. If the local hospital had been wholly owned by the admitting hospital, rather than affiliated with it, the DRG window policy would have prevented the beneficiary from making this separate payment for the outpatient services.

# Nearly all these admission-related outpatient services were provided prior to urgent or emergency admissions

Urgent and emergency admissions made up nearly 90 percent of all admissions associated with outpatient services provided at affiliated hospitals. These types of admissions indicate that beneficiaries required immediate care for their medical conditions. Of the \$245 million that Medicare and beneficiaries paid to affiliated hospitals for admission-related outpatient services, \$225 million was for services that were provided prior to urgent or emergency admissions.

Beneficiaries typically received outpatient services at affiliated hospitals immediately before urgent or emergency admissions. Specifically, 59 percent of admission-related outpatient services were received on the same day as beneficiaries' urgent or emergency admissions. Another 30 percent of these outpatient services were received on the day prior to these admissions.

There are many reasons why beneficiaries may have received outpatient services at one hospital prior to an urgent or emergency admission at an affiliated hospital. For example, the first hospital may not have been able to provide the needed care—some hospitals may be unable to provide certain types of inpatient services, such as orthopedic surgery, or to access certain types of specialists, such as cardiologists.<sup>30</sup>

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In these cases, hospitals often transfer beneficiaries to a hospital that offers these services.<sup>31</sup> Further, some affiliated groups may intentionally offer certain types of inpatient services at only a limited number of the hospitals in their groups, thereby necessitating transfers between some hospitals.<sup>32</sup>

# Beneficiaries who received outpatient services at affiliated critical access hospitals paid even more for those services

Beneficiaries paid even more for admission-related outpatient services that were not covered by the DRG window policy when they received those services at affiliated

critical access hospitals rather than at other types of affiliated hospitals. The median amount that beneficiaries paid for outpatient services at CAHs prior to being admitted to an affiliated hospital was \$646. In contrast, the median amount that beneficiaries paid for outpatient services at other hospitals was \$109. Despite the large difference in median payments, beneficiaries generally received similar outpatient services at both settings. See Appendix A for a breakdown of the most common outpatient services provided at each setting in 2019.



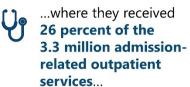
Beneficiaries who received admission-related outpatient services at CAHs paid about **six times as much** for those services as beneficiaries who received similar services at other types of affiliated hospitals.

Beneficiaries who received outpatient services at affiliated CAHs generally paid even more for two reasons. First, the costs of outpatient services at CAHs are often higher than the costs for those same services at other hospitals. Previous OIG work found that services commonly provided at CAHs cost between 2 and 6 times the amounts that the same services cost at other types of hospitals.<sup>33</sup> Second, CAHs calculate the amounts that beneficiaries pay on the basis of what the CAHs *charge* for the services, rather than the services' final costs. Charges at CAHs are typically much higher than the final costs. In 2019, beneficiaries who received preadmission outpatient services at affiliated CAHs paid approximately 49 percent of the final costs for those services, while beneficiaries who received those services at other affiliated hospitals paid 20 percent—a disparity consistent with previous OIG findings.<sup>34</sup>

Because beneficiaries paid even more for admission-related outpatient services at affiliated CAHs, beneficiary payments to CAHs made up a disproportionately high share of the total beneficiary payments to affiliated hospitals. In 2019, approximately one-fifth of beneficiaries paid affiliated CAHs \$48 million—more than half of the total \$77 million paid to all affiliated hospitals. See Exhibit 1 for a comparison of beneficiary use of CAHs for admission-related outpatient services and the amounts they paid for those services.

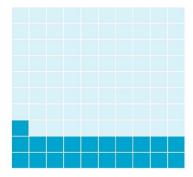
Exhibit 1: Beneficiary payments to CAHs made up a disproportionately high share of the total beneficiary payments to affiliated hospitals for admission-related outpatient services.

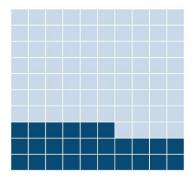


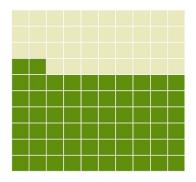




...and made payments that accounted for 62 percent of all beneficiary payments for admissionrelated outpatient services.







# CONCLUSION AND RECOMMENDATION

Since Congress first established the DRG window policy, it has updated it twice in response to changes in health care delivery trends to ensure that the policy continues to serve its original purpose—protecting Medicare and beneficiaries from paying separately for outpatient services that are related to inpatient admissions. One of these changes—made in 1990—expanded the policy to cover wholly owned settings that were becoming increasingly popular in the health care system. Since that time, affiliated settings have become increasingly common, with more than 70 percent of all general acute-care hospitals belonging to an affiliated group, and they are similar to wholly owned settings in key ways. However, affiliated settings are not covered by the current DRG window policy.

Because the DRG window policy does not cover hospitals that belong to affiliated groups, Medicare and beneficiaries in 2019 paid these hospitals \$168 million and \$77 million, respectively, for admission-related outpatient services that, if they had been delivered at wholly owned settings, would have been considered part of the inpatient admission and not paid separately. These payments are particularly costly for Medicare beneficiaries who rely on CAHs for their care, in part because beneficiary payments at CAHs are based on charges for services rather than final costs (which are lower). OIG has previously recommended that CMS seek the legislative authority necessary to modify how coinsurance is calculated for all outpatient services that CAHs provide.

Further, for most beneficiaries, the extra costs associated with receiving admission-related outpatient services at affiliated hospitals may be practically unavoidable. In 2019, the vast majority of these payments were made for outpatient services provided prior to urgent or emergency admissions. When beneficiaries are seeking urgent or emergency care, they may not be able to choose where they receive services.

As more hospitals join affiliated groups, the fact that the DRG window policy does not cover affiliated hospitals will continue to result in increased costs for Medicare and beneficiaries. For example, as the number of hospitals that belonged to affiliated groups has increased, OIG has found considerable growth in the number of admission-related outpatient services provided at affiliated hospitals—from nearly 800,000 services in 2011 to 3.3 million services in 2019—along with a five-fold increase in the total payments made for these services. The trend towards greater consolidation among hospitals—which has continued through the COVID-19 pandemic—suggests that the DRG window policy needs another update to ensure that Medicare and beneficiaries do not pay higher, setting-specific amounts for the same outpatient services. To that end, CMS should take the following action:

### We recommend that CMS:

Evaluate the potential impacts of updating the DRG window policy to include affiliated hospitals, and seek the necessary legislative authority to update the policy as appropriate.

This report highlights the financial burdens placed on Medicare and beneficiaries when beneficiaries receive admission-related outpatient services at affiliated hospitals. However, our analysis does not explore all the potential implications of expanding the DRG window policy to include affiliated hospitals. Therefore, we recommend that CMS analyze relevant policies, including those related to inpatient and outpatient payments, rate-setting, and other relevant areas, to determine the impacts of including affiliated hospitals in the DRG window policy. This analysis should consider both potential savings to Medicare and beneficiaries as well as possible unintended negative effects on beneficiary access to care or increases in costs. With past updates to the DRG window, CMS has done analyses of expected costs and benefits.

CMS should also consider incorporating in its analysis the impact of including other (i.e., nonhospital) affiliated settings—such as physicians' offices—in the DRG window policy. We did not include these types of settings in our analysis because we were unable to confidently determine if they were affiliated with admitting hospitals in 2019.

To the extent that CMS determines that updating the DRG window policy to include affiliated hospitals—and potentially other affiliated settings—would achieve savings for Medicare and beneficiaries with low risk of unintended negative effects, CMS should seek the necessary legislative authority to do so.

# OIG RESPONSE TO AGENCY COMMENTS

In its response to our report, CMS neither concurred nor nonconcurred with our recommendation. CMS noted that expanding the DRG window policy to include affiliated hospitals would require legislation and that such a proposal is not currently included in the President's Budget. CMS indicated that it has not yet determined whether to use its administrative resources to conduct the recommended analysis.

We continue to recommend that CMS evaluate the potential impacts of updating the DRG window policy to include affiliated hospitals. If that evaluation finds that updating the DRG window policy would result in savings for Medicare and beneficiaries, with a low risk of unintended negative effects, we also continue to recommend that CMS seek the necessary legislative authority to update the policy.

For the full text of CMS's comments, see the Agency Comments section following the Appendices.

# **METHODOLOGY**

# Scope

For this evaluation, we analyzed fee-for-service preadmission services delivered in affiliated hospital outpatient settings. We excluded approximately one-third of all Medicare beneficiaries because those beneficiaries were enrolled in Medicare managed care plans and the DRG window policy does not apply to those plans. We did not analyze preadmission services delivered at other affiliated settings, such as physicians' offices, where data was not available to definitively determine whether they were affiliated with admitting hospitals in 2019.

#### **Data sources**

## **Standard Analytic Files**

We used the inpatient Standard Analytic Files (SAFs) from calendar years 2018 and 2019 to identify inpatient admissions to include in our analysis. We used just over 12 months of outpatient SAF data (December 29, 2018, through December 31, 2019) to identify outpatient services delivered 3 days prior to the inpatient admissions. We also used the outpatient SAF data to identify the types of admission-related outpatient services not covered by the DRG window.

# **Medicare Cost Reports**

We used fiscal year (FY) 2019 Medicare cost reports to identify affiliated hospital groups.<sup>35</sup> If a hospital did not have an FY 2019 Medicare cost report, we used its Medicare cost report from FY 2018.

# Provider Enrollment, Chain, and Ownership System

In addition to using the Medicare cost reports, we used the Provider Enrollment, Chain, and Ownership System (PECOS) to identify affiliated hospital groups.

# **Data analysis**

We analyzed inpatient and outpatient claims and Medicare cost reports to identify how much Medicare and beneficiaries paid in 2019 for admission-related outpatient services not covered by the current DRG window policy. We included outpatient services that were provided the DRG window—i.e., during the 3 days preceding inpatient admissions—by hospitals affiliated with, but not owned by, admitting hospitals.

## **Identifying Admission-Related Outpatient Services**

We used the following steps to identify preadmission outpatient services provided within the DRG window at affiliated hospitals:

- 1. We identified all 2019 inpatient admissions subject to the DRG window that were performed at short-term acute-care hospitals. For each admission, we noted the beneficiary's Medicare identification number, the start date of the admission, and the provider number of the admitting hospital. We included only inpatient admissions for which (1) the hospital was located in one of the 50 U.S. States or Washington, D.C.; (2) the beneficiary was not enrolled in a Medicare managed-care plan; and (3) Medicare paid for the admission. We used the 2019 inpatient SAF to identify these admissions.
- 2. Next, we identified all outpatient services provided to these beneficiaries during the 3 days prior to those inpatient admissions and on the day of those admissions. We selected this timeframe because it is the same number of days covered by the DRG window policy. To identify these outpatient services, we used Medicare identification numbers and admission start dates from the inpatient admissions and the Medicare identification numbers and line-item dates of service from the outpatient claims from December 29, 2018, through December 31, 2019.<sup>36</sup> In total, we identified 14.6 million outpatient services provided to approximately 883,000 beneficiaries. These outpatient services were associated with approximately 1 million inpatient admissions.
- 3. We then determined whether each hospital was part of an affiliated group. To do this, we used several sources, including cost reports, PECOS, and internet research. First, we used chain ownership information provided in each hospital's FY 2019 cost report (or, if the FY 2019 report was not available, the FY 2018 report) to identify groups of affiliated hospitals. We considered hospitals to be part of the same affiliated group if they provided the name of the same chain owner on their cost reports. We conducted internet research—for example, searching for press reports on acquisitions and for ownership information on hospital websites—to verify chain names when there were minor inconsistencies between cost reports. (For example, some hospitals used abbreviations in the chain name while others wrote out the full name.) Next, if a hospital's cost report indicated costs for a home office but did not report a chain owner, we used PECOS data and checked hospital websites to determine whether these hospitals belonged to affiliated groups. If either of these sources showed that the hospital had a chain owner during 2019, we assigned the hospital to the appropriate affiliated group. If cost reports, PECOS, and our research did not show a chain owner, we considered a hospital to be independent and did not assign it to an affiliated group. We assigned a unique ID to each affiliated group.

We also used the cost reports, PECOS, and internet research to identify any of our affiliated hospitals for which the affiliated group ownership changed

- in 2019. If a hospital changed affiliated group ownership in 2019, we recorded both the original and new affiliation and date of ownership change. We used this information to assign admission-related outpatient services to the correct affiliated group on the basis of the dates on which the services were provided.
- 4. Next, for the outpatient services we identified, we determined whether they were provided at settings affiliated with admitting hospitals. To do so, we identified the outpatient services that were performed at hospitals in the same affiliated group as the admitting hospital. We then excluded outpatient services provided by hospitals with the same exact hospital identification number as the admitting hospital, so that our analysis did not include wholly owned settings that are already covered by the DRG window policy.

We then determined whether these outpatient services would have been covered by the DRG window policy had they been provided at wholly owned settings. First, we classified the outpatient services as diagnostic or nondiagnostic using a list of diagnostic services from CMS. The DRG window policy covers *all* diagnostic services and related *nondiagnostic* services in the 3-day window. Therefore, we included all diagnostic services. We determined which nondiagnostic services were related to the inpatient admission by matching the first three digits of the diagnosis codes on the hospital inpatient claims and the outpatient claims.<sup>37</sup>

Our method to classify nondiagnostic services as being related to an inpatient stay is different from how Medicare makes this determination for the DRG window policy. The DRG window policy uses condition code 51 to designate nondiagnostic outpatient services as not being related to the inpatient admission at wholly owned settings. However, because affiliated settings are not covered by the DRG window policy, hospitals would have no occasion to use condition code 51. Therefore, we relied on diagnosis code matches.

This methodology of matching by partial diagnosis codes is based on the World Health Organization's description of diagnosis codes; epidemiologists use a similar methodology for research purposes.<sup>38, 39</sup> Additionally, we believe that matching by using the first three digits is appropriate because CMS has stated that requiring an exact match would "impermissibly limit" the number of outpatient services related to an inpatient admission as defined by the DRG window policy.<sup>40</sup>

For approximately 51 percent of related nondiagnostic services, we identified the services as being related because the primary diagnosis code on the outpatient claim matched the primary diagnosis code on the inpatient claim. See Appendix B for the number and percentage of each combination of matches of inpatient and outpatient diagnosis codes included in this dataset.

# Calculating Potential Savings Under Alternative Policy Options for Medicare and Beneficiaries

Using the dataset of matches that we described above, we summed Medicare payments to providers to calculate the amount that Medicare paid for outpatient services related to an inpatient stay. These related outpatient services were provided at affiliated hospitals within the 3-day DRG window. Similarly, we summed beneficiary deductible and coinsurance payments to providers to determine the amount that beneficiaries paid for related outpatient services provided inside the DRG window at affiliated hospitals.

We next examined the inpatient hospital admissions that were associated with the related outpatient services provided at affiliated hospitals not covered by the DRG window policy. We used the DRGs and admission type codes from inpatient claims to identify the reason for and urgency of the inpatient admissions. We compared the outpatient dates of service to the associated inpatient start dates to identify when within the 3-day DRG window the related outpatient services were provided. Finally, we summed the number of outpatient services and Medicare and beneficiary payments by inpatient admission and calculated mean number of services and payments per admission.

Finally, we calculated payments made by Medicare and beneficiaries for admission-related outpatient services by type of hospital, comparing payments made to CAHs to payments made to other hospitals. CAH designation was determined using the facility's CMS Certification Number (CCN). Hospitals with "13" as the third and fourth digits of the CCN were classified as CAHs. We used Healthcare Common Procedure Coding System (HCPCS) codes to compare the types of outpatient services provided at CAHs and other hospitals prior to a related inpatient admission at an affiliated hospital.

# Limitations

The number of admission-related outpatient services and associated costs to Medicare and beneficiaries that we present in this work should be considered estimates, not exact figures. We excluded some admission-related services from our analysis, specifically:

- Admission-related services at nonhospital settings—such as physicians'
  offices—affiliated with the hospital where the beneficiary was admitted. We
  excluded these settings because we were unable to confidently determine
  whether they were affiliated with admitting hospitals in 2019.
- 2. Admission-related services at hospitals that we could not determine to be part of an affiliated group. We did not have FY 2019 cost reports for all hospitals. For such hospitals, we had to rely instead on FY 2018 cost reports and PECOS data. Therefore, it is possible that for these hospitals for which we had only a FY 2018 cost report, a hospital could have changed affiliation status in

FY 2019 without our being aware of that change. Additionally, we may not have been able to identify all instances in which a hospital was part of an affiliated group if ownership was not accurately reported in the cost report and/or PECOS.

For the nondiagnostic services that we included, we relied on a match of diagnosis codes to determine whether the nondiagnostic outpatient services were related to the inpatient admission. We developed this methodology on the basis of the following: (1) the construction of the diagnosis codes (i.e., that the three digits we are using for the match describe the major disease category), (2) CMS's statements that requiring that all characters of the diagnosis code to match would limit related services and therefore be impermissible; and (3) common practice among other researchers. It is possible that this methodology may both identify some services that are *not* related to the admissions and not identify other services that *are* related. We did not perform a medical record review on the claims in our analysis to ensure that we had identified all admission-related outpatient services that were not covered by the DRG window, or to ensure that we had not identified some outpatient services that were in fact not related to the inpatient admission.

#### **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.

# **APPENDICES**

# Appendix A: Affiliated CAHs and other affiliated hospitals provided similar outpatient services

Service Description (HCPCS Code)	Critical Access Hospitals		Other Hospitals	
	Rank	Number of Claims	Rank	Number of Claims
Complete blood count w/ auto diff (85025)	1	44,370	1	130,228
Comprehensive metabolic panel (80053)	2	40,278	2	110,317
Electrocardiogram tracing (93005)	3	34,862	3	98,201
Routine venipuncture (36415)	4	34,108	4	82,881
Assay of troponin quant. (84484)	5	29,860	5	80,692

Source: OIG analysis of Medicare inpatient and outpatient claims data, 2021.

# Appendix B: We identified about half of all nondiagnostic services because of a match between the primary diagnosis codes

Type of Match (Inpatient Diagnosis Code- Outpatient Diagnosis Code)	Number of Services	Percentage of Total Nondiagnostic Services
Primary-Primary	1,268,765	50.9%
Admitting-Primary	386,777	15.5%
Secondary-Primary	217,651	8.7%
Primary-Secondary	196,343	7.9%
Admitting-Reason for visit 1	173,993	7.0%
Secondary-Secondary	90,314	3.6%
Admitting-Secondary	80,215	3.2%
Primary-Reason for visit 1	31,604	1.3%
Admitting-Reason for visit 2	19,330	0.8%
Admitting-Reason for visit 3	10,797	0.4%
Secondary-Reason for visit 1	8,754	0.4%
Secondary-Reason for visit 3	2,219	0.1%
Secondary-Reason for visit 2	1,966	0.1%
Primary-Reason for visit 3	1,099	0.0%
Primary-Reason for visit 2	987	0.0%

Source: OIG analysis of Medicare inpatient and outpatient claims data, 2021. We included in this matching process three diagnosis codes from each inpatient claim (primary diagnosis code, admitting diagnosis code, and the first-listed secondary diagnosis codes) and five diagnosis codes from each outpatient claim (primary diagnosis code, secondary diagnosis code, and the three diagnosis codes given as the reason for the visit).

# **AGENCY COMMENTS**

Following this page are the official comments from CMS.

# **Agency Comments**



#### DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Medicare & Medicaid Services

Administrator
Washington, DC 20201

**DATE:** December 3, 2021

**TO:** Suzanne Murrin

Deputy Inspector General for Evaluation and Inspections

Office of Inspector General

**FROM:** Chiquita Brooks-LaSure

Administrator

Centers for Medicare & Medicaid Services

SUBJECT: Office of Inspector General (OIG) Draft Report: Medicare and Beneficiaries Pay

More for Preadmission Services at Affiliated Hospitals than at Wholly-owned

Settings (OEI-05-19-00380)

The Centers for Medicare & Medicaid Services (CMS) appreciates the opportunity to review and comment on the Office of Inspector General's (OIG) draft report regarding the Medicare Severity Diagnosis Related Groups (DRG) window policy.

In accordance with long-standing Medicare payment policy under section 1886(a)(4) of the Social Security Act, Medicare's DRG 3-day (or 1-day) payment window policy applies to outpatient services that hospitals and hospital wholly owned or wholly operated Part B entities furnish to Medicare beneficiaries. The statute requires that hospitals bundle the technical component of all outpatient diagnostic services and related non-diagnostic services (for example, therapeutic) with the claim for an inpatient stay when services are furnished to a Medicare beneficiary in the three days (or, in the case of a hospital that is not a subsection (d) hospital, during the one day) preceding an inpatient admission. The outpatient services are considered part of the admission and included in the prospectively-determined inpatient payment rather than resulting in separate outpatient payments. Outpatient nondiagnostic services provided during the payment window are to be included on the bill for the beneficiary's inpatient stay at the hospital only when the services are "related" to the beneficiary's admission.

As the OIG noted, outpatient hospital services provided in settings wholly owned or wholly operated by the admitting hospital are subject to the DRG window policy, but such policy does not apply to affiliated settings. While CMS appreciates the OIG's work to determine the cost savings to Medicare if the DRG window policy applied to affiliated settings, CMS lacks the statutory authority to make this change. CMS will need to determine whether conducting an independent evaluation of the policy change is the most appropriate use of finite Agency administrative resources, particularly in the absence of existing statutory authority.

The OIG's recommendation and CMS' response is below.

<sup>&</sup>lt;sup>1</sup> Three Day Payment Window. <a href="https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Three\_Day\_Payment\_Window">https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Three\_Day\_Payment\_Window</a>

#### **OIG Recommendation**

Evaluate the potential impacts of updating the DRG window policy to include affiliated hospitals, and seek the necessary legislative authority to update the policy, as appropriate.

#### **CMS Response**

As OIG's recommendation indicates, adopting this recommendation would require legislation and such a proposal is not currently included in the President's Budget. While CMS appreciates the OIG's research in this area, CMS would need to further determine whether conducting an evaluation of the potential impacts of updating the DRG window policy to include affiliated hospitals, in the absence of existing statutory authority, is the most appropriate use of finite Agency administrative resources.

# **ACKNOWLEDGMENTS AND CONTACT**

# Acknowledgments

Lisa Minich served as the team leader for this study, and Jon Carroll served as the lead analyst. Others in the Office of Evaluation and Inspections who conducted the study include Rebecca Gorges. Office of Evaluation and Inspections staff who provided support include Joe Chiarenzelli, Rob Gibbons, Christine Moritz, and Sarah Swisher.

This report was prepared under the direction of Laura Kordish, Regional Inspector General for Evaluation and Inspections in the Chicago regional office, and Adam Freeman, Deputy Regional Inspector General.

#### **Contact**

To obtain additional information concerning this report, contact the Office of Public Affairs at <a href="mailto:Public.Affairs@oig.hhs.gov">Public.Affairs@oig.hhs.gov</a>. OIG reports and other information can be found on the OIG website at <a href="mailto:oig.hhs.gov">oig.hhs.gov</a>.

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

# **ENDNOTES**

- <sup>1</sup> 42 CFR § 412.2(c).
- <sup>2</sup> CMS, *Inpatient PPS PC Pricer*. Accessed at <a href="https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PCPricer/inpatient">https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PCPricer/inpatient</a> on March 10, 2020.
- <sup>3</sup> Social Security Act § 1886(a)(4), 42 U.S.C. § 1395ww. See also 42 CFR § 412.2(c)(5).
- <sup>4</sup> Ambulance services and maintenance renal services are the only outpatient services excluded from this rule. CMS always pays separately for ambulance services and maintenance renal services; it never bundles these services into the DRG payment.
- <sup>5</sup> 42 CFR § 412.2(c)(5)(ii).
- <sup>6</sup> Revenue codes describe hospital accommodations and services. Current Procedural Terminology (CPT) is a set of codes, descriptions, and guidelines that describe procedures and services performed by physicians and other qualified health care providers.
- <sup>7</sup> CMS, *Medicare Claims Processing Manual*, Pub. No. 100-04, ch. 3 § 40.3.
- <sup>8</sup> 42 CFR § 412.2(c)(5)(iv). The provider indicates that the outpatient service is unrelated to the inpatient admission by including condition code 51 on the claim. CMS, *Medicare Claims Processing Manual*, Pub. No. 100-04, ch. 3 § 40.3(D).
- <sup>9</sup> 42 CFR § 412.2(c)(5)(i). An admitting hospital does not have to have policymaking authority over an entity for the entity to be considered wholly operated.
- <sup>10</sup> CMS, Medicare Claims Processing Manual, Pub. No. 100-04, ch. 12 §§ 90.7 and 90.7.1.
- <sup>11</sup> Social Security Act § 1814(I)(1).

the total in coinsurance.

- <sup>12</sup> Medicare Payment Advisory Commission (MedPAC), *Payment Basics: Outpatient Hospital Services Payment System* (revised October 2020). Accessed at <a href="https://www.medpac.gov/wp-content/uploads/import data/scrape files/docs/default-source/payment-basics/medpac payment basics 20 opd final sec.pdf">https://www.medpac.gov/wp-content/uploads/import data/scrape files/docs/default-source/payment-basics/medpac payment basics 20 opd final sec.pdf</a> on September 3, 2021. In 2019, beneficiaries paid 19 percent of total OPPS payments in coinsurance. While coinsurance amounts under the OPPS are typically 20 percent of the services' rates, these amounts cannot exceed the inpatient deductible amount (\$1,364 in 2019). Therefore, for some particularly expensive services or bundles of services, beneficiaries pay less than 20 percent of
- <sup>13</sup> OIG, Medicare Beneficiaries Paid Nearly Half of the Costs for Outpatient Services at Critical Access Hospitals, OEI-05-12-00085, October 2014.
- <sup>14</sup> MedPAC, Payment Basics: Outpatient Hospital Services Payment System (revised October 2013).
- <sup>15</sup> OIG, Medicare Beneficiaries Paid Nearly Half of the Costs for Outpatient Services at Critical Access Hospitals, OEI 05-12-00085, October 2014.
- <sup>16</sup> Agency for Healthcare Research and Quality, *Compendium of U.S. Health Systems, 2018.* Accessed at <a href="https://www.ahrq.gov/chsp/data-resources/compendium-2018.html">https://www.ahrq.gov/chsp/data-resources/compendium-2018.html</a> on March 17, 2020.
- <sup>17</sup> Ermann, D., and Gabel, J., "Multihospital Systems: Issues and Empirical Findings," *Health Affairs*, Vol. 3, No. 1, Spring 1984. Accessed at <a href="https://www.healthaffairs.org/doi/10.1377/hlthaff.3.1.50">https://www.healthaffairs.org/doi/10.1377/hlthaff.3.1.50</a> on January 16, 2020.
- <sup>18</sup> Agency for Healthcare Research and Quality, *Compendium of U.S. Health Systems, 2018.* Accessed at https://www.ahrq.gov/chsp/data-resources/compendium-2018.html on March 17, 2020.
- <sup>19</sup> Williams, D., Jr.; Reiter, K.L.; Pink, G.H.; Holmes, G.M.; and Song, P.H., "Rural Hospital Mergers Increased Between 2005 and 2016—What Did Those Hospitals Look Like?," *Inquiry: The Journal of Health Care Organization, Provision, and Financing*, Vol. 57, July 2020, pp. 1–16. Accessed at <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7370548/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7370548/</a> on July 13, 2021.

- <sup>20</sup> KaufmanHall, *M&A* [*Merger & Acquisition*] *Quarterly Activity Report: Q3 2020; M&A Quarterly Activity Report: Q1 2021; M&A Quarterly Activity Report: Q3, 2021.* Accessed at <a href="https://www.kaufmanhall.com/insights-all?f%5B0%5D=software">https://www.kaufmanhall.com/insights-all?f%5B0%5D=software</a> or practice area resources%3A861&f%5B1%5D=type%3A466&order=desc&sort=field p ublication date on October 15, 2021.
- <sup>21</sup> 76 Fed. Reg. 73026, 73286, November 28, 2011.
- <sup>22</sup> P.L. No. 101-508, § 4003.
- <sup>23</sup> P.L. No. 111-192, § 102.

September 2, 2021.

- <sup>24</sup> OIG, Medicare and Beneficiaries Could Realize Substantial Savings If the DRG Window Were Expanded, OEI-05-12-00480, January 2014.
- <sup>25</sup> OIG, Expansion of the Diagnosis Related Group Payment Window, A-01-02-00503, August 2003.
- <sup>26</sup> OIG, Expansion of the Diagnosis Related Group Payment Window, A-01-92-00521, July 1994.
- <sup>27</sup> OIG, Medicare Made \$11.7 Million in Overpayments for Nonphysician Outpatient Services Provided Shortly Before or During Inpatient Stays, A-01-17-00508, May 2020.
- <sup>28</sup> These amounts are likely underestimations because data limitations precluded us from including every type of affiliated setting in our analysis.
- <sup>29</sup> For example, before being admitted for heart failure, a beneficiary may receive such outpatient services as blood tests, an electrocardiogram, and a chest x-ray. On average, beneficiaries received 14 outpatient services prior to being admitted as inpatients.
- <sup>30</sup> Goldberg, S., "Why You'll Have to Go Farther for Some Hospital Care," *Modern Healthcare*, July 2019. Accessed at <a href="https://www.modernhealthcare.com/mergers-acquisitions/why-youll-have-go-farther-some-hospital-care">https://www.modernhealthcare.com/mergers-acquisitions/why-youll-have-go-farther-some-hospital-care</a> on July 13, 2021. Additionally, OIG found that in 2011, fewer than half of CAHs offered certain types of inpatient services, including intensive care, behavioral health services, and oncology. See OIG, *Services Provided by Critical Access Hospitals in 2011*, OEI-05-12-00081, December 2013.
- <sup>31</sup> Kindermann, D.; Mutter, R.; and Pines, J.M., *Emergency Department Transfers to Acute Care Facilities, 2009*, HCUP [Healthcare Cost and Utilization Project] Statistical Brief #155, May 2013, Agency for Healthcare Research and Quality, Rockville, MD. Accessed at <a href="https://www.hcup-us.ahrq.gov/reports/statbriefs/sb155.jsp">https://www.hcup-us.ahrq.gov/reports/statbriefs/sb155.jsp</a> on September 2, 2021.
- <sup>32</sup> Noether, M., and May, S., *Hospital Merger Benefits: Views from Hospital Leaders and Econometric Analysis*, January 2017. Accessed at <a href="https://www.aha.org/guidesreports/2017-01-24-hospital-merger-benefits-views-hospital-leaders-and-econometric-analysis">https://www.aha.org/guidesreports/2017-01-24-hospital-merger-benefits-views-hospital-leaders-and-econometric-analysis</a> on July 13, 2021. Ross, C., "Paying More, Getting Less: As Hospital Chains Grow, Local Services Shrink," *STAT*, January 2018. Accessed at <a href="https://www.statnews.com/2018/01/24/hospital-chains-services-consolidation/">https://www.statnews.com/2018/01/24/hospital-chains-services-consolidation/</a> on July 13, 2021. Hayford, T., "The Impact of Hospital Mergers on Treatment Intensity and Health Outcomes," *Health Services Research*, Vol. 47, June 2012, pp. 1008–1029. Accessed at <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3423176/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3423176/</a> on
- <sup>33</sup> OIG, Medicare Beneficiaries Paid Nearly Half of the Costs for Outpatient Services at Critical Access Hospitals, OEI-05-12-00085, October 2014.
- <sup>34</sup> Previous OIG work similarly found that beneficiaries who received outpatient services at CAHs in 2012 paid an average of 47 percent of the costs of those services in coinsurance, whereas beneficiaries who received outpatient services at other hospitals paid an average of 22 percent in coinsurance. See OIG, *Medicare Beneficiaries Paid Nearly Half of the Costs for Outpatient Services at Critical Access Hospitals*, OEI-05-12-00085, October 2014.
- <sup>35</sup> Hospitals submit cost reports based on their fiscal years rather than calendar years. Because the start of the fiscal year varies across hospitals, they submit cost reports at different times.
- <sup>36</sup> Multiple lines can be billed on a claim. Each line item represents a unique service.
- <sup>37</sup> For this analysis, we classified as "related" a match between the first three digits of the code for the admitting diagnosis, the primary diagnosis, or the first-listed secondary diagnosis on the inpatient claim and the first three digits of the codes for the primary diagnosis, the reason for the visit (1-3), or the first-listed secondary diagnosis on the outpatient claim were classified as related for this analysis.

<sup>&</sup>lt;sup>38</sup> The World Health Organization (the body that develops diagnosis codes) states that the first three digits of a diagnosis code typically describe the major disease category, and that the fourth, fifth, and subsequent digits provide additional details and specificity. World Health Organization, "Instruction Manual," Fifth Edition, *International Statistical Classification of Diseases and Related Health Problems*, 10th Rev., Vol. 2, ch. 2.4.

<sup>39</sup> Sebastian Schneeweiss et al., "Use of comorbidity scores for control of confounding in studies using administrative databases," *International Journal of Epidemiology*, Vol. 28, Issue 5, 2000, pp. 891–898.

<sup>40</sup> Prior to June 2010, CMS used a five-digit match to determine whether nondiagnostic services were related to an inpatient admission. 76 Fed. Reg. 51476, 51707, August 18, 2011.

<sup>&</sup>lt;sup>41</sup> CMS, *State Operations Manual*, Pub. No. 100-07, ch. 2, § 2779A1. Accessed at <a href="http://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/som107c02.pdf">http://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/som107c02.pdf</a> on July 12, 2021.