MEDICARE CONTRACTORS WERE NOT CONSISTENT IN HOW THEY REVIEWED EXTRAPOLATED OVERPAYMENTS IN THE PROVIDER APPEALS PROCESS
The mission of the Office of Inspector General (OIG), as mandated by Public Law 95-452, as amended, is to protect the integrity of the Department of Health and Human Services (HHS) programs, as well as the health and welfare of beneficiaries served by those programs. This statutory mission is carried out through a nationwide network of audits, investigations, and inspections conducted by the following operating components:

**Office of Audit Services**

The Office of Audit Services (OAS) provides auditing services for HHS, either by conducting audits with its own audit resources or by overseeing audit work done by others. Audits examine the performance of HHS programs and/or its grantees and contractors in carrying out their respective responsibilities and are intended to provide independent assessments of HHS programs and operations. These audits help reduce waste, abuse, and mismanagement and promote economy and efficiency throughout HHS.

**Office of Evaluation and Inspections**

The Office of Evaluation and Inspections (OEI) conducts national evaluations to provide HHS, Congress, and the public with timely, useful, and reliable information on significant issues. These evaluations focus on preventing fraud, waste, or abuse and promoting economy, efficiency, and effectiveness of departmental programs. To promote impact, OEI reports also present practical recommendations for improving program operations.

**Office of Investigations**

The Office of Investigations (OI) conducts criminal, civil, and administrative investigations of fraud and misconduct related to HHS programs, operations, and beneficiaries. With investigators working in all 50 States and the District of Columbia, OI utilizes its resources by actively coordinating with the Department of Justice and other Federal, State, and local law enforcement authorities. The investigative efforts of OI often lead to criminal convictions, administrative sanctions, and/or civil monetary penalties.

**Office of Counsel to the Inspector General**

The Office of Counsel to the Inspector General (OCIG) provides general legal services to OIG, rendering advice and opinions on HHS programs and operations and providing all legal support for OIG’s internal operations. OCIG represents OIG in all civil and administrative fraud and abuse cases involving HHS programs, including False Claims Act, program exclusion, and civil monetary penalty cases. In connection with these cases, OCIG also negotiates and monitors corporate integrity agreements. OCIG renders advisory opinions, issues compliance program guidance, publishes fraud alerts, and provides other guidance to the health care industry concerning the anti-kickback statute and other OIG enforcement authorities.
THIS REPORT IS AVAILABLE TO THE PUBLIC
at https://oig.hhs.gov

Section 8M of the Inspector General Act, 5 U.S.C. App., requires that OIG post its publicly available reports on the OIG website.

OFFICE OF AUDIT SERVICES FINDINGS AND OPINIONS

The designation of financial or management practices as questionable, a recommendation for the disallowance of costs incurred or claimed, and any other conclusions and recommendations in this report represent the findings and opinions of OAS. Authorized officials of the HHS operating divisions will make final determination on these matters.
Why OIG Did This Audit
When an overpayment is identified in Medicare Part A or Part B, providers have the right to contest the overpayment amount using the Medicare administrative appeals process. If a statistical estimate of an overpayment (an extrapolated overpayment) is overturned during the administrative appeals process, then the provider is liable for the overpayment identified in the sample but not the extrapolated amount. Given the large difference between overpayment amounts in the sample and extrapolated amounts, it is critical that the process for reviewing extrapolations during an appeal is fair and reasonably consistent. In the first and second levels of the appeals process, such extrapolated overpayments are reviewed by Medicare administrative contractors (MACs) and qualified independent contractors (QICs), respectively.

Our objective was to determine whether the Centers for Medicare & Medicaid Services (CMS) ensured that MACs and QICs reviewed appealed extrapolated overpayments consistently and in a manner that conforms with existing CMS requirements.

How OIG Did This Audit
We surveyed the contractors about their processes for reviewing extrapolated overpayments. In addition, we interviewed the statistical groups at three contractors about their experiences with the appeals process. We audited three separate nonstatistical samples of appeals cases.

Medicare Contractors Were Not Consistent in How They Reviewed Extrapolated Overpayments in the Provider Appeals Process

What OIG Found
Although MACs and QICs generally reviewed appealed extrapolated overpayments in a manner that conforms with existing CMS requirements, CMS did not always provide sufficient guidance and oversight to ensure that these reviews were performed in a consistent manner. The most significant inconsistency we identified involved the use of a type of simulation testing that was performed only by a subset of contractors. The test was associated with at least $42 million in extrapolated overpayments that were overturned in fiscal years 2017 and 2018. If CMS did not intend that the contractors use this procedure, these extrapolations should not have been overturned. Conversely, if CMS intended that contractors use this procedure, it is possible that other extrapolations should have been overturned but were not. In addition, CMS’s ability to provide oversight over the extrapolation review process was limited because of data reliability issues in the Medicare Appeals System (MAS). Of the 39 appeals cases we reviewed that were listed in the MAS as involving extrapolation, 19 cases did not actually involve statistical sampling. Improving the accuracy of the information in the MAS would potentially assist CMS with ensuring that extrapolated overpayments are reviewed by the MACs and QICs in a consistent manner.

What OIG Recommends and CMS Comments
We recommend that CMS: (1) provide additional guidance to contractors to ensure reasonable consistency in procedures used to review extrapolated overpayments during the first two levels of the Medicare Parts A and B appeals process; (2) take steps to identify and resolve discrepancies in the procedures contractors use to review extrapolations during the appeals process; (3) provide guidance regarding the organization of extrapolation-related files that must be submitted in response to a provider appeal; (4) improve system controls to reduce the risk of contractors incorrectly marking the extrapolation flag field in the MAS; and (5) update the information in the MAS to accurately reflect extrapolation amounts challenged as part of an appeal, whether the extrapolation was reviewed by a contractor, and the outcome of any extrapolation review.

In written comments on our draft report, CMS concurred with our recommendations and described the actions that it has taken or plans to take to address them.

The full report can be found at https://oig.hhs.gov/oas/reports/region5/51800024.asp.
# TABLE OF CONTENTS

**INTRODUCTION** .......................................................................................................................... 1  
  Why We Did This Audit .................................................................................................................. 1  
  Objective ....................................................................................................................................... 1  
  Background .................................................................................................................................... 1  
    The Medicare Program ................................................................................................................ 1  
    Statistical Sampling and Extrapolated Overpayments ............................................................... 2  
    Medicare Parts A and B Fee-for-Service Appeals Process ....................................................... 3  
    Appeal of Extrapolated Overpayments ....................................................................................... 4  
    The Primary Medicare System for Tracking Parts A and B Appeals Case Information .......... 4  
  How We Conducted This Audit ..................................................................................................... 5  

**FINDINGS** .................................................................................................................................. 6  
  Medicare Appellate Contractors Generally Conformed With Requirements But Were Not Entirely Consistent in How They Performed Their Reviews ...................................................... 6  
    Federal Requirements .............................................................................................................. 6  
    Appellate Contractors Used Different Procedures To Review Extrapolated Overpayments .......... 6  
    Appellate Contractors Differed in Whether They Used Simulation Testing To Review Extrapolated Overpayments ............................................................................................................. 7  
    Qualified Independent Contractors’ Procedures Generally Complied With Appendix B of the QIC Manual ................................................................................................................................. 9  
    The Field in the Medicare Appeals System Identifying Appeals Cases With Extrapolated Overpayments Was Unreliable ........................................................................................................ 10  

**RECOMMENDATIONS** .............................................................................................................. 11  

**CENTERS FOR MEDICARE & MEDICAID SERVICES COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE** ........................................................................................ 11  

**OTHER MATTERS** ..................................................................................................................... 12  
  Opportunity To Improve the Processing of Appeals Cases Involving Extrapolated Overpayments ........................................................................................................................................... 12  
  Opportunity To Improve Contractor Understanding of Policy Updates .................................... 12
APPENDICES

A: Audit Scope and Methodology .................................................................................. 14
B: Detailed Sampling Methodology ............................................................................. 16
C: Related Reports ......................................................................................................... 17
D: Federal Requirements ............................................................................................... 18
E: Centers for Medicare & Medicaid Services Comments ........................................ 21
INTRODUCTION

WHY WE DID THIS AUDIT

Providers have the right to contest assessments of Medicare Parts A and B overpayments, whether actual overpayments or extrapolated overpayments, using the administrative appeals process outlined in section 1869 of the Social Security Act (the Act) and 42 CFR part 405, subpart I. Providers can challenge overpayment assessments on appeal for several reasons, such as asserting incorrect coverage and medical necessity determinations, as well as alleging that statistical sampling and overpayment estimation was done improperly. If statistical sampling and overpayment estimation methodology are successfully challenged during the administrative appeals process, the provider may be liable for the actual overpayment identified in the sample but not the extrapolated amount. Given the oftentimes large difference between an actual overpayment (limited to the sample) and an extrapolated overpayment (projected from the sample), it is critical that the process for reviewing extrapolations within the administrative appeals process be fair and reasonably consistent. In the first and second levels of the appeals process, such extrapolated overpayments are reviewed by Medicare administrative contractors (MACs) and qualified independent contractors (QICs), respectively.

OBJECTIVE

Our objective was to determine whether the Centers for Medicare & Medicaid Services (CMS) ensured that MACs and QICs reviewed appealed extrapolated overpayments consistently and in a manner that conforms with existing CMS requirements.

BACKGROUND

The Medicare Program

Medicare provides health insurance for people aged 65 years and older, people with disabilities, and people with permanent kidney disease. Medicare Part A provides inpatient hospital insurance benefits and coverage for extended care services for patients after discharge. Medicare Part B provides supplementary insurance for medical and other health services, including coverage of outpatient hospital services. CMS administers the Medicare program.

The Act states that “no payment may be made under part A or part B for any expenses incurred for items or services which . . . are not reasonable and necessary for diagnosis or treatment of illness or injury or to improve the functioning of a malformed body member.”

1 The Act § 1862(a)(1)(A).
providers must maintain the information necessary to support their claims. The U.S. Department of Health and Human Services (HHS) estimated that $31.6 billion in Medicare Parts A and B fee-for-service claims in Federal fiscal year 2018 were improper. This total represents one of the largest sources of improper payments within the Federal Government.

**Statistical Sampling and Extrapolated Overpayments**

The Federal Government relies on a diverse set of tools to help ensure the recovery of improper payments. One such tool is a postpayment claim review in which one or more claims are examined to determine whether they comply with Medicare requirements. Due to the high volume of Medicare payments, CMS sometimes uses postpayment claim review in conjunction with statistical sampling to identify and recover overpayments made by the Federal Government to providers.

Sampling involves selecting and reviewing a subset of claims from a larger population to make a total overpayment determination for all claims in that population. Chapter 8, section 8.4, of the *Medicare Program Integrity Manual* (PIM) contains specific requirements that program integrity contractors must follow when using sampling to determine overpayments. During our audit period, section 8.4 and all of its subsections were the same as when originally published in the Medicare Program Integrity Transmittal 377/Change Request 6560 (issued May 27, 2011; effective June 28, 2011), until amended by Medicare Program Integrity Transmittal 828/Change Request 10067 (issued Sept. 28, 2018; effective Jan. 2, 2019).

Chapter 8, section 8.4.1.3 (Rev. 377) of the PIM states that the major steps in conducting statistical sampling are:

1. selecting the provider or supplier;
2. selecting the period to be reviewed;
3. defining the universe, the sampling unit, and the sampling frame;
4. designing the sampling plan and selecting the sample;
5. reviewing each of the sampling units and determining whether there was an overpayment or an underpayment; and

---

2 42 CFR § 424.5(a)(6).

3 CMS has contracted with different entities over the years to identify and collect overpayments, including recovery audit contractors, MACs, the supplemental Medicare review contractor, unified program integrity contractors (UPICs), zone program integrity contractors, and program safeguard contractors. For the purposes of this report, we refer to any Medicare contractor identifying overpayments using sampling and extrapolation under the requirements of the PIM as a “program integrity contractor.”
(6) estimating the overpayment, as applicable.4

Transmittal 828/Change Request 10067 added the requirements that the program integrity contractor assess whether the sample size is appropriate for the method used and whether the selected statistical methodology is appropriate given the distribution of paid amounts in the sampling frame. Both versions of the PIM also place restrictions on when program integrity contractors may use statistical sampling for overpayment estimation and require that program integrity contractors consult with a statistical expert.5 (See Figure 1 for an example of a program integrity contractor’s sampling methodology.)

<table>
<thead>
<tr>
<th>Figure 1: Sampling Methodology Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>A program integrity contractor obtained 127,000 claim lines for a selected service provided by a selected provider during the audit period. The PIM refers to this file as the “universe.” The program integrity contractor grouped the claim lines by beneficiary identification number and date of service. These groups of claim lines are known as sampling units, or sample items. The list of all sampling units is known as the sampling frame. The sampling frame in this audit contained 64,000 sampling units. The program integrity contractor used statistical software to select 30 sampling units from the sampling frame and it found that the provider was overpaid $4,700 for these sampling units. The program integrity contractor used the sample results to estimate that the provider was overpaid at least $7 million for claim lines associated with the sampling frame.</td>
</tr>
</tbody>
</table>

Medicare Parts A and B Fee-for-Service Appeals Process

When CMS determines that a provider received an overpayment, the provider has the right to appeal the determination. At the first level of appeal, the MAC that originally processed the claim reviews the overpayment determination and any sampling methods applied. If the provider disagrees with the redetermination by the MAC, the provider may appeal any portion of the MAC review to the QIC. The QIC review, referred to as a “reconsideration,” is performed without deference to the redetermination by the MAC. After the QIC review, the provider may further appeal the reconsideration to an Administrative Law Judge, the Medicare Appeals Council, and Federal court.6 This audit focuses on the first two levels of the appeals process, redetermination and reconsideration. We use the term “appellate contractors” to refer to the MAC and QIC performing their roles as appellate adjudicators in the first and second levels of Medicare appeals.

4 These steps were substantively unchanged by Transmittal 828/Change Request 10067.

5 PIM, chapter 8, §§ 8.4.1.4 and 8.4.1.5. Revisions 377 and 828 contained these requirements, but CMS was more prescriptive in Revision 828.

6 Section 1869 of the Act and 42 CFR part 405, subpart I.
**Appeal of Extrapolated Overpayments**

When a program integrity contractor identifies an overpayment through statistical sampling and extrapolation, the provider may challenge the application of Medicare requirements (e.g., coverage requirements), the statistical methodology that the program integrity contractor used to estimate the overpayment in the sampling frame, or both. This audit focuses on the methodology challenges rather than challenges of individual claim determinations.

If an overpayment (a sample claim) is overturned during the administrative appeals process, then the extrapolated overpayment is recalculated given the updated sample results. The provider is liable for the revised extrapolated amount. In contrast, if the provider successfully challenges the statistical methodology, the provider is liable only for the overpayment amounts identified in the sample. For extrapolations calculated by program integrity contractors, the statistical methods are reviewed against the sampling criteria outlined in the version of the PIM in effect at the time the extrapolation was made.

During the first two levels of appeal, the MAC’s or QIC’s statistical expert assessing the validity of the program integrity contractor’s extrapolated overpayment will consider any arguments submitted by the provider. The PIM states that a sample is valid if the program integrity contractor properly defines the universe, sampling frame, and sampling unit; uses proper randomization; accurately measures the variables of interest; and uses the correct formulas for estimation. However, even if a program integrity contractor follows these requirements, the extrapolated overpayment can still be overturned if documentation is not available supporting that these requirements were met or if the program integrity contractor fails to meet certain administrative requirements in the PIM. If statistical sampling and overpayment estimation methodology are found to be invalid on appeal, the provider may be liable for the actual overpayment identified in the sample but not the extrapolated amount.

Extrapolation reviews at the QIC level are guided by the specific protocol published by CMS in Appendix B of the QIC Manual. This protocol lists the review steps necessary to verify that the program integrity contractor’s extrapolated overpayment complies with the PIM. Currently, no similar unifying guidance other than the PIM exists for the MAC level of review.

**The Primary Medicare System for Tracking Parts A and B Appeals Case Information**

The Medicare Appeals System (MAS) is an appeal processing system that allows submitted documentation to be stored and shared more easily by the entities processing the different levels of appeals. MAS is the system of record for MAC-level appeals of Part A claims and all QIC-level appeals. MAC-level appeals of Part B data are not included. The system includes an

---

7 PIM, chapter 8, § 8.4.2.

8 PIM, chapter 8, § 8.4.9.
“extrapolation flag” field, which indicates for each appeals case whether the amount appealed is based on the overpayment identified in the sample or an extrapolated overpayment amount.

**HOW WE CONDUCTED THIS AUDIT**

Our audit covered Medicare appellate contractor reviews of extrapolated overpayments that occurred from January 1, 2016, through January 31, 2019 (audit period), as part of the Medicare fee-for-service appeals process. Seven MACs and two QICs performed these reviews.

We requested and obtained information from the MACs and QICs about their processes for reviewing extrapolated overpayments.

In addition, we interviewed statistical experts at three program integrity contractors⁹ to learn more about how their extrapolated overpayments were reviewed by the MACs and QICs during the appeals process.

We audited three separate samples of appeals cases.

- We audited documentation provided by the program integrity contractors for 10 cases in which $42 million in extrapolated overpayments were overturned on appeal. The documentation for each sample item included the decision letter from the MAC or QIC statistical expert that overturned the extrapolated overpayment. We used this sample to identify common reasons that extrapolated overpayments were overturned.

- We audited documentation provided by the MACs and QICs for 19 cases in which appellants challenged the sampling and extrapolation methodology used by the program integrity contractor without regard for whether the methodology was affirmed or overturned on appeal. The documentation for this sample included all case files that the MAC or QIC had concerning the review of the extrapolated overpayment. We used this sample to identify any inconsistencies in the procedures for reviewing extrapolated overpayments.

- We audited responses provided by the MACs and QICs concerning the status of 39 cases identified in the MAS as involving extrapolated overpayments. We used this sample to determine the accuracy of the MAS field that flags whether cases involve extrapolated overpayments.

We did not audit the overall internal control structure of CMS or its contractors. Rather, we limited our audit of internal controls to those applicable to ensuring consistency in the review of extrapolations during the first two levels of the Medicare fee-for-service appeals process.

---

⁹ The program integrity contractors were SafeGuard Services LLC, AdvanceMed, and Qlarant.
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, Appendix B describes how we selected our three nonstatistical samples, Appendix C contains a list of related OIG reports on the Medicare fee-for-service appeals process, and Appendix D contains criteria related to our audit.

**FINDINGS**

Although MACs and QICs generally reviewed appealed extrapolated overpayments in a manner that conforms with existing CMS requirements, CMS did not always provide sufficient guidance and oversight to ensure that these reviews were performed in a consistent manner. The most significant inconsistency we identified involved the use of a type of simulation testing\(^{10}\) that was performed only by a subset of appellate contractors. The test was associated with at least $42 million in extrapolated overpayments that were overturned in fiscal years 2017 and 2018. If CMS did not intend that the appellate contractors use this procedure, these extrapolations should not have been overturned. Conversely, if CMS intended that appellate contractors use this procedure, it is possible that other extrapolations should have been overturned but were not.

In addition, CMS’s ability to provide oversight over the extrapolation review process was limited because of data reliability issues in the MAS. Of the 39 appeals cases we reviewed that were listed in the MAS as involving extrapolation, 19 did not actually involve extrapolated overpayments. Improving the accuracy of the information in the MAS would potentially assist CMS with ensuring that extrapolated overpayments are reviewed by the MACs and QICs in a consistent manner.

**MEDICARE APPELLATE CONTRACTORS GENERALLY CONFORMED WITH REQUIREMENTS BUT WERE NOT ENTIRELY CONSISTENT IN HOW THEY PERFORMED THEIR REVIEWS**

**Federal Requirements**

CMS has established requirements that program integrity contractors must follow to identify overpayments based on extrapolation. When a provider appeals an overpayment, MACs and QICs determine whether the program integrity contractors adhered to those standards.

\(^{10}\) Reviewers used the specific simulation test referenced here to provide information about whether the lower limit for a given sampling design was likely to achieve the target confidence level.
CMS has provided additional instruction to QICs in Appendix B of the QIC Manual regarding how the QICs should review any appeals cases that involve extrapolations. These instructions outlined a series of specific checks that the QICs must perform when reviewing extrapolated overpayments. Beyond CMS guidance, Federal law requires QICs to monitor their own decisions for consistency.\footnote{Section 1869(c)(3)(H) of the Act. (“Each qualified independent contractor shall monitor its decisions with respect to reconsiderations to ensure the consistency of such decisions with respect to requests for reconsideration of similar or related matters.”).} In addition, the Secretary of HHS is required to report to Congress an analysis of any inconsistent determinations made by QICs.\footnote{Section 1869(e)(4)(A) of the Act.}

CMS does not mandate specific steps or tests MACs must use when determining the validity of program integrity contractor projected overpayment determinations.

**Appellate Contractors Used Different Procedures To Review Extrapolated Overpayments**

The six MACs\footnote{We did not include one particular MAC in this analysis because the extrapolated overpayment that it reviewed during the audit period was not calculated by a program integrity contractor.} and two QICs that reviewed extrapolated overpayments during our audit period performed the following procedures: (1) verified the universe definition, (2) replicated the sample using the random seed number,\footnote{The random seed number represents the starting point for a random number generator and allows the user to replicate a previously drawn set of random numbers.} (3) verified the match between the sample results and the original sample list, (4) replicated the overpayment estimate calculation, (5) verified the definition and implementation of the sampling unit, (6) verified how the strata are defined and implemented, and (7) reviewed any comments from the provider.\footnote{We determined whether the MACs and QICs performed the review procedures but not whether the MACs and QICs interpreted the results of the review steps in a similar manner.}

We identified eight procedures that were not performed consistently across the six MACs and two QICs.\footnote{For each instance for which we identified that a review procedure was not performed, we gave the MAC or QIC an opportunity to confirm that it did not perform the procedure or to provide additional evidence that it did perform the procedure.}

- Seven of the eight contractors determined whether the construction of the sampling frame could be replicated.
• Three of the eight contractors reviewed whether the coverage of the lower limit likely met the 90-percent confidence level.\(^7\)

• Seven of the eight contractors reviewed how the sample size was determined; one of the seven contractors started reviewing sample size determination after CMS updated the PIM.

• Seven of the eight contractors determined whether the sampling unit was uniquely identified.

• Six of the eight contractors reviewed the reason that sampling was used; one of the six contractors started reviewing the reason that sampling was used after CMS updated the PIM.

• Seven of the eight contractors determined whether the universe contained any denied or $0 paid sampling units.

• Four of the eight contractors reviewed an extrapolation only if the provider requested the review.

• Four of the eight contractors determined whether the statistician who approved the sampling methodology had sufficient experience; one of the four contractors started reviewing the approving statistician’s experience after CMS updated the PIM.

We are not suggesting that the MACs and QICs that did not perform all of the above tests were using incorrect review procedures. The list is meant to highlight differences between review processes rather than deviations from CMS criteria or statistical best practices.

Other than the simulation test that is described in the next section, we did not identify any examples of MACs or QICs overturning extrapolated overpayments using a procedure not currently performed by all MACs and QICs. One reason for this result is that some of the issues identified by the MACs and QICs were not considered sufficient to overturn the extrapolated overpayment.\(^8\)

We also found that the program integrity contractors differed in how they organized the files they submitted to the MACs and QICs. The PIM lists what documents CMS requires for the appeals process, but it does not provide guidance on how these documents should be organized.

---

\(^7\) This step is referred to elsewhere in the report as “simulation testing” and is described in more detail in the next section.

\(^8\) PIM, chapter 8, § 8.4.1.1 (Rev. 828; effective Jan. 2, 2019) states that the “[f]ailure by a contractor to follow one or more of the requirements contained herein does not necessarily affect the validity of the statistical sampling that was conducted or the projection of the overpayment.”
organized. MACs and QICs reported that differences in how program integrity contractors organize files make reviewing extrapolated overpayments in a timely manner difficult. Likewise, a program integrity contractor who had taken over the work of another program integrity contractor noted that it had difficulty handling extrapolation-related files that it obtained from the other program integrity contractor because of differences in how the files were labeled and organized.

**Appellate Contractors Differed in Whether They Used Simulation Testing To Review Extrapolated Overpayments**

The PIM states that “in most situations, the lower limit of a one-sided 90-percent confidence interval shall be used as the amount of overpayment to be demanded for recovery from the provider or supplier.” The extrapolated overpayment that results from this approach is designed to be less than the actual amount overpaid to the provider 90 percent of the time. For technical reasons, the lower limit will not always meet this target. The actual percent of the time that the lower limit will be less than the actual overpayment amount is known as the coverage of the lower limit. Higher coverage is more conservative because it means that if the sample were repeated many times, the lower limit would be less than the actual overpayment more often. The opposite is true as well. A sample is less conservative if it provides lower coverage.

Exact testing of the coverage of the lower limit is not possible because it requires identifying the actual overpayment amounts for all of the items in the sampling frame. One alternative approach is to use the paid amounts in the sampling frame to simulate what the overpayment amounts in the sampling frame might look like. The simulated overpayment amounts can then be used to examine the potential coverage of the lower limit.

One MAC performed this type of simulation testing for all extrapolation reviews, and two MACs recently changed their policies to include simulation testing for sample designs that are not well supported by the program integrity contractor. In contrast, both QICs and three MACs did not perform simulation testing and had no plans to start using it in the future.

Figure 2 (next page) gives an example of how a simulation test is used in the context of a provider appeal.

---

19 PIM, chapter 8, § 8.4.5.1 (Rev. 377; Eff. 06-28-11). In Revision 828 (Eff. 01-02-19), CMS replaced “shall” with “should.”

20 We did not include one of the MACs in this analysis because it did not review any extrapolated overpayments during the audit period.
A program integrity contractor selected a stratified random sample of 55 paid claims, which it used to identify an extrapolated overpayment of $6 million. This $6 million is a lower limit that is designed to be less than the actual amount overpaid to the provider 90 percent of the time. The provider appealed, and the MAC’s statistician used a series of simulations to test whether the program integrity contractor’s sample design ensured that the lower limit would meet the 90-percent target. For high error rates, the statistician concluded that the program integrity contractor’s extrapolated overpayment would be less than the actual overpayment amount about 85 percent of the time, which the statistician found to be too far from the 90-percent target. On the basis of this evidence, the MAC overturned the extrapolation, reducing the amount the provider was required to repay from $6 million to less than $220,000.21

The decision to use simulation testing had a substantial effect on the extrapolation review process, accounting for $41.5 million of the $42.0 million in overturned extrapolations identified in our sample. CMS did not provide guidance to the appellate contractors about when the procedure should be used. If CMS did not intend that the appellate contractors use this procedure, these extrapolations should not have been overturned. Conversely, if CMS intended that contractors use this procedure, it is possible that other extrapolations should have been overturned but were not.

Qualified Independent Contractors’ Procedures Generally Complied With Appendix B of the QIC Manual

We compared the QICs’ procedures with the CMS requirements outlined in Appendix B of the QIC Manual, which contains a checklist of the specific steps QICs must perform when reviewing extrapolated overpayments and found that the QICs’ procedures for reviewing extrapolated overpayments generally met CMS requirements. However, one QIC did not test whether there were any duplicate sampling units in the frame. The QIC did not conduct the testing because it used an older version of the extrapolation review checklist that did not list the test as a requirement.

The Field in the Medicare Appeals System Identifying Appeals Cases With Extrapolated Overpayments Was Unreliable

We reviewed 39 appeals cases that the MAS listed as involving extrapolation and found that 19 of those cases did not involve extrapolated overpayments. Contractors stated that this occurred because system users accidently clicked the extrapolation flag box when entering the case data into the MAS. Improving the accuracy of the information would allow CMS to better identify inconsistencies in how extrapolated overpayments are reviewed within the appeals process. The information in the MAS was also limited because it did not contain information

21 The exact monetary impact of the decision is unknown because it depends on the re-extrapolated amount that would have been calculated given the appeal results for the individual claims in the sample.
regarding whether the extrapolation was challenged as part of the appeal, whether the contractor reviewed the extrapolation, or the outcome of any such review.

**RECOMMENDATIONS**

We recommend that the Centers for Medicare & Medicaid Services:

- provide additional guidance to MACs and QICs to ensure reasonable consistency in procedures used to review extrapolated overpayments during the first two levels of the Medicare Parts A and B appeals process;

- take steps to identify and resolve discrepancies in the procedures that MACs and QICs use to review extrapolations during the appeals process;

- provide guidance to the program integrity contractors regarding the organization of extrapolation-related files that must be submitted in response to a provider appeal;

- improve system controls to reduce the risk of MACs and QICs incorrectly marking the extrapolation flag field in the MAS; and

- update the information in the MAS to accurately reflect extrapolation amounts challenged as part of an appeal, whether the extrapolation was reviewed by a contractor, and the outcome of any extrapolation review.

**CENTERS FOR MEDICARE & MEDICAID SERVICES COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE**

In written comments on our draft report, CMS concurred with our recommendations and described the actions that it has taken or plans to take to address them. The actions CMS described include: (1) updating its guidance on the use of statistical sampling for overpayment estimation and providing training to the MACs and QICs and determining what, if any, appropriate next steps are needed; (2) continuing to explore opportunities to identify and resolve any future discrepancies in the procedures that the MACs and QICs use to review extrapolations during the appeals process; (3) taking OIG’s findings into consideration when determining whether more specificity regarding the maintenance of the required documentation is necessary; (4) modifying the MAS to reduce the risk of MACs and QICs incorrectly marking the extrapolation flag field; and (5) as resources allow, modifying the MAS to reflect the extrapolation amounts challenged as part of appeals and whether extrapolations are reviewed by a contractor.

CMS’s comments are included in their entirety as Appendix E.
We commend CMS for the corrective actions it has taken and plans to implement to address our recommendations. These corrective actions should provide improved consistency for appealed extrapolated overpayments and conform with existing CMS requirements.

OTHER MATTERS

OPPORTUNITY TO IMPROVE THE PROCESSING OF APPEALS CASES INVOLVING EXTRAPOLATED OVERPAYMENTS

CMS could improve the appeals system if it had the authority to require providers to submit all claims involved with an extrapolation under a single appeals case. When appeals for multiple claims from the same statistical sample are submitted independently, CMS has no assurance that the changes involving different sample items will be brought together to calculate an extrapolated overpayment amount that accounts for the results of all the separate appeals. Moreover, the same extrapolation may be reviewed separately for each claim in the sample, resulting in potential delays and inconsistent results. We identified at least one example of an extrapolation that was reviewed twice because the provider separately appealed claims from a single statistical sample. The contractor did not have any system for tracking or identifying such multiple submissions and identified the issue only by chance when a reviewing statistician recognized having seen the appeals case before.

OPPORTUNITY TO IMPROVE CONTRACTOR UNDERSTANDING OF POLICY UPDATES

CMS recently updated the section of the PIM covering overpayments. The update includes the requirement that program integrity contractors determine whether the sample size is appropriate and whether any distributional assumptions underlying the sampling approach are met. The MACs and QICs have interpreted these requirements differently. The MAC that previously used simulation testing to identify the coverage of the lower limit stated that it planned to continue to use that approach. Two MACs that previously did not perform simulation testing indicated that they would start using such testing if they had concerns about a program integrity contractor’s sample design. Two other MACs, which did not use simulation testing, did not plan to change their review procedures.

One QIC planned to add a step to its review to determine whether the program integrity contractor could support that its sampling and estimation method was reasonable given the distribution of the paid amounts in the sampling frame, but it did not plan to perform any simulation testing. The other QIC indicated that it would defer to the administrative qualified independent contractor (AdQIC) regarding any changes.\(^{22}\) CMS stated that the AdQIC did not plan to change the QIC Manual in response to the updated PIM.

\(^{22}\) The AdQIC is the central manager for all Medicare fee-for-service claim case files appealed to the QIC.
In addition, a program integrity contractor requested clarification from CMS on whether simulation testing is a necessary part of the sample planning process. In response, CMS stated that it is not generally necessary to perform simulation testing as part of the planning phase if the assumptions used to develop the sampling plan are clearly documented. CMS’s response letter was not made available to the other program integrity contractors, and no guidance was provided to the MACs and QICs.

As described above, CMS contractors have different interpretations of the updated PIM. The release of the new policy provides an opportunity for CMS to improve the consistency of the appeals process so that it is fair to providers regardless of which MAC or QIC the providers’ appeals cases fall under.
APPENDIX A: AUDIT SCOPE AND METHODOLOGY

SCOPE

Our audit covered the MAC and QIC processes for reviewing extrapolated overpayment amounts within the first two levels of the Medicare Parts A and B appeals process from January 1, 2016, through January 31, 2019. For the period January 1, 2016, through September 25, 2018, our audit included a sample of appeals cases. We used a questionnaire to obtain additional information about the MAC and QIC processes from September 26, 2018, through January 31, 2019.

METHODOLOGY

To accomplish our objective, we:

- reviewed applicable Federal laws, regulations, and CMS guidance;
- gained an understanding of CMS’s process for overseeing the MAC and QIC appeals decisions;
- surveyed the MACs and QICs regarding their extrapolation review procedures using a questionnaire;
- interviewed 3 integrity contractors and obtained 10 examples from these contractors of appeals cases in which an extrapolation was overturned at either the MAC or QIC level;
- extracted 2,114 MAS records associated with appeals cases that were marked as involving an extrapolated overpayment and that were decided between January 1, 2016, and September 25, 2018;
- requested and reviewed QIC and MAC extrapolation review documentation for a nonstatistical sample of 19 cases;
- reviewed a nonstatistical sample of 39 records from the MAS to verify the accuracy of the MAS field that marks whether cases involve extrapolated overpayments;
- used the sample results to identify and confirm potential inconsistencies between the extrapolation review procedures used across the MACs and QICs; and
- discussed the results of our audit 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.
APPENDIX B: DETAILED SAMPLING METHODOLOGY

We reviewed three nonstatistical samples of appeals cases.

For our first sample, we requested that the three unified program integrity contractors (UPICs) provide any examples they could identify in which an extrapolated overpayment was overturned during the first two levels of the appeals process. In response to this request, the UPICs provided 10 examples that fell within the audit period. We reviewed each example to identify the primary reason the extrapolation was overturned.

For our second sample, we obtained a list of 2,114 records from the MAS that were flagged as involving an extrapolation and were decided between January 1, 2016, and September 25, 2018. From this list, we selected 19 cases by drawing 1 random case from each MAC and QIC jurisdiction that had at least 1 case listed in our MAS data extract. In addition, we judgmentally selected 10 cases from providers with a large number of cases within a short time range. The purpose of this latter judgmental sample was to identify situations in which a provider separately appealed multiple claims from a single statistical sample.

From these 29 cases, we excluded 20 cases that did not include extrapolations by integrity contractors that were within the scope of our audit. We identified 20 additional cases as potential replacements. We identified the first 10 potential replacements by selecting 10 cases from the MAS; however, these 10 cases were not relevant to the audit, and we excluded them from further review. The MACs identified the final 10 replacements using their own internal records. In total, as part of the second sample, we selected 49 cases, excluded 30 cases, and reviewed the remaining 19 cases. We used this second sample of 19 cases to identify any inconsistencies in the procedures for reviewing extrapolated overpayments.

For our third sample, we examined the accuracy of the field in the MAS that identifies which cases involve extrapolated overpayments. This third sample of 39 cases was a subset of the 49 cases we selected from the MAS in attempting to identify our second sample. Therefore, it did not include the 10 replacement cases that were identified by the MACs rather than through the MAS.

23 We contacted the UPICs rather than all program integrity contractors because the UPICs produce a majority of the extrapolated overpayments that are reviewed in the appeals process.

24 In two cases, the appealed extrapolations were not calculated by a program integrity contractor, in eight cases the providers did not challenge the sampling or extrapolation methodology, in one case the claim was no longer under the jurisdiction of the selected contractor, and in nine cases the appeal was incorrectly coded in MAS as involving an extrapolated overpayment.

25 In all 10 cases, the appeal was incorrectly coded in MAS as involving an extrapolated overpayment.
## APPENDIX C: RELATED REPORTS

<table>
<thead>
<tr>
<th>Report Title</th>
<th>Report Number</th>
<th>Date Issued</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Medicare Advantage Appeal Outcomes and Audit Findings Raise Concerns About Service and Payment Denials</em> [a Medicare Part C Review]</td>
<td>OEI-09-16-00410</td>
<td>9/25/2018</td>
</tr>
<tr>
<td><em>Improvements Are Needed at the Administrative Law Judge Level of Medicare Appeals</em></td>
<td>OEI-02-10-00340</td>
<td>11/14/2012</td>
</tr>
</tbody>
</table>
APPENDIX D: FEDERAL REQUIREMENTS

GENERAL AUTHORITY AND SAMPLING REQUIREMENTS

The general requirements for the five levels of Medicare Parts A and B appeals are outlined in section 1869 of the Act and 42 CFR part 405, subpart I.

The basis for CMS’s authority to extrapolate overpayments is outlined in CMS (formerly the Health Care Financing Administration) Ruling 86-1, which concludes that

Statistical sampling to project an overpayment is consistent with the Government’s common law right to recover overpayments, the Medicare statute, and the Department’s [HHS’s] regulations, and does not deny a provider or supplier due process. Neither the statute nor regulations require that a case-by-case review be conducted in order to determine that a provider or supplier has been overpaid and to determine the amount of overpayment.

The detailed requirements related to the implementation of sampling by the integrity contractors are outlined in the PIM. CMS updated the PIM September 28, 2018, with the changes taking effect January 2, 2019. For the purpose of this review, the most significant change is in the definition of the steps for conducting statistical sampling. We outline these changes below.

Table: Updates to PIM Chapter 8.4.1.3 on Sampling, Effective January 2, 2019

<table>
<thead>
<tr>
<th>PIM chapter 8.4.1.3 (Rev. 377)</th>
<th>Updated PIM chapter 8.4.1.3 (Rev. 828)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The major steps in conducting statistical sampling are:</td>
<td>The major steps in conducting statistical sampling are:</td>
</tr>
<tr>
<td>(1) Selecting the provider or supplier;</td>
<td>(1) Identifying the provider/supplier;</td>
</tr>
<tr>
<td>(2) Selecting the period to be reviewed;</td>
<td>(2) Identifying the period to be reviewed;</td>
</tr>
<tr>
<td>(3) Defining the universe, the sampling unit, and the sampling frame;</td>
<td>(3) Defining the universe (target population) and the sampling unit, and constructing the sampling frame;</td>
</tr>
<tr>
<td>(4) Assessing the distribution of the paid amounts in the sample frame to determine the sample design; it is very likely that the distribution of the overpayments will not be normal. However, there are many sampling methodologies (for example, use of the Central Limit Theorem) that may be used to accommodate non-normal distributions.</td>
<td></td>
</tr>
<tr>
<td>PIM chapter 8.4.1.3 (Rev. 377)</td>
<td>Updated PIM chapter 8.4.1.3 (Rev. 828)</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>(4) Designing the sampling plan</td>
<td>(5) Performing the appropriate</td>
</tr>
<tr>
<td>and selecting the sample;</td>
<td>assessment(s) to determine whether</td>
</tr>
<tr>
<td></td>
<td>the sample size is appropriate for</td>
</tr>
<tr>
<td></td>
<td>the statistical analyses used, and</td>
</tr>
<tr>
<td>(5) Reviewing each of the</td>
<td>identifying, relative to the sample</td>
</tr>
<tr>
<td>sampling units and determining</td>
<td>size used, the corresponding</td>
</tr>
<tr>
<td>if there was an overpayment or</td>
<td>confidence interval;</td>
</tr>
<tr>
<td>an underpayment; and, as</td>
<td>(6) Designing the sampling plan and</td>
</tr>
<tr>
<td>applicable</td>
<td>selecting the sample from the</td>
</tr>
<tr>
<td>(6) Estimating the overpayment.</td>
<td>sampling frame;</td>
</tr>
<tr>
<td>Where an overpayment has been</td>
<td>(7) Examining each of the sampling</td>
</tr>
<tr>
<td>determined to exist, follow</td>
<td>units and determining if there was</td>
</tr>
<tr>
<td>applicable instructions for</td>
<td>an overpayment or an underpayment;</td>
</tr>
<tr>
<td>notification and collection of</td>
<td>and</td>
</tr>
<tr>
<td>the overpayment.</td>
<td>(8) Estimating the overpayment. When</td>
</tr>
<tr>
<td></td>
<td>an overpayment has been determined</td>
</tr>
<tr>
<td></td>
<td>to exist, the contractor shall</td>
</tr>
<tr>
<td></td>
<td>follow applicable instructions for</td>
</tr>
<tr>
<td></td>
<td>notification and collection of the</td>
</tr>
<tr>
<td></td>
<td>overpayment, unless otherwise</td>
</tr>
<tr>
<td></td>
<td>directed by CMS.</td>
</tr>
<tr>
<td></td>
<td>For each step, the contractor shall</td>
</tr>
<tr>
<td></td>
<td>provide complete and clear</td>
</tr>
<tr>
<td></td>
<td>documentation sufficient to explain</td>
</tr>
<tr>
<td></td>
<td>the action(s) taken in the step and</td>
</tr>
<tr>
<td></td>
<td>to replicate, if needed, the</td>
</tr>
<tr>
<td></td>
<td>statistical sampling.</td>
</tr>
</tbody>
</table>

**QUALIFIED INDEPENDENT CONTRACTOR REQUIREMENTS**

QICs are explicitly required to monitor their decisions for consistency under section 1869(c)(3)(H) of the Act. (“Each qualified independent contractor shall monitor its decisions with respect to reconsiderations to ensure the consistency of such decisions with respect to requests for reconsideration of similar or related matters.”)

Under section 1869(e)(4)(A) of the Act, the Secretary of HHS is required to report an analysis of determinations by QICs with respect to inconsistent decisions: “The Secretary shall include in such report an analysis of determinations by qualified independent contractors with respect to inconsistent decisions and an analysis of the causes of any such inconsistencies.”
Federal regulations (42 U.S.C. § 1869(c)(3)(I)) require that each QIC “keep accurate records of each decision made, consistent with standards established by the Secretary.”

CMS has issued additional guidance in the QIC Manual (chapter 5 § 5.50.1 and Appendix B) concerning how extrapolated overpayments should be reviewed. For each of the following elements, the QIC is instructed to identify whether the integrity contractor documented the step and whether the step was performed in a valid manner.

a) Determine that the universe is clearly defined.

b) Determine that a file for the frame is identified, the sampling unit definition is correctly implemented, each sampling unit is uniquely identified, each sampling unit is correctly drawn from the universe; and that the stratification, if used, is correctly implemented.

c) Determine that random numbers can be accurately generated from the random number seeds and that the sample is correctly drawn from the frame.

d) Determine that a file for the sample review determinations matches the sample created from the previous step.

e) Determine that the average net overpayment and the point estimate are correctly calculated and that the lower bound is correctly calculated if it is used for the overpayment demand.
The Centers for Medicare & Medicaid Services (CMS) appreciates the opportunity to review and comment on the Office of Inspector General’s (OIG) draft report.

CMS recognizes the importance of providing Medicare beneficiaries with access to medically necessary services and, at the same time, protecting the Medicare Trust Funds from improper payments. CMS uses a robust program integrity strategy to reduce and prevent Medicare improper payments. As part of this strategy, CMS recovers identified overpayments in accordance with relevant law and agency policies and procedures.

Medicare contractors may utilize a statistical sample to estimate the amount of overpayments on a larger population of claims. Section 1893(f)(3) of the Social Security Act mandates that before using statistical estimation, which is also sometimes referred to as extrapolation, to determine overpayment amounts, there must be a determination of sustained or high level of payment error or documentation that education intervention has failed to correct the payment error.

A claimant dissatisfied with a contractor’s initial determination is entitled by law and regulations to specified appeals. The appeals process allows a provider or supplier the right to request a review or reconsideration of the determination to deny payment for a service in full or in part. If the decision issued on appeal contains either a finding that the sampling methodology was invalid or reverses the revised initial claim determination, the contractors must take appropriate action to adjust the estimation of overpayment. If the decision issued on appeal contains a finding that the sampling methodology was invalid, such actions by contractors could include a new review using a new valid methodology, recovery of the actual overpayments related to the sample claims and a new review of the provider or supplier, or a revised overpayment determination.

To ensure that contractors are using uniform and consistent procedures when performing statistical sampling, in September 2019, CMS updated Chapter 8 of the Program Integrity Manual (IOM 100-08) with additional guidance regarding the use of statistical sampling for overpayment estimation. For example, CMS clarified the requirements for documenting the sampling methodology that was utilized.
The OIG’s recommendations and CMS’ responses are below.

**OIG Recommendation**
The OIG recommends that the Centers for Medicare & Medicaid Services provide additional guidance to MACs and QICs to ensure reasonable consistency in procedures used to review extrapolated overpayments during the first two levels of the Medicare Parts A and B appeal process.

**CMS Response**
CMS concurs with this recommendation. As stated above, CMS recently updated Chapter 8 of the Program Integrity Manual (IOM 100-08) with new guidance regarding the use of statistical sampling for overpayment estimation. This new guidance will help ensure that a statistically representative sample of the claim universe is drawn that yields an unbiased estimate of an overpayment. As part of this implementation of the new guidance, CMS provided training to the Medicare Administrative Contractors and the Qualified Independent Contractors. Based on this, CMS will determine what, if any, appropriate next steps are needed.

**OIG Recommendation**
The OIG recommends that the Centers for Medicare & Medicaid Services take steps to identify and resolve discrepancies in the procedures that MACs and QICs use to review extrapolations during the appeals process.

**CMS Response**
CMS concurs with this recommendation. CMS will continue to explore opportunities to identify and resolve discrepancies, if any, in the procedures that the Medicare Administrative Contractors and Qualified Independent Contractors use to review extrapolations during the appeals process moving forward. As stated above, to further ensure consistency, CMS provided training to the Medicare Administrative Contractors and the Qualified Independent Contractors as part of the implementation of the updated guidance.

**OIG Recommendation**
The OIG recommends that the Centers for Medicare & Medicaid Services provide guidance to the program integrity contractors regarding the organization of extrapolation-related files that must be submitted in response to a provider appeal.

**CMS Response**
CMS concurs with this recommendation. CMS will take the OIG’s findings into consideration when determining whether more specificity regarding the maintenance of the required documentation is necessary.

**OIG Recommendation**
The OIG recommends that the Centers for Medicare & Medicaid Services improve system controls to reduce the risk of MACs and QICs incorrectly marking the extrapolation flag field in the MAS.

**CMS Response**
CMS concurs with this recommendation. CMS will modify the Medicare Appeals System to reduce the risk of Medicare Administrative Contractors and the Qualified Independent Contractors incorrectly marking the extrapolation flag field.
**OIG Recommendation**
The OIG recommends that the Centers for Medicare & Medicaid Services update the information in the MAS to accurately reflect extrapolation amounts challenged as part of an appeal, confirmation the extrapolation was reviewed by a contractor, and the outcome of the review.

**CMS Response**
CMS concurs with this recommendation. As resources allow, CMS will modify the Medicare Appeals System to reflect the extrapolation amounts challenged as part of an appeal, as well as confirmation that the extrapolation was reviewed by a contractor. CMS would like to clarify that case outcome is already shown in the Medicare Appeals System.