

Department of Health and Human Services

**OFFICE OF
INSPECTOR GENERAL**

**MEDICARE IMPROPERLY PAID
HOSPITALS FOR BENEFICIARIES WHO
HAD NOT RECEIVED 96 OR MORE
CONSECUTIVE HOURS OF
MECHANICAL VENTILATION**

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EXECUTIVE SUMMARY

Medicare improperly paid hospitals an estimated \$19.6 million over 2 years for inpatient claims with certain procedure codes that required beneficiaries to have received 96 or more consecutive hours of mechanical ventilation.

WHY WE DID THIS REVIEW

A previous Office of Inspector General (OIG) review found that hospitals did not fully comply with Medicare requirements for billing inpatient claims with certain Medicare Severity Diagnosis-Related Groups (MS-DRGs) that required beneficiaries to have received 96 or more consecutive hours of mechanical ventilation. (Mechanical ventilation is the use of a ventilator or respirator to take over active breathing for a patient.) The claims in our prior review had lengths of stay of 4 days or fewer. A subsequent OIG review of a hospital's compliance with Medicare billing requirements found that claims with longer lengths of stay were also at risk for billing errors. Consequently, we conducted this review to include claims with longer lengths of stay.

Our objective was to determine whether Medicare payments to hospitals for inpatient claims with certain MS-DRGs that required 96 or more consecutive hours of mechanical ventilation complied with Medicare requirements.

BACKGROUND

The MS-DRG payment is, with certain exceptions, intended to be payment in full to the hospital for all inpatient costs associated with the beneficiary's stay. For MS-DRGs 207 and 870 to be assigned to a claim, a beneficiary must have received 96 or more consecutive hours of mechanical ventilation. A hospital indicates that a beneficiary has met this requirement by using procedure code 96.72. If a beneficiary received fewer than 96 hours of mechanical ventilation, the beneficiary's stay is assigned to an MS-DRG with a lower severity level, resulting in a lower payment. The claim includes the beginning and ending dates of the beneficiary's hospitalization, which define the beneficiary's length of stay in days. The claim also includes the date that the mechanical ventilation procedure started but does not indicate when it ended.

Prompted by our previous review of claims with lengths of stay of 4 days or fewer, the Centers for Medicare & Medicaid Services (CMS) implemented a new claim processing system edit for continuous invasive mechanical ventilation of 96 consecutive hours or more. Effective October 1, 2012, claims with procedure code 96.72 and a length of stay fewer than 4 days are returned to the provider for validation and resubmission. CMS has also educated hospitals on how to properly submit claims with mechanical ventilation procedures.

HOW WE CONDUCTED THIS REVIEW

Our audit covered \$113.5 million in Medicare payments to hospitals for 2,986 claims that we identified as at risk for billing errors and that had dates of service from July 1, 2012, through June 30, 2014 (audit period). These claims had MS-DRGs 207 or 870 and beneficiary lengths of stay up to 49 days. Because claims do not indicate when mechanical ventilation ended, we

identified the claims at risk for billing errors by estimating the potential mechanical ventilation procedure length (potential procedure length) as the number of days between the date that mechanical ventilation started and the beneficiary discharge date on a claim. (The actual procedure length would have been less if mechanical ventilation ended before the discharge date.) Our review focused on claims with a potential procedure length of 5 days or fewer because these claims were identified as at risk for billing errors. In contrast with our previous review that focused on claims with lengths of stay of 4 days or fewer, using this method enabled us to review claims with longer lengths of stay.

Of the total payments of \$113.5 million, \$16 million represented payments for 427 claims with a potential procedure length of 4 days or fewer, and \$97.5 million represented payments for 2,559 claims with a potential procedure length of 5 days. We selected for review 2 random samples, consisting of 100 claims from each procedure-length group, and evaluated the medical records for each claim to determine whether the beneficiary had received 96 or more consecutive hours of mechanical ventilation as required by the MS-DRG.

WHAT WE FOUND

For 137 of the 200 claims we reviewed, Medicare payments to hospitals complied with Medicare requirements; the beneficiaries had received 96 or more consecutive hours of mechanical ventilation. However, for the 63 remaining claims, Medicare payments to hospitals did not comply with requirements. Specifically, the hospitals incorrectly used procedure code 96.72 when the beneficiaries had not received 96 or more consecutive hours of mechanical ventilation. Consequently, the claims were assigned incorrectly to MS-DRGs 207 and 870, resulting in \$1,488,165 of overpayments. The hospitals confirmed that these claims were improperly billed and generally attributed the errors to incorrectly counting the number of hours that beneficiaries had received mechanical ventilation or to clerical errors in selecting the appropriate procedure code.

The existing length-of-stay edit did not identify the improper billing of claims with mechanical ventilation because the edit was limited to beneficiary lengths of stay that were 4 days or fewer. Specifically, Medicare's claim processing edit focused on the beginning and ending dates of the beneficiary's hospitalization rather than the date that mechanical ventilation started. Had the edit focused on the date that mechanical ventilation started, it would have been able to identify additional claims at risk for billing errors by using that date rather than the beginning date of the hospitalization.

On the basis of our sample results for the 2-year audit period, we estimated that the hospitals received (1) overpayments of \$3,709,139 for claims with a potential procedure length of 4 days or fewer and (2) overpayments of \$15,853,359 for claims with a potential procedure length of 5 days. In total, the hospitals received an estimated \$19,562,498 in overpayments for MS-DRGs 207 and 870. Review of these claims by the Medicare contractors could result in savings of an estimated average of \$8,687 per claim with a potential procedure length of 4 days or fewer and an estimated average of \$6,195 per claim with a potential procedure length of 5 days.

Prompted by our review, the hospitals have refunded identified overpayments for claims that had dates of service in calendar year 2012. For the remaining claims, some hospitals have initiated adjustments.

WHAT WE RECOMMEND

We recommend that CMS:

- ensure that the Medicare contractors recover the \$1,488,165 in identified overpayments for the sampled claims;
- revise the length-of-stay edit to take into account the mechanical ventilation start date for claims with a potential procedure length of 4 days or fewer, which could result in savings of an estimated \$3,709,139 over a 2-year period;
- provide additional guidance to hospitals on the correct billing of mechanical ventilation claims, emphasizing correct billing of claims with a potential procedure length of 5 days, which could result in savings of an estimated \$15,853,359 over a 2-year period;
- review the remaining nonsampled claims during the audit period and recover the overpayments to the extent feasible and allowed under the law; and
- direct the Medicare contractors to review any claims for which procedure code 96.72 was used with a potential procedure length of 5 days or fewer and recover any overpayments after our audit period.

CMS COMMENTS AND OUR RESPONSE

In written comments on our draft report, CMS concurred with all of our recommendations and provided information on actions that it had taken or planned to take to address our recommendations. Regarding our first recommendation, CMS requested that we provide the necessary claim data so that it could instruct its contractors to recover the overpayments. Regarding our fourth recommendation, CMS requested that we provide the necessary claim data so that it could determine an appropriate number of claims to review and recover any overpayments. We plan to provide CMS with the requested claim data.

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INTRODUCTION

WHY WE DID THIS REVIEW

A previous Office of Inspector General (OIG) review found that hospitals did not fully comply with Medicare requirements for billing inpatient claims with certain Medicare Severity Diagnosis-Related Groups (MS-DRGs) that required beneficiaries to have received 96 or more consecutive hours of mechanical ventilation.¹ (Mechanical ventilation is the use of a ventilator or respirator to take over active breathing for a patient.) The claims in our prior review had lengths of stay of 4 days or fewer. A subsequent OIG review of a hospital's compliance with Medicare billing requirements found that claims with longer lengths of stay were also at risk for billing errors.² Consequently, we conducted this review to include claims with longer lengths of stay.³

OBJECTIVE

Our objective was to determine whether Medicare payments to hospitals for inpatient claims with certain MS-DRGs that required 96 or more consecutive hours of mechanical ventilation complied with Medicare requirements.

BACKGROUND

The Medicare Program: Administration and Payment of Claims

The Medicare program provides health insurance coverage to people aged 65 and over, people with disabilities, and people with end-stage renal disease. The Centers for Medicare & Medicaid Services (CMS) administers the program. Medicare Part A provides inpatient hospital insurance benefits and coverage of extended-care services for beneficiaries after hospital discharge.

CMS contracts with Medicare contractors to, among other things, process and pay Medicare claims submitted for services, conduct reviews and audits, and safeguard against fraud and abuse. As part of claim processing, claim information such as patient diagnoses, procedures, and demographic information is entered in the Medicare claim processing systems and is subjected to a series of automated edits that are designed to identify claims that require further review before payment.

¹ *Medicare Incorrectly Paid Hospitals for Beneficiaries Who Had Not Received 96 or More Hours of Mechanical Ventilation* (A-09-12-02066), issued September 17, 2013.

² *Medicare Compliance Review of Swedish Medical Center – First Hill* (A-09-13-02048), issued June 25, 2014.

³ For our review, we considered the first day of hospitalization as the first day of the beneficiary's stay. Therefore, for counting purposes, a beneficiary who was admitted and discharged from the hospital on the same day was considered to have had a 1-day length of stay.

Medicare Requirements for Hospital Claims and Payments

The Social Security Act (the Act) states that Medicare payments may not be made for items or services that “are not reasonable and necessary for the diagnosis or treatment of illness or injury or to improve the functioning of a malformed body member” (§ 1862(a)(1)(A)). In addition, payment is precluded to any provider of services without information necessary to determine the amount due the provider (the Act §§ 1814(a) and 1815(a)). The provider must furnish to the Medicare contractor sufficient information to determine whether payment is due and the amount of the payment (42 CFR § 424.5(a)(6)).

Hospital Inpatient Prospective Payment System and MS-DRG Payments

The Act established the inpatient prospective payment system (IPPS) for inpatient hospital services provided to Medicare beneficiaries (§§ 1886(d) and (g)). Under the IPPS, CMS pays hospital costs at predetermined rates for patient discharges. The rates vary according to the MS-DRG to which a beneficiary’s stay is assigned and the severity level of the patient’s diagnosis. The MS-DRG payment is, with certain exceptions, intended to be payment in full to the hospital for all inpatient costs associated with the beneficiary’s stay. Because a patient may undergo a procedure for a variety of reasons, the Medicare contractor uses software to group an admission into a particular MS-DRG on the basis of many factors, including the principal diagnosis, any present accompanying additional diagnoses, and the principal procedure. Therefore, if the hospital reports an incorrect procedure code, the assigned MS-DRG may be incorrect.

MS-DRGs Requiring Beneficiaries To Have Received 96 or More Consecutive Hours of Mechanical Ventilation

Mechanical ventilation is the use of a mechanical device to inflate and deflate the lungs. Mechanical ventilation provides the force needed to deliver air to the lungs in a patient whose ability to breathe is diminished or lost.

For a beneficiary’s stay to be assigned to the following MS-DRGs, the beneficiary must have received 96 or more consecutive hours of mechanical ventilation:

- MS-DRG 207 is described as “Respiratory system diagnosis [with] ventilator support 96+ hours.”
- MS-DRG 870 is described as “Septicemia or severe sepsis [with mechanical ventilation] 96+ hours.”⁴

⁴ Septicemia is bacteria or other pathogenic organisms in the blood, a condition that often occurs with severe infections. Sepsis is an illness in which the body has a severe response to bacteria or other pathogenic organisms.

A hospital indicates that a beneficiary has received 96 or more consecutive hours of mechanical ventilation by using procedure code 96.72.⁵ If a beneficiary received fewer than 96 hours of mechanical ventilation, the beneficiary's stay is assigned to a lower severity MS-DRG, resulting in a lower payment.⁶

The claim includes the beginning and ending dates of the beneficiary's hospitalization, which define the beneficiary's length of stay in days. The claim also includes the date that the mechanical ventilation procedure started but does not indicate when it ended. The start and end times of mechanical ventilation are documented in the medical records, allowing the hospital to determine the duration of mechanical ventilation in hours. For example, a start time of 9:17 a.m. on October 1 and an end time of 12:17 p.m. on October 5 would be calculated as 99 hours of mechanical ventilation.

CMS Actions To Prevent Overpayments for Mechanical Ventilation

As a result of our previous review (*Medicare Incorrectly Paid Hospitals for Beneficiaries Who Had Not Received 96 or More Hours of Mechanical Ventilation*, for claims with dates of service from calendar years 2009 through 2011), CMS directed Medicare contractors to recover more than \$6 million in overpayments for claims for beneficiaries who had not received 96 or more consecutive hours of mechanical ventilation. CMS also implemented a new length-of-stay edit for claims with continuous invasive mechanical ventilation of 96 consecutive hours or more. With this edit, effective October 1, 2012, claims found to have procedure code 96.72 and a length of stay of 4 days or fewer are returned to the provider for validation and resubmission. To address claims after 2011 and before implementation of the length-of-stay edit, CMS directed contractors to recover more than \$3 million in overpayments for claims with a length of stay of 4 days or fewer during this period.

CMS educates hospitals on how to properly submit claims with mechanical ventilation procedures. In addition to providing descriptions of ICD-9-CM procedure codes,⁷ CMS published a *Quarterly Provider Compliance Newsletter*,⁸ which described common problems with providers incorrectly reporting the number of hours of mechanical ventilation and provided guidance on correctly counting the number of hours.

⁵ *International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)*, defines procedure code 96.72 as "Continuous invasive mechanical ventilation for 96 consecutive hours or more."

⁶ A hospital indicates that a beneficiary has received fewer than 96 hours of mechanical ventilation by using procedure code 96.71.

⁷ After our audit period, effective October 1, 2015, CMS implemented *International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM)*. As of that date, providers report the number of hours of mechanical ventilation using ICD-10-CM procedure codes.

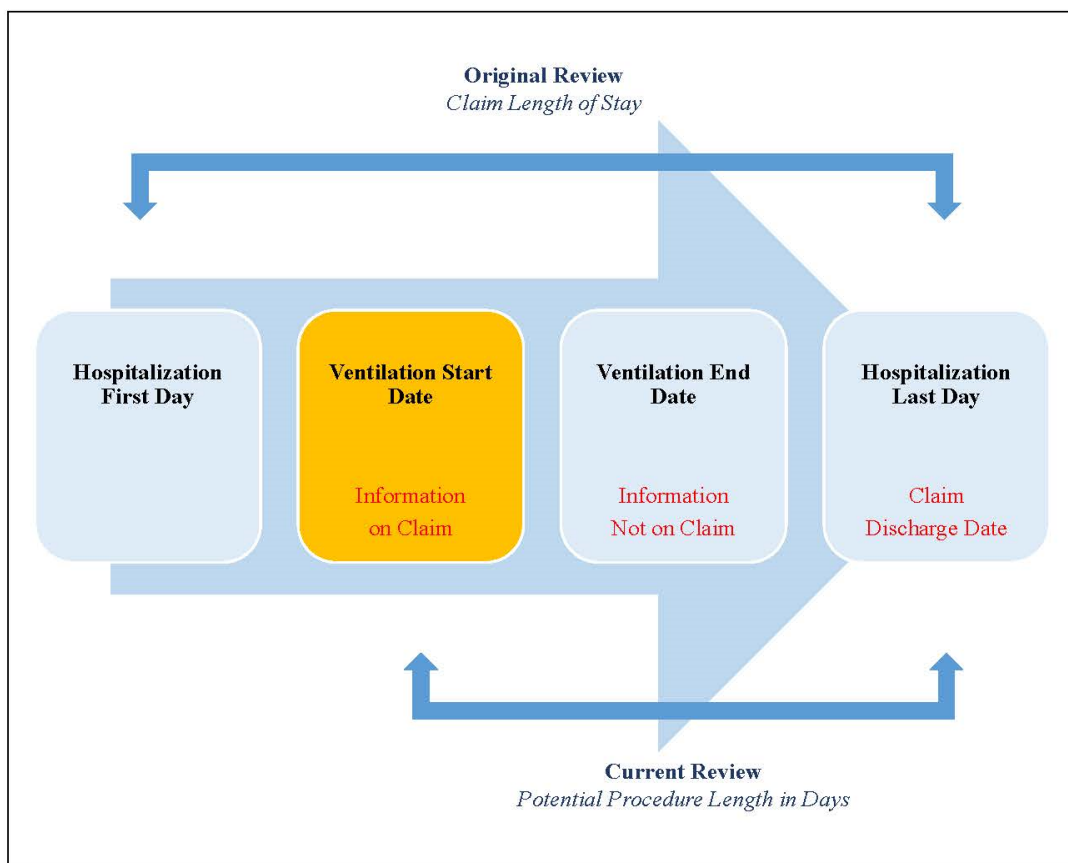
⁸ Medicare Learning Network, *Medicare Quarterly Provider Compliance Newsletter*, volume 2, issue 1, October 2011.

HOW WE CONDUCTED THIS REVIEW

Our audit covered \$113,477,530 in Medicare payments to hospitals for 2,986 claims that we identified as at risk for billing errors and that had dates of service from July 1, 2012, through June 30, 2014 (audit period). These claims had MS-DRGs 207 or 870 and beneficiary lengths of stay up to 49 days. Because claims do not indicate when mechanical ventilation ended, we identified the claims at risk for billing errors by estimating the potential mechanical ventilation procedure length (potential procedure length) as the number of days between the date that mechanical ventilation started and the beneficiary discharge date on the claim.⁹ Our review focused on claims with a potential procedure length of 5 days or fewer because these claims were identified as at risk for billing errors. In contrast with our previous review that focused on claims with lengths of stay of 4 days or fewer, using this method enabled us to review claims with longer lengths of stay.

The figure below shows how we identified claims in our current review using the estimated potential procedure length and how that method differed from how we identified claims in our previous review using beneficiary length of stay.

Figure: Identification of Claims Using Potential Mechanical Ventilation Procedure Length vs. Beneficiary Length of Stay



⁹ The actual procedure length would have been less if mechanical ventilation had ended before the discharge date.

Of the total payments, \$15,985,782 represented payments for 427 claims with a potential procedure length of 4 days or fewer,¹⁰ and \$97,491,748 represented payments for 2,559 claims with a potential procedure length of 5 days. We selected for review 2 random samples, consisting of 100 claims from each procedure-length group. For each claim, we evaluated the medical records to determine whether the beneficiary had received 96 or more consecutive hours of mechanical ventilation as required by the MS-DRG, but we did not use medical review to determine whether the services were medically necessary.

We selected claims with a potential procedure length of 4 days or fewer because a beneficiary was unlikely to have received 96 or more consecutive hours of mechanical ventilation during the course of only 4 days. We selected claims with a potential procedure length of 5 days because our prior review of claims with longer lengths of stay found that claims with 5-day procedure lengths were at risk for miscounting of the number of hours of mechanical ventilation even though a beneficiary could have received 96 or more consecutive hours.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix A contains the details of our audit scope and methodology. Appendixes B and C describe our statistical sampling methodology for claims with potential procedure lengths of 4 days or fewer and 5 days, respectively. Appendix D contains our sample results and estimates.

FINDINGS

For 137 of the 200 claims we reviewed, Medicare payments to hospitals complied with Medicare requirements; the beneficiaries had received 96 or more consecutive hours of mechanical ventilation. However, for the 63 remaining claims, Medicare payments to hospitals did not comply with requirements. Specifically, the hospitals incorrectly used procedure code 96.72 when the beneficiaries had not received 96 or more consecutive hours of mechanical ventilation. Consequently, the claims were assigned incorrectly to MS-DRGs 207 and 870, resulting in \$1,488,165 of overpayments. The hospitals confirmed that these claims were improperly billed and generally attributed the errors to incorrectly counting the number of hours that beneficiaries had received mechanical ventilation or to clerical errors in selecting the appropriate procedure code. The existing length-of-stay edit did not identify the improper billing of claims with mechanical ventilation because the edit was limited to beneficiary lengths of stay that were 4 days or fewer.

On the basis of our sample results for the 2-year audit period, we estimated that the hospitals received (1) overpayments of \$3,709,139 for claims with a potential procedure length of 4 days or fewer and (2) overpayments of \$15,853,359 for claims with a potential procedure length of

¹⁰ Four claims identified in our sample overlapped claims that were included in CMS's review of claims before implementation of the length-of-stay edit. We treated these claims as non-errors in our review.

5 days. In total, the hospitals received an estimated \$19,562,498 in overpayments for MS-DRGs 207 and 870.

FEDERAL REQUIREMENTS

The *Medicare Claims Processing Manual* (the Manual) requires providers to complete claims accurately so that Medicare contractors may process them correctly and promptly (Pub. No. 100-04, chapter 1, § 80.3.2.2). In addition, hospitals may bill only for services provided (the Manual, chapter 3, § 10). Moreover, hospitals must bill Medicare using ICD-9-CM in accordance with the ICD-9-CM official coding and reporting guidelines (the Manual, chapter 23, § 10).

MEDICARE IMPROPERLY PAID CLAIMS FOR BENEFICIARIES WHO HAD NOT RECEIVED 96 OR MORE CONSECUTIVE HOURS OF MECHANICAL VENTILATION

Hospitals Improperly Billed Claims With a Potential Procedure Length of 4 Days or Fewer

For 64 of the 100 sampled claims with a potential procedure length of 4 days or fewer, Medicare payments to hospitals were correct; the beneficiaries had received 96 or more consecutive hours of mechanical ventilation.¹¹ However, for the 36 remaining claims, hospitals improperly billed Medicare. Specifically, for a majority of the claims, the hospitals incorrectly used procedure code 96.72 on the claims when the beneficiaries had not received at least 96 hours of mechanical ventilation.¹² As a result, the claims were assigned incorrectly to MS-DRGs 207 and 870.

For example, for one beneficiary, the documentation (i.e., physician’s notes and ventilation records) showed that the beneficiary had received 68 hours of mechanical ventilation. However, rather than selecting procedure code 96.71, defined as “continuous invasive mechanical ventilation for less than 96 consecutive hours,” the hospital selected procedure code 96.72, indicating that the beneficiary had received 96 hours or more of mechanical ventilation. By using procedure code 96.72, the claim was incorrectly grouped into MS-DRG 870 rather than MS-DRG 871, resulting in an overpayment of \$26,929.¹³

As a result of these errors, the hospitals received overpayments of \$868,651. The hospitals confirmed that these claims were incorrectly billed and generally attributed the errors to

¹¹ Although we selected claims with potential procedure lengths of 4 days or fewer, our review of the medical records showed that the mechanical ventilation start dates on these claims were incorrect and were after the start of mechanical ventilation. However, the hospitals correctly billed procedure code 96.72, indicating that the beneficiaries had received 96 or more consecutive hours of mechanical ventilation.

¹² For two incorrect claims, the beneficiaries received 96 or more consecutive hours of mechanical ventilation. However, the hospitals reported incorrect diagnosis codes, resulting in the claims being assigned to the incorrect MS-DRGs.

¹³ MS-DRG 871 is described as “Septicemia or severe sepsis [without mechanical ventilation] 96+ hours [with major complication or comorbidity].”

incorrectly counting the number of hours that beneficiaries had received mechanical ventilation or to clerical errors in selecting the appropriate procedure code.

Hospitals Improperly Billed Claims With a Potential Procedure Length of 5 Days

For 73 of the 100 sampled claims with a potential procedure length of 5 days, Medicare payments to hospitals were correct; the beneficiaries had received 96 or more consecutive hours of mechanical ventilation. However, for the 27 remaining claims, the hospitals improperly billed Medicare. Specifically, for a majority of the claims, the hospitals incorrectly used procedure code 96.72 on the claims when the beneficiaries had not received at least 96 hours of mechanical ventilation.¹⁴ As a result, the claims were assigned incorrectly to MS-DRGs 207 and 870.

For example, for one beneficiary, the documentation (i.e., ventilation records) showed that although the beneficiary was on mechanical ventilation over a span of 5 days, the beneficiary had received only 91 hours. The mechanical ventilation started at 2:30 p.m. on the beneficiary's first day in the hospital and ended at 9:30 a.m. on the beneficiary's fifth day in the hospital, which did not add up to a total of 96 hours. Rather than selecting procedure code 96.71, defined as "continuous invasive mechanical ventilation for less than 96 consecutive hours," the hospital selected procedure code 96.72, indicating that the beneficiary had received 96 hours or more of mechanical ventilation. By using procedure code 96.72, the claim was incorrectly grouped into MS-DRG 207 rather than MS-DRG 208, resulting in an overpayment of \$22,143.¹⁵

As a result of these errors, the hospitals received overpayments of \$619,514. The hospitals confirmed that these claims were incorrectly billed and generally attributed the errors to incorrectly counting the number of hours that beneficiaries had received mechanical ventilation or to clerical errors in selecting the appropriate procedure code.

CONTROLS WERE INADEQUATE TO PREVENT INCORRECT BILLING

Medicare overpaid the hospitals a total of \$1,488,165 for the sampled claims because the controls related to mechanical ventilation were inadequate to prevent improper billing of Medicare claims. The existing length-of-stay edit did not identify the improper billing of claims with mechanical ventilation because the edit was limited to beneficiary lengths of stay that were 4 days or fewer.

Specifically, Medicare's claim processing edit focused on the beginning and ending dates of the beneficiary's hospitalization rather than the date that mechanical ventilation started. Had the edit focused on the date that mechanical ventilation started, it would have been able to identify additional claims at risk for billing errors by using that date rather than the beginning date of the hospitalization.

¹⁴ For two incorrect claims, the beneficiaries received 96 or more consecutive hours of mechanical ventilation. However, the hospitals reported incorrect diagnosis codes, resulting in the claims being assigned to the incorrect MS-DRGs.

¹⁵ MS-DRG 208 is described as "Respiratory system diagnosis [with] ventilator support < 96 hours."

In our review of claims with a potential procedure length of 4 days or fewer, the length-of-stay edit did not capture the 36 claims for which hospitals improperly billed Medicare because the edit was restricted to claims with lengths of stay of 4 days or fewer. Had the edit focused on the date that mechanical ventilation started, it would have identified these incorrect claims regardless of the lengths of stay. For the 64 claims for which Medicare properly paid hospitals, the hospitals reported incorrect dates that mechanical ventilation started.

For the 27 claims for which hospitals improperly billed Medicare with a potential procedure length of 5 days, the hospitals used the incorrect procedure codes because they miscounted the number of hours of mechanical ventilation.

OVERALL ESTIMATE OF MEDICARE OVERPAYMENTS TO HOSPITALS

On the basis of our sample results for the 2-year audit period, we estimated that the hospitals received (1) overpayments of \$3,709,139 for claims with a potential procedure length of 4 days or fewer and (2) overpayments of \$15,853,359 for claims with a potential procedure length of 5 days. In total, the hospitals received an estimated \$19,562,498 in overpayments for MS-DRGs 207 and 870. Review of these claims by the Medicare contractors could result in savings of an estimated average of \$8,687 per claim with a potential procedure length of 4 days or fewer and an estimated average of \$6,195 per claim with a potential procedure length of 5 days.

Prompted by our review, the hospitals have refunded identified overpayments for claims that had dates of service in calendar year 2012. For the remaining claims, some hospitals have initiated adjustments.

RECOMMENDATIONS

We recommend that CMS:

- ensure that the Medicare contractors recover the \$1,488,165 in identified overpayments for the sampled claims;
- revise the length-of-stay edit to take into account the mechanical ventilation start date for claims with a potential procedure length of 4 days or fewer, which could result in savings of an estimated \$3,709,139 over a 2-year period;
- provide additional guidance to hospitals on the correct billing of mechanical ventilation claims, emphasizing correct billing of claims with a potential procedure length of 5 days, which could result in savings of an estimated \$15,853,359 over a 2-year period;
- review the remaining nonsampled claims during the audit period and recover the overpayments to the extent feasible and allowed under the law; and
- direct the Medicare contractors to review any claims for which procedure code 96.72 was used with a potential procedure length of 5 days or fewer and recover any overpayments after our audit period.

CMS COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE

In written comments on our draft report, CMS concurred with all of our recommendations and provided information on actions that it had taken or planned to take to address our recommendations. Regarding our first recommendation, CMS stated that once we provide the necessary claim data, it will instruct its contractors to recover the overpayments “consistent with the agency’s policies and procedures.” Regarding our fourth recommendation, CMS stated that once we provide the necessary claim data, it will conduct an analysis to determine the potential return on investment of the claims provided. CMS stated that, on the basis of the analysis, it will determine an appropriate number of claims to review and recover any overpayments “consistent with the agency’s policies and procedures.” CMS’s comments are included in their entirety as Appendix E.

We plan to provide CMS with the requested claim data.

APPENDIX A: AUDIT SCOPE AND METHODOLOGY

SCOPE

Our audit covered \$113,477,530 in Medicare payments to hospitals for 2,986 claims that we identified as at risk for billing errors and that had dates of service from July 1, 2012, through June 30, 2014. These claims had MS-DRGs 207 or 870 and beneficiary lengths of stay up to 49 days. Because claims do not indicate when mechanical ventilation ended, we identified the claims at risk for billing errors by estimating the potential mechanical ventilation procedure length as the number of days between the date that mechanical ventilation started and the beneficiary discharge date on the claim.¹⁶ Our review focused on claims with a potential procedure length of 5 days or fewer because these claims were identified as at risk for billing errors. Of the total payments, \$15,985,782 represented payments for 427 claims with a potential procedure length of 4 days or fewer, and \$97,491,748 represented payments for 2,559 claims with a potential procedure length of 5 days. We selected for review 2 random samples, consisting of 100 claims from each procedure-length group.

For each claim, we evaluated the medical records to determine whether the beneficiary had received 96 or more consecutive hours of mechanical ventilation as required by the MS-DRG, but we did not use medical review to determine whether the services were medically necessary.

We limited our review of CMS's internal controls to those applicable to inpatient claims for mechanical ventilation. Our review enabled us to establish reasonable assurance of the authenticity and accuracy of the data obtained from CMS's National Claims History file, but we did not assess the completeness of the file.

We conducted our audit from November 2014 to December 2015.

METHODOLOGY

To accomplish our objective, we:

- reviewed applicable Federal laws, regulations, and guidance;
- extracted inpatient paid claim data from CMS's National Claims History file for the audit period for MS-DRGs 207 and 870;
- used computer matching, data mining, and data analysis techniques to identify claims for review;
- selected simple random samples for claims with a potential procedure length of 4 days or fewer and a potential procedure length of 5 days (Appendixes B and C, respectively);

¹⁶ The actual procedure length would have been less if mechanical ventilation had ended before the discharge date.

- reviewed available data from CMS’s Common Working File for the sampled claims to determine whether the claims had been canceled or adjusted;
- requested that each hospital conduct its own review of the sampled claims to determine whether the services were billed correctly;
- reviewed the itemized bills and medical record documentation, including the timelogs for the mechanical ventilation procedures and summaries of the inpatient stays, provided by each hospital to determine whether the beneficiaries had received 96 or more consecutive hours of mechanical ventilation;
- used CMS’s PC Pricer to reprice each improperly paid claim to determine the payment amount for the revised MS-DRG, compared the repriced payment with the actual payment, and determined the value of the overpayment;¹⁷
- used the results of the two samples to calculate the estimated Medicare overpayments (Appendix D); and
- discussed the results of our review with CMS officials.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

¹⁷ CMS’s PC Pricer is a tool used to estimate Medicare payments. Because of timing differences in the data used to determine the payments, the estimated payments may not match exactly the actual claim payments.

APPENDIX B: STATISTICAL SAMPLING METHODOLOGY FOR CLAIMS WITH A POTENTIAL MECHANICAL VENTILATION PROCEDURE LENGTH OF 4 DAYS OR FEWER

POPULATION

The population consisted of Medicare Part A claims from July 1, 2012, through June 30, 2014, with MS-DRGs that required 96 or more consecutive hours of mechanical ventilation (MS-DRGs 207 or 870) and a potential procedure length of 4 days or fewer.

SAMPLING FRAME

The sampling frame consisted of 427 Part A claims with a total paid amount of \$15,985,782. We excluded claims with a paid amount of \$0, claims for which Medicare was a secondary payer, and claims under review by the recovery audit contractors.

SAMPLE UNIT

The sample unit was a Part A claim with MS-DRG 207 or MS-DRG 870.

SAMPLE DESIGN

Our sample design was a simple random sample.

SAMPLE SIZE

We selected a sample size of 100 sample units.

SOURCE OF THE RANDOM NUMBERS

We generated random numbers with the OIG, Office of Audit Services (OAS), statistical software.

METHOD OF SELECTING SAMPLE ITEMS

We consecutively numbered the sample units in the sampling frame from 1 to 427. After generating 100 random numbers, we selected the corresponding frame items.

ESTIMATION METHODOLOGY

We used the OIG/OAS statistical software to estimate the total amount of unallowable payments. In addition, we estimated the average overpayment per claim by dividing the estimated overpayment total by the associated frame count of 427.

APPENDIX C: STATISTICAL SAMPLING METHODOLOGY FOR CLAIMS WITH A POTENTIAL MECHANICAL VENTILATION PROCEDURE LENGTH OF 5 DAYS

POPULATION

The population consisted of Medicare Part A claims from July 1, 2012, through June 30, 2014, with MS-DRGs that required 96 or more consecutive hours of mechanical ventilation (MS-DRGs 207 or 870) and a potential procedure length of 5 days.

SAMPLING FRAME

The sampling frame consisted of 2,559 Part A claims with a total paid amount of \$97,491,748. We excluded claims with a paid amount of \$0, claims for which Medicare was a secondary payer, and claims under review by the recovery audit contractors.

SAMPLE UNIT

The sample unit was a Part A claim with MS-DRG 207 or MS-DRG 870.

SAMPLE DESIGN

Our sample design was a simple random sample.

SAMPLE SIZE

We selected a sample size of 100 sample units.

SOURCE OF THE RANDOM NUMBERS

We generated random numbers with the OIG/OAS statistical software.

METHOD OF SELECTING SAMPLE ITEMS

We consecutively numbered the sample units in the sampling frame from 1 to 2,559. After generating 100 random numbers, we selected the corresponding frame items.

ESTIMATION METHODOLOGY

We used the OIG/OAS statistical software to estimate the total amount of unallowable payments. In addition, we estimated the average overpayment per claim by dividing the estimated overpayment total by the associated frame count of 2,559.

APPENDIX D: SAMPLE RESULTS AND ESTIMATES

**CLAIMS WITH A POTENTIAL MECHANICAL VENTILATION PROCEDURE
LENGTH OF 4 DAYS OR FEWER**

Table 1: Sample Results

No. of Claims in Sampling Frame	Value of Frame	Sample Size	Value of Sample	No. of Unallowable Claims	Value of Unallowable Claims
427	\$15,985,782	100	\$3,758,627	36	\$868,651

**Table 2: Estimated Value of Unallowable Claims
(Limits Calculated for a 90-Percent Confidence Interval)**

	Total	Average
Point estimate	\$3,709,139	\$8,687
Lower limit	2,930,646	6,863
Upper limit	4,487,631	10,510

**CLAIMS WITH A POTENTIAL MECHANICAL VENTILATION PROCEDURE
LENGTH OF 5 DAYS**

Table 3: Sample Results

No. of Claims in Sampling Frame	Value of Frame	Sample Size	Value of Sample	No. of Unallowable Claims	Value of Unallowable Claims
2,559	\$97,491,748	100	\$3,720,744	27	\$619,514

**Table 4: Estimated Value of Unallowable Claims
(Limits Calculated for a 90-Percent Confidence Interval)**

	Total	Average
Point estimate	\$15,853,359	\$6,195
Lower limit	11,368,932	4,443
Upper limit	20,337,785	7,948

APPENDIX E: CMS COMMENTS



DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Medicare & Medicaid Services

MAY - 6 2016

200 Independence Avenue SW
Washington, DC 20201

To: Daniel R. Levinson
Inspector General
Office of the Inspector General

From: Andrew M. Slavitt *Andrew M. Slavitt*
Acting Administrator
Centers for Medicare & Medicaid Services

Subject: Medicare Improperly Paid Hospitals for Beneficiaries Who Had Not Received 96 or More Consecutive Hours of Mechanical Ventilation (A-09-14-02041)

The Centers for Medicare & Medicaid Services (CMS) appreciates the opportunity to review and comment on the Office of the Inspector General's (OIG) report.

CMS is committed to providing Medicare and Medicaid beneficiaries with high quality health care and to being a good steward of taxpayer dollars by preventing improper payments. CMS has taken actions to prevent overpayments for Medicare Part A, including those for mechanical ventilation, by educating providers on proper billing and updating an existing edit to use the mechanical ventilation procedure code date to ensure correct coding of mechanical ventilation greater than 96 consecutive hours.

In addition to automated system checks, CMS uses a number of claim-review initiatives, including prepayment and postpayment review, prior authorization and the Comprehensive Error Rate Testing program to identify and address incorrect billing caused by coverage or coding errors made by providers.

OIG Recommendation

OIG recommends that CMS ensure that the Medicare contractors recover the \$1,488,165 in identified overpayments for the sampled claims.

CMS Response

CMS concurs with this recommendation. CMS requests that OIG furnish the necessary data to follow-up on the claims. CMS will instruct its contractors to recover all overpayments consistent with the agency's policies and procedures.

OIG Recommendation

OIG recommends that CMS revise the length-of-stay edit to take into account the mechanical ventilation start date for claims with a potential procedure length of 4 days or fewer, which could result in savings of an estimated \$3,709,139 for a 2-year period.

CMS Response

CMS concurs with this recommendation. Effective October 1, 2016, CMS will implement an edit to ensure correct coding of mechanical ventilation greater than 96 consecutive hours by using the mechanical ventilation procedure service date as the start date to calculate consecutive days.

OIG Recommendation

OIG recommends that CMS provide additional guidance to hospitals on the correct billing of mechanical ventilation claims, emphasizing correct billing of claims with a potential procedure length of 5 days, which could result in savings of an estimated \$15,853,359 over a 2-year period.

CMS Response

CMS concurs with this recommendation. CMS educates providers on avoiding common Medicare billing errors through various channels, including the Medicare Learning Network. CMS has also used the ICD-10 Coding Clinics to review the proper way to bill for mechanical ventilation. CMS will continue to use these channels to educate providers.

OIG Recommendation

OIG recommends that CMS review the remaining nonsampled claims during the audit period and recover the overpayments to the extent feasible and allowed under the law.

CMS Response

CMS concurs with this recommendation. CMS requests that OIG furnish the necessary data to follow-up on the claims. Upon receipt of the files from OIG, CMS will conduct an analysis to determine the potential return on investment of the claims provided. Based on the analysis, CMS will determine an appropriate number of claims to review and recover any overpayments consistent with the agency's policies and procedures.

OIG Recommendation

OIG recommends that CMS direct the Medicare contractors to review any claims for which procedure code 96.72 was used with a potential procedure length of 5 days or fewer and recover any overpayments after our audit period.

CMS Response

CMS concurs with this recommendation. CMS will conduct an analysis to determine the potential return on investment of the claims from the OIG's two year audit period. Based on the analysis and contractor resources, CMS will determine an appropriate number of claims to review and recover any overpayments consistent with the agency's policies and procedures.