U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

2017 Medicare Fee-for-Service Supplemental Improper Payment Data

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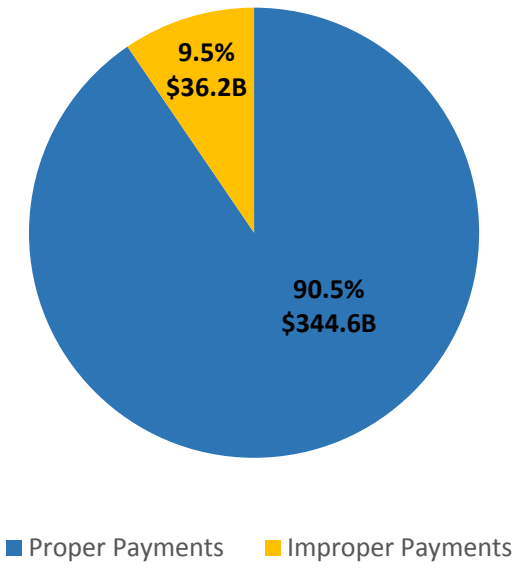
SUMMARY OF HIGH LEVEL FINDINGS

This document supplements improper payment information in the annual Department of Health and Human Services Agency Financial Report (HHS AFR). The Improper Payments Information Act of 2002 (IPIA), as amended by the Improper Payments Elimination and Recovery Act of 2010 (IPERA) and the Improper Payments Elimination and Recovery Improvement Act of 2012 (IPERIA), (hereafter collectively referred to as IPERIA), requires improper payment reporting in the HHS AFR. The improper payment rate calculation complies with the requirements of Office of Management and Budget (OMB) Circular A-123, Appendix C. The Centers for Medicare & Medicaid Services (CMS) measures the Medicare Fee-for-Service (FFS) improper payment rate through the Comprehensive Error Rate Testing (CERT) program.

90.5 Percent Accuracy Rate and 9.5 Percent Improper Payment Rate[1,2, 3]

Figure 1: Payment Accuracy



[1] HHS published the 2017 Medicare FFS improper payment rate in the Federal Fiscal Year (FY) 2017 HHS AFR. The FY runs from October 1 to September 30. The Medicare FFS sampling period does not correspond with the FY due to practical constraints with claims review and rate calculation methodologies. The FY 2017 Medicare FFS improper payment rate included claims submitted during the 12-month period from July 1, 2015 through June 30, 2016.

[2] CMS adjusted the improper payment rate by 0.1 percentage points ($0.5 billion) from 9.6 percent to 9.5 percent to account for the effect of rebilling inpatient hospital claims denied under Medicare Part A (Part A to B rebilling). The Part A to B rebilling adjustment factor was calculated by selecting a random sub-sample of Part A inpatient claims selected by the CERT program and repricing the individual services provided under Part B. Because this repricing process was not applied to all of the Part A inpatient claims selected by the CERT program, the Part A to B rebilling adjustment factor could only be applied to the high-level calculations (i.e., the overall, Part A Total, and Part A Hospital Inpatient Prospective Payment System (IPPS) improper payment rates). This methodology is unchanged from 2012 through 2017.

[3] For purposes of this report, correct payments are considered total Medicare FFS payments minus payments considered an improper payment as identified through CERT. Please note that instances of fraud or other problems not discerned during the CERT review could still be present.

Common Causes of Improper Payments

Figure 2: Improper Payment Rate Error Categories by Percentage of 2017 National Improper Payments

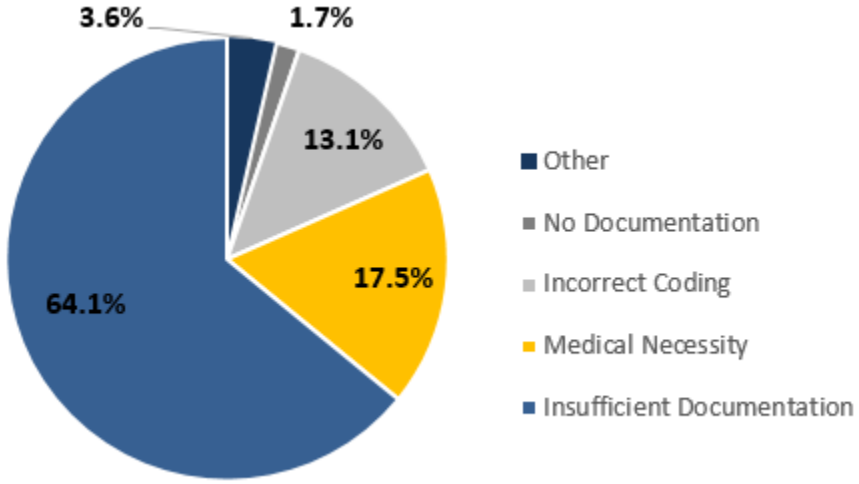
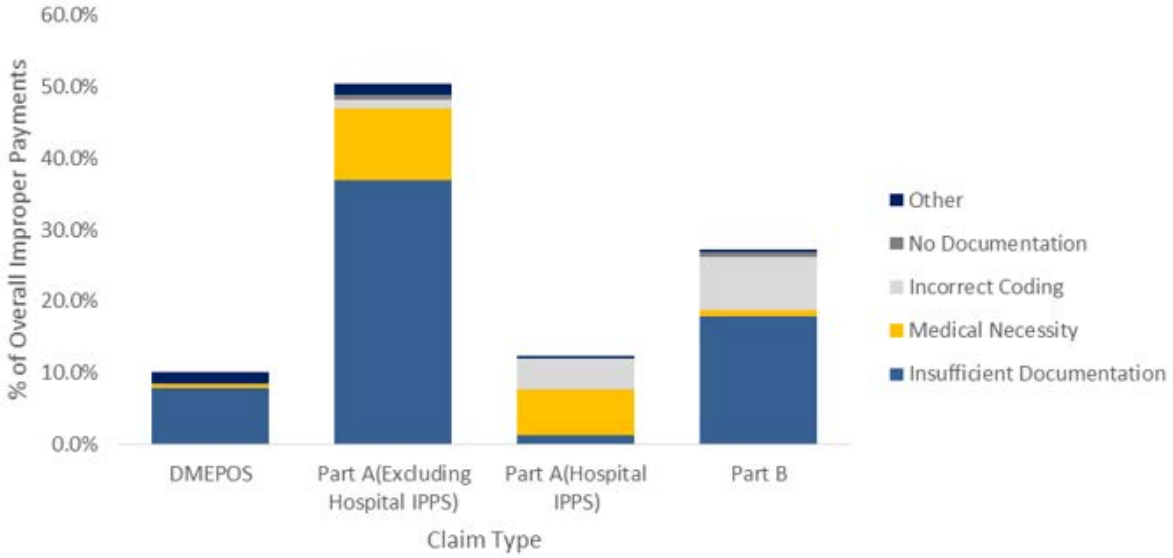
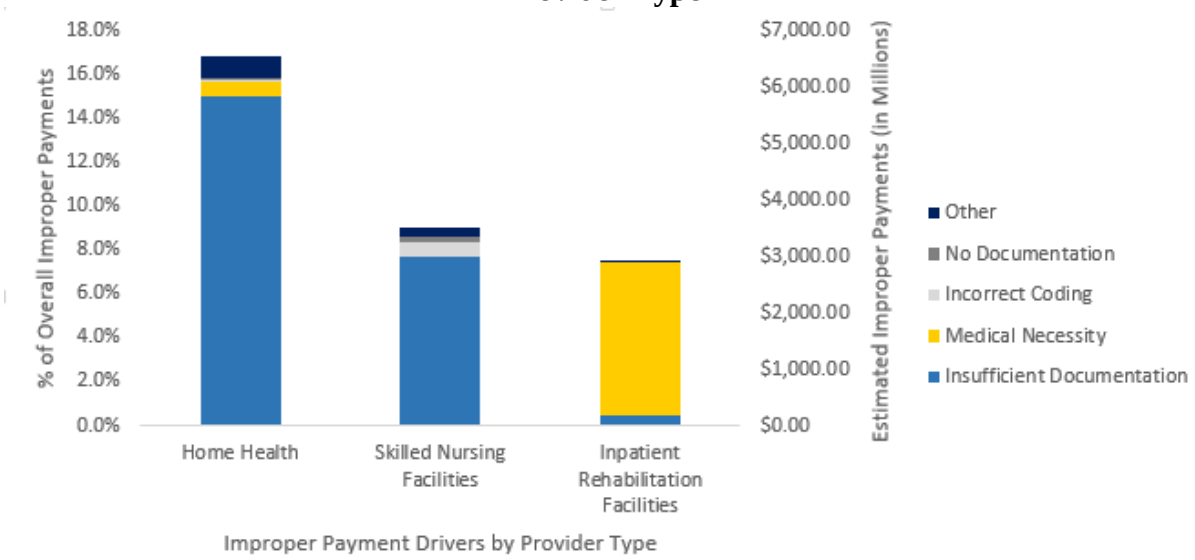


Figure 3: Improper Payment Rate Error Categories by Percentage of 2017 National Improper Payments by Claim Type (Adjusted for Impact of A/B Rebilling)[4]



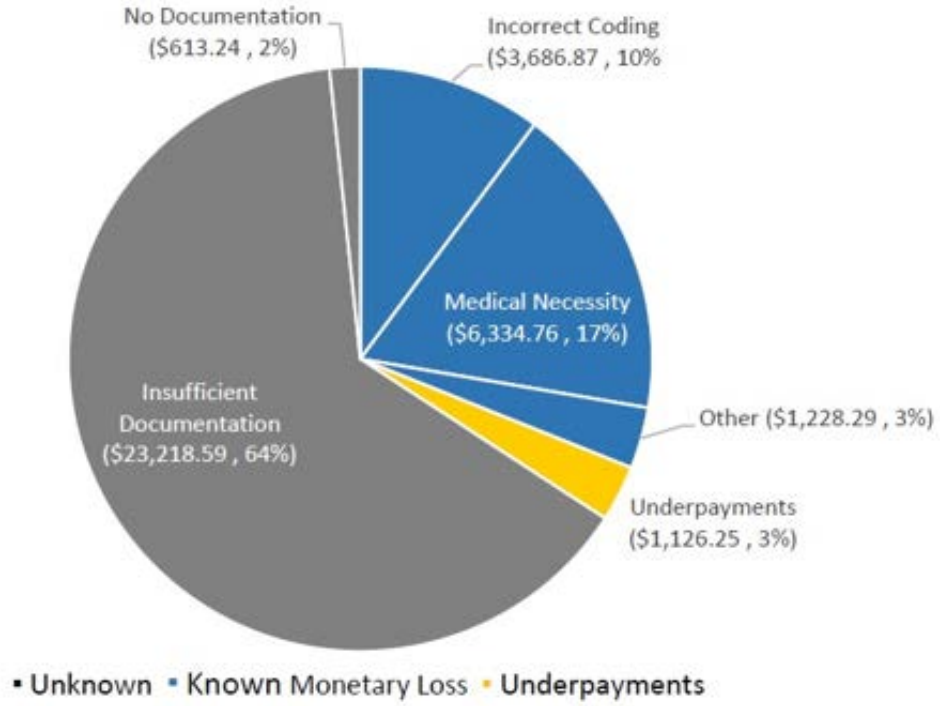
[4] Improper payment rate reporting for Part A (Excluding Hospital IPPS) providers is determined by the type of bill submitted to Medicare for payment. Providers, facilities, and suppliers that submit institutional claims via the electronic American National Standards Institute (ANSI) Accredited Standards Committee (ASC) X12 Health Care Claim: Institutional (837) or paper claim format Uniform Billing (UB)-04, are included in the Part A (Excluding Hospital IPPS) improper payment rate calculation. Examples of providers, facilities, and suppliers that bill using these formats include hospitals, skilled nursing facilities, home health and hospice providers, renal dialysis facilities, comprehensive outpatient rehabilitation facilities, rural health clinics, and federally qualified health centers. These institutional claims may include professional services that may be paid under Part A or Part B, yet are ultimately included in the CERT Part A (Excluding Hospital IPPS) improper payment rate measurement because they are submitted on the ASC X12 837 or UB-04.

Figure 4: Improper Payment Rate Error Categories by Percentage of 2017 National Improper Payments and Improper Payments (in Millions) by Improper Payment Driver Provider Type



Monetary Loss Findings[5]

Figure 5: Improper Payments (in Millions) and Percentage of Improper Payments by Monetary Loss and Improper Payment Rate Error Categories



[5] The FY 2017 HHS AFR contains detailed information on the Medicare FFS monetary loss findings.

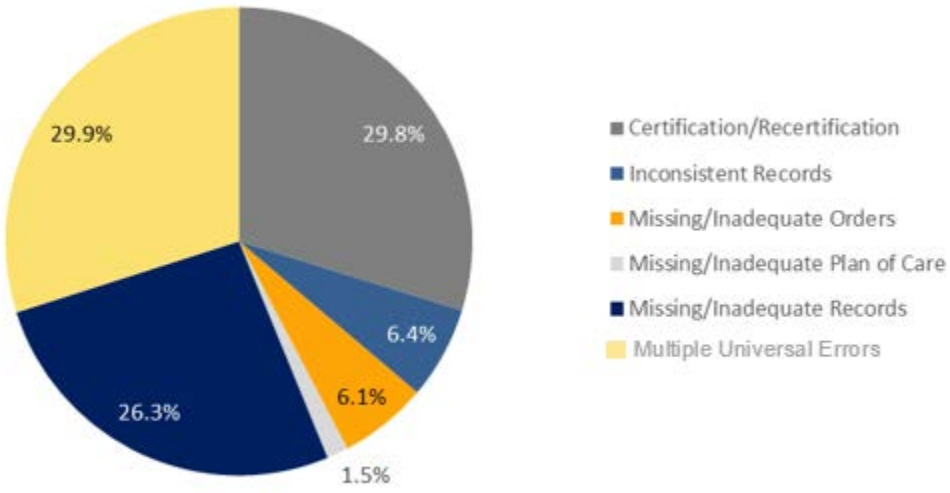
Detailed Information on Insufficient Documentation Errors by Claim Type

In order to provide a more thorough understanding of insufficient documentation errors, CMS examined the root causes of these errors and developed a universal error for the insufficient documentation error. The root cause of the insufficient documentation error must meet the universal error definition to be included in that classification.

The universal error names and definitions are:

Universal Error Name[6]	Universal Error Definition[7]
Missing/Inadequate Orders	A valid provider's order (or intent to order for certain services) for the service/supply has not been submitted.
Missing/Inadequate Plan of Care	A valid provider's plan of care for the service has not been submitted.
Missing/Inadequate Records	A required record has not been submitted or has not been fully completed.
Inconsistent Records	The records submitted have inconsistent information (e.g., date, provider, service, beneficiary, etc.) or incorrect date of service.
Certification/Recertification	Certification/recertification requirements not met.

Figure 6: Universal Errors as a Percentage of Improper Payments Due to Insufficient Documentation



[6] Missing is defined as the provider fails to submit a required document, in its entirety. Inadequate is defined as the provider has submitted the documentation; however, a required element is not complete. CMS is exploring new and innovative approaches to providing additional data on missing and inadequate insufficient documentation errors in future reporting.

[7] A valid provider's order is defined as meeting the required elements for the order. A valid provider's plan of care is defined as meeting the required elements for plan of care.

Figure 7: Claim Type Categories by Percentage of Insufficient Documentation Improper Payments by Universal Errors

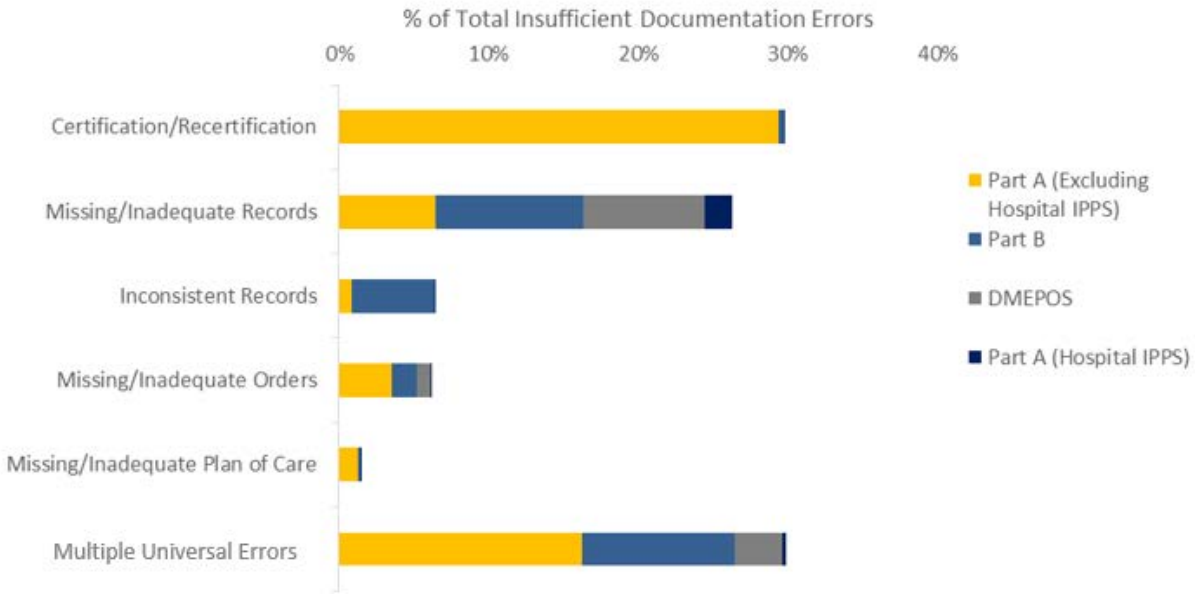
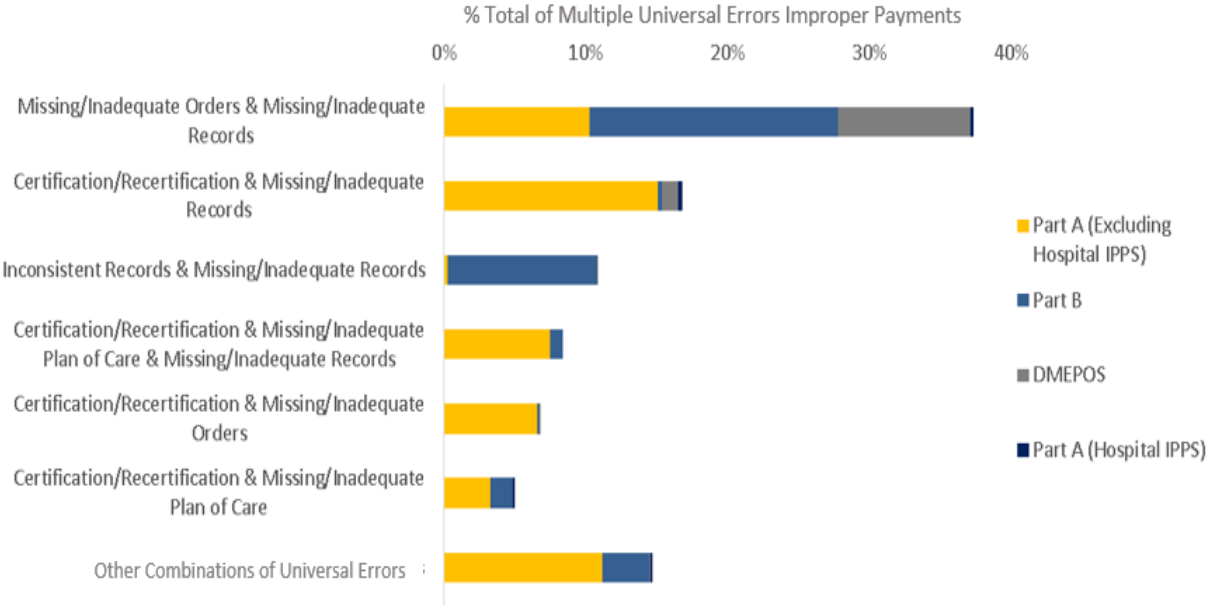


Figure 8: Claim Type Categories by Percentage of Insufficient Documentation Improper Payments by Multiple Universal Errors[8]



[8] Each claim can have more than one root cause of error so there could also be more than one universal error of insufficient documentation error.

Part A (Excluding Hospital IPPS)

Figure 9: Universal Errors as a Percentage of Part A (Excluding Hospital IPPS) Improper Payments Due to Insufficient Documentation

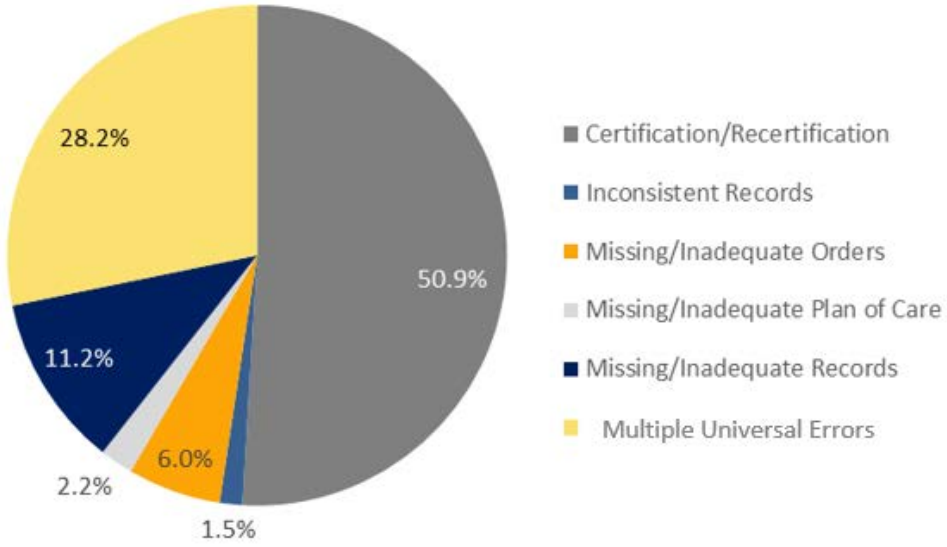


Figure 10: Multiple Universal Errors as a Percentage of Part A (Excluding Hospital IPPS) Improper Payments Due to Insufficient Documentation

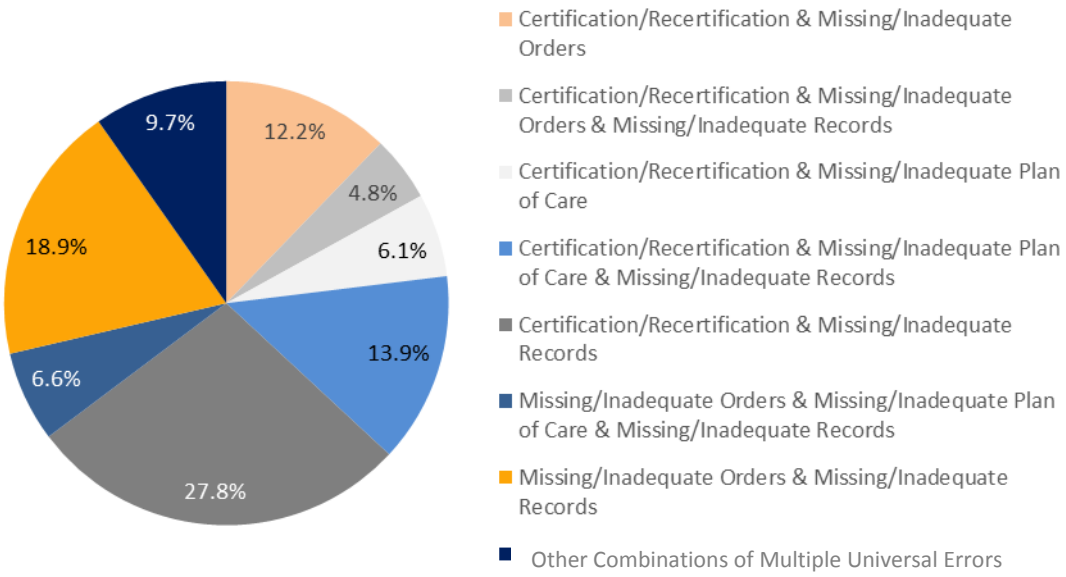


Table 1: Top Root Causes of Insufficient Documentation Errors in Part A (Excluding Hospital IPPS)

Root Cause Description	Universal Error Name	Claim Count[9]
Home health certification requirements, in entirety or an element, has not been submitted.	Certification/Recertification	265
A valid provider's order, or element of an order, has not been submitted.	Missing/Inadequate Orders	133
Skilled Nursing Facility certification/recertification requirements, in entirety or an element, has not been submitted.	Certification/Recertification	125
Documentation to support medical necessity has not been submitted.	Missing/Inadequate Records	102
Valid provider's intent to order (for certain services) has not been submitted.	Missing/Inadequate Orders	84

[9] A claim can have more than one root cause for an insufficient documentation error.

Part B

Figure 11: Universal Errors as a Percentage of Part B Improper Payments Due to Insufficient Documentation

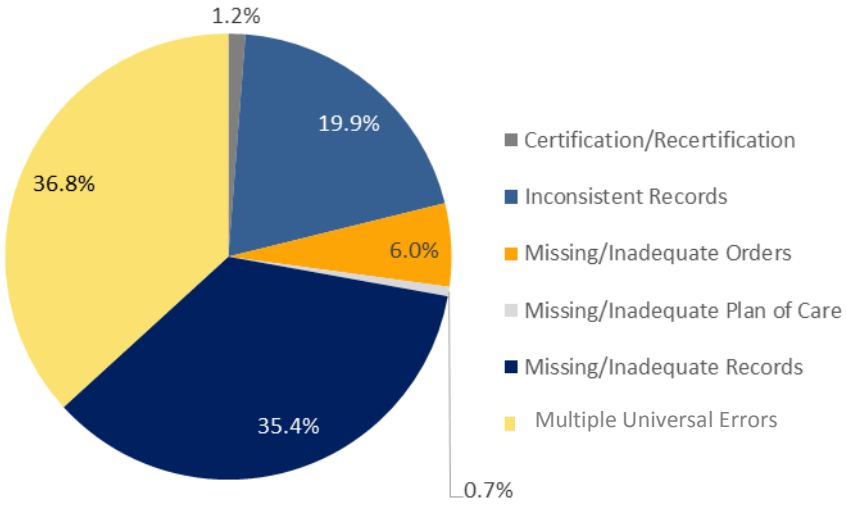


Figure 12: Multiple Universal Errors as a Percentage of Part B Improper Payments Due to Insufficient Documentation

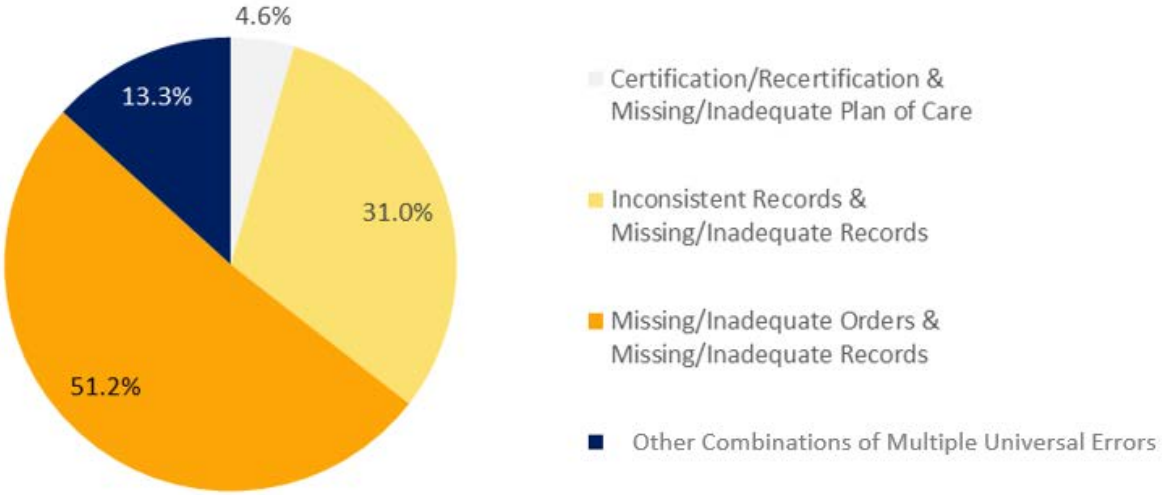


Table 2: Top Root Causes of Insufficient Documentation Errors in Part B

Root Cause Description	Universal Error Name	Line Count[10]
Documentation to support medical necessity has not been submitted.	Missing/Inadequate Records	8,185
A valid provider's order, or element of an order, has not been submitted.	Missing/Inadequate Orders	7,006
Valid provider's intent to order (for certain services) has not been submitted.	Missing/Inadequate Orders	5,757
Documentation of result of the diagnostic or laboratory test was not submitted.	Missing/Inadequate Records	1,064
Documentation to support the services were provided or were provided as billed was not submitted.	Inconsistent Records	838
A signature log of medical personnel to support a clear identity of an illegible signature was not submitted or the provider's written attestation of the unsigned or illegible signature was not submitted.	Missing/Inadequate Records	351

[10] A line can have more than one root cause for an insufficient documentation error.

Durable Medical Equipment, Prosthetics, Orthotics, and Supplies (DMEPOS)

Figure 13: Universal Errors as a Percentage of DMEPOS Improper Payments Due to Insufficient Documentation

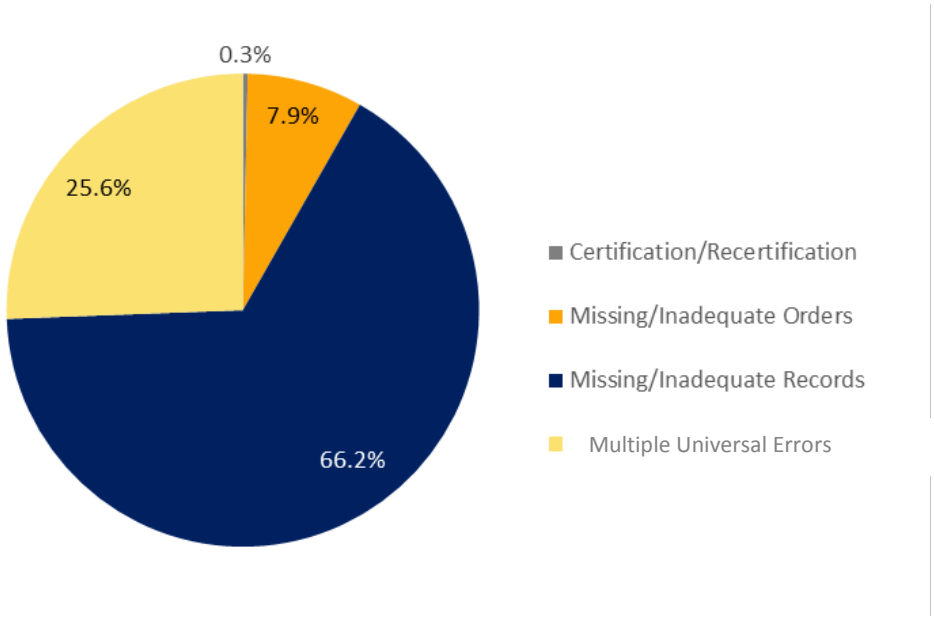


Figure 14: Multiple Universal Errors as a Percentage of DMEPOS Improper Payments Due to Insufficient Documentation

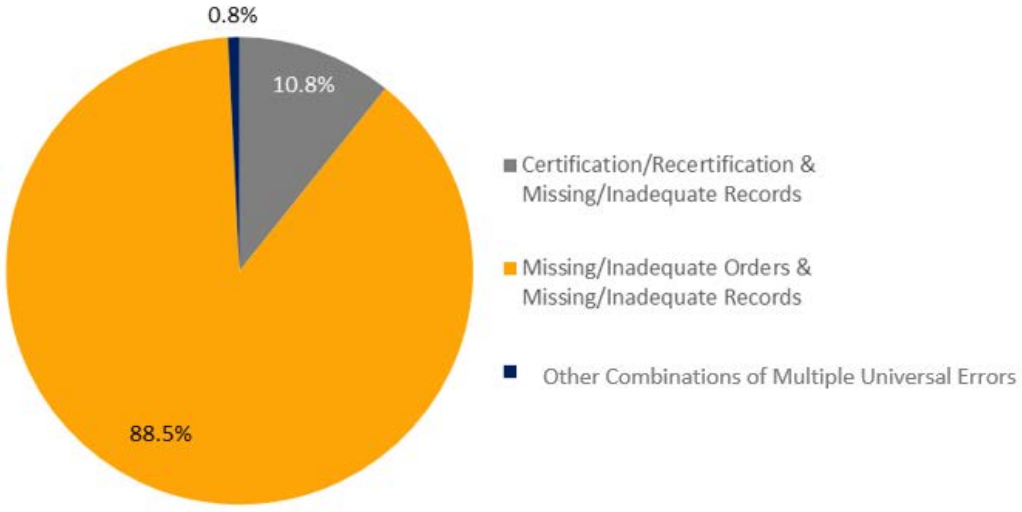


Table 3: Top Root Causes of Insufficient Documentation Errors in DMEPOS

Root Cause Description	Universal Error Name	Line Count[11]
Documentation to support medical necessity or to support the services were provided or were provided as billed was not submitted.	Missing/Inadequate Records	2,919
A valid provider's order, or element of an order, has not been submitted.	Missing/Inadequate Orders	2,371
The proof of delivery, in entirety or an element, has not been submitted.	Missing/Inadequate Records	2,231
Documentation to support a face-to-face examination or order requirements prior to delivery for certain DME items has not been submitted.	Missing/Inadequate Records	1,035
Documentation to support medical necessity of diabetic supplies or medical necessity of high utilization of diabetic supplies has not been submitted.	Missing/Inadequate Records	508
Documentation of result of the oxygen saturation study has not been submitted or the certificate of medical necessity is not corroborated by the medical record documentation.	Missing/Inadequate Records	348

[11] A line can have more than one root cause for an insufficient documentation error.

SUPPLEMENTAL STATISTICAL REPORTING

Appendix A: Summary of Projected Improper Payments Adjusted for A/B Rebill[12]

Table A1: 2017 Improper Payment Rates and Projected Improper Payments by Claim Type (Dollars in Billions) (Adjusted for Impact of A/B Rebilling)

Claim Type	Claims Sampled	Claims Reviewed	Total Payment	Projected Improper Payment	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
Part A (Total)	29,756	22,001	$275.6	$22.7	8.2%	7.5% - 9.0%	62.7%
Part A (Excluding Hospital IPPS)	8,626	7,501	$161.3	$18.2	11.3%	10.1% - 12.6%	50.4%
Part A (Hospital IPPS)	21,130	14,500	$114.3	$4.5	3.9%	3.5% - 4.3%	12.3%
Part B	17,550	17,000	$97.0	$9.9	10.2%	9.3% - 11.0%	27.2%
DMEPOS	11,357	11,001	$8.2	$3.7	44.6%	42.5% - 46.7%	10.1%
Overall	**58,663**	**50,002**	**$380.8**	**$36.2**	**9.5%**	**8.9% - 10.1%**	**100.0%**

Table A2: Comparison of 2016 and 2017 National Improper Payment Rates by Error Category (Adjusted for Impact of A/B Rebilling)

Error Category	2016	2017				
	Overall	Overall	Part A Excluding Hospital IPPS	Part A Hospital IPPS	Part B	DMEPOS
No Documentation	0.1%	0.2%	0.1%	0.0%	0.1%	0.0%
Insufficient Documentation	7.2%	6.1%	3.5%	0.1%	1.7%	0.8%
Medical Necessity	2.2%	1.7%	0.9%	0.6%	0.1%	0.0%
Incorrect Coding	1.1%	1.2%	0.1%	0.4%	0.7%	0.0%
Other	0.4%	0.3%	0.1%	0.0%	0.0%	0.1%
Total	**11.0%**	**9.5%**	**4.8%**	**1.2%**	**2.6%**	**1.0%**

[12] Adjusted for Medicare Part A to B rebilling of denied inpatient hospital claims.

Table A3: Improper Payment Rate Categories by Percentage of 2017 National Improper Payments (Adjusted for Impact of A/B Rebilling)

Error Category	Percent of Overall Improper Payments
No Documentation	1.7%
Insufficient Documentation	64.1%
Medical Necessity	17.5%
Incorrect Coding	13.1%
Other	3.6%
Total	**100.0%**

Table A4: Improper Payment Rates and Projected Improper Payments by Claim Type and Over/Under Payments (Dollars in Billions) (Adjusted for Impact of A/B Rebilling)

Claim Type	Overall Improper Payments			Overpayments		Underpayments	
	Total Amount Paid	Improper Payment Amount	Improper Payment Rate	Improper Payment Amount	Improper Payment Rate	Improper Payment Amount	Improper Payment Rate
Part A (Total)	$275.6	$22.7	8.2%	$21.9	8.0%	$0.8	0.3%
Part A (Excluding Hospital IPPS)	$161.3	$18.2	11.3%	$18.2	11.3%	$0.1	0.0%
Part A(Hospital IPPS)	$114.3	$4.5	3.9%	$3.7	3.3%	$0.7	0.6%
Part B	$97.0	$9.9	10.2%	$9.5	9.8%	$0.3	0.3%
DMEPOS	$8.2	$3.7	44.6%	$3.6	44.5%	$0.0	0.1%
Total	**$380.8**	**$36.2**	**9.5%**	**$35.1**	**9.2%**	**$1.1**	**0.3%**

Table A5: 2017 Projected Improper Payments by Type of Error and Clinical Setting (Dollars in Billions) (Adjusted for Impact of A/B Rebilling)

Error Category	DMEPOS	Home Health Agencies	Hospital Outpatient Departments	Acute Inpatient Hospitals	Physician Services (All Settings)	Skilled Nursing Facilities	Other Clinical Settings	Overall
No Documentation	$0.1	$0.0	$0.1	$0.0	$0.3	$0.1	$0.0	$0.6
Insufficient Documentation	$2.9	$5.4	$5.0	$0.7	$4.8	$2.8	$1.7	$23.2
Medical Necessity	$0.1	$0.3	$0.8	$4.8	$0.1	$0.0	$0.3	$6.3
Incorrect Coding	$0.0	$0.0	$0.2	$1.6	$2.5	$0.2	$0.2	$4.7
Other	$0.6	$0.4	$0.0	$0.1	$0.1	$0.2	$0.0	$1.3
Total	**$3.7**	**$6.1**	**$6.1**	**$7.2**	**$7.7**	**$3.3**	**$2.2**	**$36.2**

Table A6: Summary of National Improper Payment Rates by Year and by Error Category (Adjusted for Impact of A/B Rebilling)[13]

Fiscal Year and Rate Type (Net/Gross)		No Doc Errors	Insufficient Document Errors	Medical Necessity Errors	Incorrect Coding Errors	Other Errors	Improper Payment Rate	Correct Payment Rate
1996[14]	Net	1.9%	4.5%	5.1%	1.2%	1.1%	13.8%	86.2%
1997	Net	2.1%	2.9%	4.2%	1.7%	0.5%	11.4%	88.6%
1998	Net	0.4%	0.8%	3.9%	1.3%	0.7%	7.1%	92.9%
1999	Net	0.6%	2.6%	2.6%	1.3%	0.9%	8.0%	92.0%
2000	Net	1.2%	1.3%	2.9%	1.0%	0.4%	6.8%	93.2%
2001	Net	0.8%	1.9%	2.7%	1.1%	-0.2%	6.3%	93.7%
2002	Net	0.5%	1.3%	3.6%	0.9%	0.0%	6.3%	93.7%
2003	Net	5.4%	2.5%	1.1%	0.7%	0.1%	9.8%	90.2%
2004[15]	Gross	3.1%	4.1%	1.6%	1.2%	0.2%	10.1%	89.9%
2005	Gross	0.7%	1.1%	1.6%	1.5%	0.2%	5.2%	94.8%
2006	Gross	0.6%	0.6%	1.4%	1.6%	0.2%	4.4%	95.6%
2007	Gross	0.6%	0.4%	1.3%	1.5%	0.2%	3.9%	96.1%
2008	Gross	0.2%	0.6%	1.4%	1.3%	0.1%	3.6%	96.4%
2009	Gross	0.2%	4.3%	6.3%	1.5%	0.1%	12.4%	87.6%
2010	Gross	0.1%	4.6%	4.2%	1.6%	0.1%	10.5%	89.5%
2011[16]	Gross	0.2%	4.3%	3.0%	1.0%	0.1%	8.6%	91.4%
2012[17]	Gross	0.2%	5.0%	1.9%	1.3%	0.1%	8.5%	91.5%
2013	Gross	0.2%	6.1%	2.2%	1.5%	0.2%	10.1%	89.9%
2014	Gross	0.1%	8.2%	2.7%	1.6%	0.2%	12.7%	87.3%
2015	Gross	0.2%	8.1%	2.1%	1.3%	0.4%	12.1%	87.9%
2016	Gross	0.1%	7.2%	2.2%	1.1%	0.4%	11.0%	89.0%
2017	Gross	0.2%	6.1%	1.7%	1.2%	0.3%	9.5%	90.5%

[13] For purposes of this report, correct payments are considered total Medicare FFS payments minus payments considered an improper payment as identified through CERT. Please note that instances of fraud or other problems not discerned during the CERT review could still be present.

[14] FY 1996-2003 improper payments were calculated as Overpayments - Underpayments

[15] FY 2004-2017 improper payments were calculated as Overpayments + Underpayments

[16] The FY 2011 improper payment rate reported in this table is adjusted for the prospective impact of late appeals and documentation.

[17] FY 2012 - 2017 improper payment rates reported in this table are adjusted for the impact of denied Part A inpatient claims under Part B.

Appendix B: Summary of Projected Improper Payments Unadjusted for A/B Rebill

Table B1: 2017 Improper Payment Rates and Projected Improper Payments by Claim Type (Dollars in Billions) (Unadjusted for Impact of A/B Rebilling)

Claim Type	Claims Sampled	Claims Reviewed	Total Payment	Projected Improper Payment	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
Part A (Total)	29,756	22,001	$275.6	$23.2	8.4%	7.7% - 9.2%	63.2%
Part A (Excluding Hospital IPPS)	8,626	7,501	$161.3	$18.2	11.3%	10.1% - 12.6%	49.7%
Part A (Hospital IPPS)	21,130	14,500	$114.3	$5.0	4.4%	3.9% - 4.8%	13.5%
Part B	17,550	17,000	$97.0	$9.9	10.2%	9.3% - 11.0%	26.8%
DMEPOS	11,357	11,001	$8.2	$3.7	44.6%	42.5% - 46.7%	10.0%
Overall	**58,663**	**50,002**	**$380.8**	**$36.7**	**9.6%**	**9.1% - 10.2%**	**100.0%**

Table B2: Comparison of 2016 and 2017 National Improper Payment Rates by Error Category (Unadjusted for Impact of A/B Rebilling)

Error Category	2016	2017				
	Overall	Overall	Part A Excluding Hospital IPPS	Part A Hospital IPPS	Part B	DMEPOS
No Documentation	0.1%	0.2%	0.1%	0.0%	0.1%	0.0%
Insufficient Documentation	7.2%	6.1%	3.5%	0.1%	1.7%	0.8%
Medical Necessity	2.4%	1.8%	0.9%	0.7%	0.1%	0.0%
Incorrect Coding	1.1%	1.2%	0.1%	0.4%	0.7%	0.0%
Other	0.4%	0.3%	0.1%	0.0%	0.0%	0.1%
Total	**11.2%**	**9.6%**	**4.8%**	**1.3%**	**2.6%**	**1.0%**

Table B3: Improper Payment Rate Categories by Percentage of 2017 National Improper Payments (Unadjusted for Impact of A/B Rebilling)

Error Category	Percent of Overall Improper Payments
No Documentation	1.7%
Insufficient Documentation	63.3%
Medical Necessity	18.7%
Incorrect Coding	12.9%
Other	3.5%
Total	**100.0%**

Table B4: Improper Payment Rates and Projected Improper Payments by Claim Type and Over/Under Payments (Dollars in Billions) (Unadjusted for Impact of A/B Rebilling)

Claim Type	Overall Improper Payments			Overpayments		Underpayments	
	Total Amount Paid	Projected Improper Payments	Improper Payment Rate	Projected Improper Payments	Improper Payment Rate	Projected Improper Payments	Improper Payment Rate
Part A (Total)	$275.6	$23.2	8.4%	$22.4	8.1%	$0.8	0.3%
Part A (Excluding Hospital IPPS)	$161.3	$18.2	11.3%	$18.2	11.3%	$0.1	0.0%
Part A(Hospital IPPS)	$114.3	$5.0	4.4%	$4.2	3.7%	$0.7	0.6%
Part B	$97.0	$9.9	10.2%	$9.5	9.8%	$0.3	0.3%
DMEPOS	$8.2	$3.7	44.6%	$3.6	44.5%	$0.0	0.1%
Total	**$380.8**	**$36.7**	**9.6%**	**$35.6**	**9.3%**	**$1.1**	**0.3%**

Table B5: 2017 Projected Improper Payments by Type of Error and Clinical Setting (Dollars in Billions) (Unadjusted for Impact of A/B Rebilling)

Error Category	DMEPOS	Home Health Agencies	Hospital Outpatient Departments	Acute Inpatient Hospitals	Physician Services (All Settings)	Skilled Nursing Facilities	Other Clinical Settings	Overall
No Documentation	$0.1	$0.0	$0.1	$0.0	$0.3	$0.1	$0.0	$0.6
Insufficient Documentation	$2.9	$5.4	$5.0	$0.7	$4.8	$2.8	$1.7	$23.2
Medical Necessity	$0.1	$0.3	$0.8	$5.3	$0.1	$0.0	$0.3	$6.9
Incorrect Coding	$0.0	$0.0	$0.2	$1.6	$2.5	$0.3	$0.2	$4.7
Other	$0.6	$0.4	$0.0	$0.1	$0.1	$0.2	$0.0	$1.3
Total	**$3.7**	**$6.1**	**$6.1**	**$7.7**	**$7.7**	**$3.3**	**$2.2**	**$36.7**

Table B6: Summary of National Improper Payment Rates by Year and by Error Category (Unadjusted for Impact of A/B Rebilling)[18]

Fiscal Year and Rate Type (Net/Gross)		No Doc Errors	Insufficient Document Errors	Medical Necessity Errors	Incorrect Coding Errors	Other Errors	Improper Payment Rate	Correct Payment Rate
1996[19]	Net	1.9%	4.5%	5.1%	1.2%	1.1%	13.8%	86.2%
1997	Net	2.1%	2.9%	4.2%	1.7%	0.5%	11.4%	88.6%
1998	Net	0.4%	0.8%	3.9%	1.3%	0.7%	7.1%	92.9%
1999	Net	0.6%	2.6%	2.6%	1.3%	0.9%	8.0%	92.0%
2000	Net	1.2%	1.3%	2.9%	1.0%	0.4%	6.8%	93.2%
2001	Net	0.8%	1.9%	2.7%	1.1%	-0.2%	6.3%	93.7%
2002	Net	0.5%	1.3%	3.6%	0.9%	0.0%	6.3%	93.7%
2003	Net	5.4%	2.5%	1.1%	0.7%	0.1%	9.8%	90.2%
2004[20]	Gross	3.1%	4.1%	1.6%	1.2%	0.2%	10.1%	89.9%
2005	Gross	0.7%	1.1%	1.6%	1.5%	0.2%	5.2%	94.8%
2006	Gross	0.6%	0.6%	1.4%	1.6%	0.2%	4.4%	95.6%
2007	Gross	0.6%	0.4%	1.3%	1.5%	0.2%	3.9%	96.1%
2008	Gross	0.2%	0.6%	1.4%	1.3%	0.1%	3.6%	96.4%
2009	Gross	0.2%	4.3%	6.3%	1.5%	0.1%	12.4%	87.6%
2010	Gross	0.1%	4.6%	4.2%	1.6%	0.1%	10.5%	89.5%
2011	Gross	0.2%	5.0%	3.4%	1.2%	0.1%	9.9%	90.1%
2012	Gross	0.2%	5.0%	2.6%	1.3%	0.1%	9.3%	90.7%
2013	Gross	0.2%	6.1%	2.8%	1.5%	0.2%	10.7%	89.3%
2014	Gross	0.1%	8.2%	3.6%	1.6%	0.2%	13.6%	86.4%
2015	Gross	0.2%	8.2%	2.5%	1.3%	0.4%	12.5%	87.5%
2016	Gross	0.1%	7.2%	2.4%	1.1%	0.4%	11.2%	88.8%
2017	Gross	0.2%	6.1%	1.8%	1.2%	0.3%	9.6%	90.4%

[18] For purposes of this report, correct payments are considered total Medicare FFS payments minus payments considered an improper payment as identified through CERT. Please note that instances of fraud or other problems not discerned during the CERT review could still be present.
[19] FY 1996-2003 improper payments were calculated as Overpayments - Underpayments
[20] FY 2004-2017 improper payments were calculated as Overpayments + absolute value of Underpayments

Table B7: Projected Improper Payments by Length of Stay (Unadjusted for Impact of A/B Rebilling)

Part A (Hospital IPPS) Length of Stay	Claims Reviewed	Improper Payment Rate	Projected Improper Payment	Percent of Overall Improper Payments
Medicare FFS	50,002	9.6%	$36.7	100.0%
Overall Part A(Hospital IPPS)	14,500	4.4%	$5.0	13.5%
0 or 1 day	1,685	18.2%	$1.4	3.7%
2 days	2,465	5.1%	$0.8	2.1%
3 days	2,472	4.8%	$0.8	2.0%
4 days	1,723	3.3%	$0.4	1.1%
5 days	1,245	3.2%	$0.3	0.8%
More than 5 days	4,910	2.6%	$1.4	3.9%

Table B8: Medicare FFS Projected Improper Payments by State (Dollars in Millions) (Unadjusted for Impact of A/B Rebilling)

State	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
TX	3,721	$3,805.4	14.8%	13.0% - 16.7%	10.4%
CA	3,980	$3,582.6	9.7%	8.2% - 11.3%	9.8%
FL	3,726	$2,549.4	9.3%	7.7% - 10.8%	6.9%
OH	1,841	$1,793.4	14.3%	11.3% - 17.3%	4.9%
PA	2,157	$1,648.4	9.6%	7.4% - 11.8%	4.5%
NY	2,864	$1,544.4	6.2%	4.5% - 7.8%	4.2%
KY	947	$1,541.0	20.6%	4.1% - 37.1%	4.2%
IL	2,155	$1,412.7	9.3%	7.0% - 11.6%	3.9%
MI	1,860	$1,224.0	9.4%	7.2% - 11.6%	3.3%
NJ	1,625	$1,078.0	8.4%	5.5% - 11.3%	2.9%
GA	1,593	$1,077.1	11.2%	8.4% - 14.0%	2.9%
AL	959	$1,068.3	15.8%	9.5% - 22.2%	2.9%
NC	1,858	$936.9	8.1%	6.0% - 10.2%	2.6%
VA	1,183	$927.3	9.9%	6.4% - 13.4%	2.5%
LA	785	$881.7	11.1%	5.6% - 16.7%	2.4%
IN	1,174	$853.7	10.4%	7.4% - 13.5%	2.3%
TN	1,450	$841.3	7.5%	5.3% - 9.7%	2.3%
AZ	755	$779.4	11.9%	5.0% - 18.8%	2.1%
MO	1,127	$734.4	10.4%	7.4% - 13.4%	2.0%
SC	818	$688.6	12.5%	8.9% - 16.0%	1.9%
MD	1,172	$629.9	5.8%	3.9% - 7.8%	1.7%
OK	752	$607.6	11.7%	6.8% - 16.6%	1.7%

State	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
MA	1,453	$549.1	4.3%	3.2% - 5.5%	1.5%
WA	837	$529.7	7.8%	5.0% - 10.7%	1.4%
MS	600	$503.6	10.8%	5.3% - 16.2%	1.4%
WI	1,073	$469.8	6.7%	2.7% - 10.7%	1.3%
AR	591	$445.0	11.2%	7.2% - 15.2%	1.2%
KS	584	$412.3	8.6%	4.1% - 13.0%	1.1%
CO	556	$321.2	7.9%	4.6% - 11.3%	0.9%
WV	365	$304.7	15.7%	9.6% - 21.8%	0.8%
UT	323	$303.3	13.3%	7.3% - 19.3%	0.8%
IA	496	$296.6	8.2%	3.6% - 12.9%	0.8%
MN	713	$229.4	3.9%	2.3% - 5.5%	0.6%
NV	346	$224.0	10.6%	6.4% - 14.8%	0.6%
NM	229	$196.4	11.4%	5.3% - 17.4%	0.5%
CT	534	$189.2	4.5%	2.6% - 6.3%	0.5%
OR	413	$188.9	4.7%	2.4% - 7.0%	0.5%
NE	308	$170.3	7.1%	3.1% - 11.2%	0.5%
NH	257	$151.7	9.1%	3.6% - 14.5%	0.4%
MT	141	$129.7	15.4%	6.9% - 23.9%	0.4%
SD	185	$119.8	9.4%	3.0% - 15.7%	0.3%
ME	284	$107.4	4.7%	1.7% - 7.8%	0.3%
DC	79	$97.4	22.4%	7.9% - 36.8%	0.3%
DE	192	$96.2	6.9%	3.0% - 10.7%	0.3%
ID	199	$94.6	7.1%	3.2% - 11.0%	0.3%
WY	81	$88.5	13.7%	(1.0%) - 28.4%	0.2%
US Territories	113	$74.6	8.8%	(0.5%) - 18.1%	0.2%
PR	82	$53.8	14.6%	4.5% - 24.8%	0.2%
RI	145	$52.9	2.6%	(0.2%) - 5.3%	0.1%
AK	72	$43.7	7.8%	0.3% - 15.2%	0.1%
ND	134	$37.7	3.6%	0.6% - 6.5%	0.1%
VT	115	$31.5	4.5%	1.7% - 7.2%	0.1%
All States	**50,002**	**$36,718.8**	**9.6%**	**9.1% - 10.2%**	**100.0%**

Table B9: Medicare FFS Projected Improper Payments by State – Parts A & B (Excluding Home Health and Hospice) (Dollars in Millions) (Unadjusted for Impact of A/B Rebilling)

State	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
CA	3,010	$2,653.4	8.2%	6.6% - 9.8%	7.2%
TX	2,788	$2,154.1	10.1%	8.5% - 11.7%	5.9%
FL	2,868	$1,551.9	6.7%	5.2% - 8.2%	4.2%
KY	690	$1,279.4	18.8%	0.6% - 37.1%	3.5%
OH	1,361	$1,238.2	11.3%	8.4% - 14.2%	3.4%
PA	1,603	$1,207.1	7.7%	5.5% - 9.8%	3.3%
NY	2,220	$996.3	4.3%	2.7% - 5.8%	2.7%
MI	1,381	$932.2	8.1%	5.9% - 10.3%	2.5%
IL	1,577	$831.1	6.2%	4.1% - 8.4%	2.3%
NJ	1,191	$829.9	7.2%	4.1% - 10.2%	2.3%
AL	697	$787.5	13.9%	6.6% - 21.2%	2.1%
VA	840	$752.9	8.9%	5.2% - 12.7%	2.1%
AZ	588	$672.9	11.4%	3.8% - 19.0%	1.8%
NC	1,368	$626.5	6.0%	4.1% - 7.9%	1.7%
GA	1,225	$604.3	7.3%	5.2% - 9.4%	1.7%
MD	929	$558.4	5.5%	3.5% - 7.4%	1.5%
MO	846	$535.0	8.5%	5.6% - 11.5%	1.5%
IN	851	$514.7	7.0%	4.3% - 9.7%	1.4%
TN	1,125	$488.6	4.7%	3.1% - 6.3%	1.3%
SC	558	$469.6	10.6%	7.1% - 14.2%	1.3%
MA	1,172	$401.9	3.5%	2.4% - 4.5%	1.1%
LA	562	$395.4	6.0%	2.0% - 10.0%	1.1%
KS	439	$374.1	8.9%	3.8% - 14.0%	1.0%
WA	617	$344.9	5.6%	3.4% - 7.9%	0.9%
AR	438	$327.3	9.1%	5.2% - 13.1%	0.9%
MS	414	$313.8	7.5%	2.8% - 12.3%	0.9%
WI	851	$293.2	4.7%	1.0% - 8.4%	0.8%
IA	343	$245.4	7.3%	2.6% - 11.9%	0.7%
OK	511	$212.0	5.1%	2.4% - 7.9%	0.6%
CO	388	$197.9	5.4%	2.9% - 8.0%	0.5%
WV	247	$181.6	11.0%	5.6% - 16.4%	0.5%
MN	535	$153.6	2.8%	1.6% - 4.0%	0.4%
OR	300	$147.9	4.0%	1.8% - 6.2%	0.4%
NE	220	$142.4	6.2%	2.1% - 10.3%	0.4%
NV	239	$132.6	7.5%	4.3% - 10.6%	0.4%

State	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
CT	388	$127.6	3.4%	1.5% - 5.2%	0.4%
MT	99	$110.1	14.2%	5.1% - 23.2%	0.3%
UT	212	$106.4	5.6%	2.5% - 8.7%	0.3%
DC	54	$81.7	19.8%	5.0% - 34.7%	0.2%
NM	151	$79.5	5.7%	2.0% - 9.3%	0.2%
SD	146	$79.1	6.5%	1.8% - 11.1%	0.2%
NH	186	$78.8	5.3%	1.8% - 8.8%	0.2%
ID	121	$72.7	6.3%	2.0% - 10.6%	0.2%
DE	126	$66.8	5.8%	1.7% - 10.0%	0.2%
ME	208	$45.3	2.2%	0.6% - 3.8%	0.1%
US Territories	84	$37.1	4.9%	(0.4%) - 10.2%	0.1%
AK	55	$35.5	6.5%	(0.9%) - 13.9%	0.1%
ND	105	$33.6	3.3%	0.3% - 6.4%	0.1%
PR	61	$30.7	10.7%	2.1% - 19.4%	0.1%
VT	85	$24.1	3.7%	1.0% - 6.5%	0.1%
WY	43	$19.2	3.5%	(2.7%) - 9.7%	0.1%
RI	107	$10.4	0.6%	(0.0%) - 1.1%	0.0%
All States	**37,223**	**$24,586.5**	**7.3%**	**6.7% - 7.9%**	**67.0%**

Table B10: Medicare FFS Projected Improper Payments by State – DMEPOS Only (Dollars in Millions) (Unadjusted for Impact of A/B Rebilling)

State	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
TX	721	$257.0	49.8%	42.1% - 57.4%	0.7%
CA	802	$236.6	40.4%	33.0% - 47.7%	0.6%
FL	684	$216.7	38.9%	31.3% - 46.5%	0.6%
NY	581	$198.0	57.0%	47.6% - 66.4%	0.5%
IL	495	$191.8	55.1%	47.3% - 62.9%	0.5%
PA	492	$148.7	45.3%	36.9% - 53.7%	0.4%
NC	446	$146.5	45.5%	37.1% - 54.0%	0.4%
NJ	389	$146.2	60.0%	51.6% - 68.4%	0.4%
MI	416	$143.6	44.1%	33.8% - 54.3%	0.4%
OH	416	$139.0	52.5%	40.2% - 64.8%	0.4%
TN	293	$110.8	51.7%	42.0% - 61.3%	0.3%
KY	234	$108.3	58.1%	44.0% - 72.2%	0.3%
IN	292	$102.1	46.9%	33.5% - 60.3%	0.3%
VA	308	$94.8	42.0%	31.7% - 52.4%	0.3%

State	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
AL	221	$87.0	31.9%	12.8% - 51.0%	0.2%
GA	316	$86.4	37.3%	26.8% - 47.8%	0.2%
MA	235	$81.3	52.0%	37.5% - 66.4%	0.2%
OK	187	$71.2	48.6%	31.5% - 65.7%	0.2%
WI	193	$63.0	47.1%	30.1% - 64.2%	0.2%
LA	153	$61.6	53.3%	38.1% - 68.5%	0.2%
WV	109	$59.3	53.0%	32.5% - 73.5%	0.2%
MD	222	$58.2	33.9%	15.7% - 52.0%	0.2%
MO	246	$57.1	29.0%	17.7% - 40.3%	0.2%
MS	166	$55.1	37.9%	26.8% - 48.9%	0.2%
CO	154	$53.9	37.2%	21.2% - 53.2%	0.2%
AZ	144	$52.7	52.7%	34.2% - 71.3%	0.1%
CT	127	$48.5	63.4%	49.3% - 77.5%	0.1%
UT	97	$47.5	59.8%	41.6% - 78.0%	0.1%
AR	136	$46.3	42.6%	27.6% - 57.6%	0.1%
WA	200	$45.0	33.3%	20.0% - 46.7%	0.1%
SC	216	$42.8	29.7%	19.4% - 40.0%	0.1%
IA	144	$38.6	41.6%	27.5% - 55.8%	0.1%
KS	126	$37.5	20.6%	5.7% - 35.5%	0.1%
MN	158	$35.0	39.0%	25.6% - 52.3%	0.1%
OR	101	$30.5	40.2%	23.8% - 56.6%	0.1%
NE	87	$27.9	47.9%	27.7% - 68.1%	0.1%
NV	94	$27.2	42.8%	27.9% - 57.7%	0.1%
WY	36	$22.6	46.4%	14.1% - 78.7%	0.1%
ID	71	$21.9	41.0%	19.4% - 62.6%	0.1%
ME	67	$20.4	45.7%	26.8% - 64.7%	0.1%
MT	40	$19.6	56.0%	35.7% - 76.3%	0.1%
NH	63	$19.1	49.7%	30.3% - 69.2%	0.1%
NM	63	$18.5	36.7%	19.9% - 53.5%	0.1%
DE	57	$16.9	36.9%	16.8% - 57.1%	0.1%
SD	37	$9.3	34.1%	12.8% - 55.3%	0.0%
RI	31	$6.4	39.3%	6.4% - 72.3%	0.0%
All States (Incl. States Not Listed)	**11,001**	**$3,654.7**	**44.6%**	**42.5% - 46.7%**	**10.0%**

Table B11: Medicare FFS Projected Improper Payments by State – Home Health and Hospice Only (Dollars in Millions) (Unadjusted for Impact of A/B Rebilling)

State	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
TX	212	$1,394.3	37.4%	30.0% - 44.9%	3.8%
FL	174	$780.8	20.3%	13.9% - 26.7%	2.1%
CA	168	$692.6	17.9%	11.5% - 24.2%	1.9%
LA	70	$424.7	35.8%	22.8% - 48.8%	1.2%
OH	64	$416.2	31.6%	17.5% - 45.6%	1.1%
IL	83	$389.8	26.8%	16.8% - 36.7%	1.1%
GA	52	$386.3	34.8%	19.7% - 50.0%	1.1%
NY	63	$350.1	28.5%	16.0% - 40.9%	1.0%
OK	54	$324.5	35.5%	21.6% - 49.4%	0.9%
PA	62	$292.7	27.0%	14.4% - 39.5%	0.8%
TN	32	$241.9	42.3%	22.2% - 62.4%	0.7%
IN	31	$236.9	37.8%	19.8% - 55.8%	0.7%
AL	41	$193.7	24.3%	10.2% - 38.4%	0.5%
SC	44	$176.3	18.3%	6.6% - 30.0%	0.5%
NC	44	$164.0	21.3%	8.4% - 34.2%	0.5%
MI	63	$148.2	13.3%	3.9% - 22.7%	0.4%
MO	35	$142.3	23.0%	6.9% - 39.1%	0.4%
NJ	45	$101.8	10.4%	0.5% - 20.4%	0.3%
VA	35	$79.6	10.9%	0.4% - 21.3%	0.2%
MA	46	$65.8	6.9%	0.1% - 13.8%	0.2%
All States (Incl. States Not Listed)	**1,778**	**$8,477.5**	**24.1%**	**21.9% - 26.3%**	**23.1%**

Appendix C: Medicare Access and CHIP Reauthorization Act of 2015 Section 517 Reporting

Table C1: Services Paid under the Physician Fee Schedule (PFS) in which the Fee Schedule Amount is in Excess of $250 and the Improper Payment Rate is in Excess of 20 Percent

There were no services that had an improper payment rate that was in excess of 20 percent that also had a physician fee schedule amount greater than $250.

Appendix D: Projected Improper Payments and Type of Error by Type of Service for Each Claim Type

This series of tables is sorted in descending order by projected improper payments. All estimates in these tables are based on a minimum of 30 lines in the sample. For a full listing of all services with 30 or more claims, see Appendix G.

Table D1: Top 20 Service Types with Highest Improper Payments: Part B

Part B Services (BETOS Codes)	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percentage of Service Type Improper Payments by Type of Error					Percent of Overall Improper Payments
				No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other	
Lab tests - other (non-Medicare fee schedule)	$1,121,237,359	32.4%	27.0% - 37.8%	0.5%	98.9%	0.6%	0.0%	0.0%	3.1%
Office visits - established	$832,300,002	5.5%	4.5% - 6.5%	2.6%	29.8%	0.0%	67.6%	0.0%	2.3%
Hospital visit - subsequent	$830,470,464	15.2%	13.5% - 16.8%	5.8%	47.1%	0.1%	46.6%	0.4%	2.3%
Hospital visit - initial	$765,933,412	26.1%	24.0% - 28.1%	3.2%	21.9%	0.2%	74.5%	0.3%	2.1%
Other drugs	$744,482,041	7.6%	2.5% - 12.6%	0.6%	91.4%	1.0%	7.0%	0.0%	2.0%
Ambulance	$687,458,438	15.5%	12.6% - 18.4%	2.7%	57.3%	36.9%	2.3%	1.0%	1.9%
Minor procedures - other (Medicare fee schedule)	$560,063,138	17.4%	13.4% - 21.4%	1.1%	88.2%	1.1%	9.1%	0.4%	1.5%
Office visits - new	$524,625,770	18.4%	15.7% - 21.1%	3.6%	15.8%	0.0%	72.6%	8.0%	1.4%
Nursing home visit	$349,210,260	17.3%	13.9% - 20.6%	11.2%	35.9%	0.0%	52.9%	0.0%	1.0%
Specialist - psychiatry	$310,744,929	25.7%	17.1% - 34.3%	1.7%	91.9%	0.0%	6.5%	0.0%	0.8%
Emergency room visit	$282,298,975	12.6%	10.4% - 14.8%	4.4%	11.0%	0.0%	84.6%	0.0%	0.8%
Chiropractic	$234,938,161	41.7%	34.7% - 48.6%	5.5%	89.9%	3.8%	0.9%	0.0%	0.6%
Specialist - other	$186,190,310	20.3%	11.9% - 28.8%	0.0%	97.2%	0.0%	2.8%	0.0%	0.5%
Hospital visit - critical care	$183,660,601	19.1%	14.4% - 23.8%	0.9%	28.5%	0.0%	70.7%	0.0%	0.5%
Anesthesia	$135,762,748	7.0%	1.0% - 13.0%	17.3%	82.7%	0.0%	0.0%	0.0%	0.4%
Other tests - other	$134,307,177	8.6%	4.5% - 12.6%	9.5%	90.3%	0.0%	0.2%	0.0%	0.4%
Minor procedures - musculoskeletal	$107,899,145	8.9%	1.4% - 16.4%	0.0%	99.3%	0.0%	0.7%	0.0%	0.3%
Minor procedures - skin	$92,681,787	7.1%	2.7% - 11.5%	0.0%	90.9%	0.0%	9.1%	0.0%	0.3%
Lab tests - other (Medicare fee schedule)	$90,336,566	5.9%	(0.2%) - 11.9%	0.0%	98.9%	0.0%	1.1%	0.0%	0.2%
Ambulatory procedures - skin	$88,103,714	3.9%	0.8% - 7.0%	0.0%	78.8%	17.1%	4.1%	0.0%	0.2%

Part B Services (BETOS Codes)	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percentage of Service Type Improper Payments by Type of Error					Percent of Overall Improper Payments
				No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other	
All Type of Services (Incl. Codes Not Listed)	**$9,852,647,684**	**10.2%**	**9.3% - 11.0%**	**3.0%**	**65.6%**	**3.4%**	**27.1%**	**0.9%**	**26.8%**

Table D2: Top 20 Service Types with Highest Improper Payments: DMEPOS

DMEPOS (HCPCS)	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percentage of Service Type Improper Payments by Type of Error					Percent of Overall Improper Payments
				No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other	
Oxygen Supplies/Equipment	$570,310,929	52.8%	49.6% - 56.1%	2.0%	84.9%	0.3%	0.0%	12.8%	1.6%
CPAP	$494,860,284	59.0%	52.2% - 65.7%	0.6%	87.8%	0.0%	0.0%	11.6%	1.3%
Lower Limb Orthoses	$319,628,556	66.7%	59.4% - 73.9%	2.1%	92.2%	1.5%	0.0%	4.2%	0.9%
Ventilators	$192,280,208	57.4%	49.6% - 65.1%	0.4%	25.4%	58.0%	0.0%	16.2%	0.5%
Infusion Pumps & Related Drugs	$148,206,151	23.1%	17.8% - 28.4%	0.0%	76.7%	1.1%	0.0%	22.3%	0.4%
Glucose Monitor	$130,830,692	47.9%	42.0% - 53.8%	1.7%	70.1%	4.2%	11.6%	12.4%	0.4%
Surgical Dressings	$126,899,334	71.3%	62.0% - 80.6%	0.8%	87.8%	0.1%	0.0%	11.4%	0.3%
LSO	$116,674,416	52.5%	41.5% - 63.5%	3.1%	79.3%	0.9%	0.0%	16.8%	0.3%
Nebulizers & Related Drugs	$106,209,329	13.4%	9.5% - 17.2%	2.7%	88.5%	0.1%	0.0%	8.7%	0.3%
Urological Supplies	$105,993,266	38.2%	30.3% - 46.2%	2.8%	89.6%	0.0%	0.0%	7.6%	0.3%
Lower Limb Prostheses	$102,951,896	24.5%	5.7% - 43.3%	0.0%	89.6%	0.0%	0.0%	10.4%	0.3%
Immunosuppressive Drugs	$93,483,725	27.6%	20.8% - 34.3%	1.4%	57.4%	0.0%	0.3%	40.9%	0.3%
Diabetic Shoes	$92,321,536	67.8%	58.3% - 77.2%	0.1%	84.9%	2.5%	0.0%	12.4%	0.3%
All Policy Groups with Less than 30 Claims	$88,855,077	65.1%	49.0% - 81.2%	0.2%	73.3%	1.8%	0.0%	24.7%	0.2%
Ostomy Supplies	$85,519,409	45.3%	37.6% - 52.9%	0.4%	81.3%	0.0%	0.0%	18.2%	0.2%
Enteral Nutrition	$72,741,148	37.0%	28.1% - 45.8%	2.6%	76.7%	2.0%	0.0%	18.6%	0.2%
Respiratory Assist Device	$71,787,176	62.7%	54.8% - 70.7%	0.9%	95.0%	1.6%	0.0%	2.4%	0.2%
Wheelchairs Manual	$70,720,235	73.5%	60.3% - 86.7%	0.6%	88.5%	0.0%	0.0%	10.9%	0.2%
Parenteral Nutrition	$70,149,030	30.4%	16.4% - 44.3%	0.0%	50.2%	0.0%	0.0%	49.8%	0.2%
Upper Limb Orthoses	$69,327,240	76.1%	67.8% - 84.4%	0.0%	77.3%	0.5%	0.0%	22.2%	0.2%

DMEPOS (HCPCS)	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percentage of Service Type Improper Payments by Type of Error					Percent of Overall Improper Payments
				No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other	
All Type of Services (Incl. Codes Not Listed)	**$3,654,724,769**	**44.6%**	**42.5% - 46.7%**	**1.4%**	**78.7%**	**4.0%**	**0.4%**	**15.5%**	**10.0%**

Table D3: Top 20 Service Types with Highest Improper Payments: Part A Excluding Hospital IPPS

Part A Excluding Hospital IPPS Services (TOB)	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percentage of Service Type Improper Payments by Type of Error					Percent of Overall Improper Payments
				No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other	
Home Health	$6,088,612,740	32.3%	29.3% - 35.3%	0.7%	89.0%	4.3%	0.3%	5.8%	16.6%
SNF Inpatient	$3,081,191,079	9.7%	7.9% - 11.4%	2.4%	84.5%	0.0%	7.9%	5.2%	8.4%
Hospital Inpatient (Part A)	$2,769,231,702	27.9%	23.8% - 32.0%	0.0%	7.2%	92.7%	0.0%	0.0%	7.5%
Nonhospital based hospice	$2,257,140,911	15.0%	11.8% - 18.3%	5.4%	57.2%	31.8%	4.4%	1.2%	6.1%
Hospital Outpatient	$1,909,714,440	3.2%	1.9% - 4.5%	0.3%	94.9%	0.6%	3.9%	0.4%	5.2%
All Codes With Less Than 30 Claims	$755,175,571	28.2%	(15.6%) - 72.1%	0.0%	100.0%	0.0%	0.0%	0.0%	2.1%
Clinic ESRD	$521,628,366	4.8%	3.1% - 6.5%	0.0%	100.0%	0.0%	0.0%	0.0%	1.4%
CAH	$349,165,586	7.9%	3.9% - 11.9%	0.0%	87.7%	10.9%	1.4%	0.0%	1.0%
SNF Inpatient Part B	$167,916,283	6.0%	(0.8%) - 12.9%	0.0%	94.4%	4.1%	1.4%	0.0%	0.5%
Hospital based hospice	$131,763,614	10.5%	0.7% - 20.4%	6.6%	93.3%	0.0%	0.1%	0.0%	0.4%
Hospital Other Part B	$97,857,384	14.8%	7.4% - 22.1%	2.4%	96.8%	0.0%	0.8%	0.0%	0.3%
Clinic OPT	$45,922,071	7.6%	(0.9%) - 16.1%	0.0%	100.0%	0.0%	0.0%	0.0%	0.1%
Clinical Rural Health	$32,183,158	3.1%	0.1% - 6.1%	0.0%	100.0%	0.0%	0.0%	0.0%	0.1%
Hospital Inpatient Part B	$12,650,930	3.7%	(0.5%) - 8.0%	9.8%	90.2%	0.0%	0.0%	0.0%	0.0%
SNF Outpatient	$10,111,769	4.1%	(1.1%) - 9.3%	0.0%	90.6%	0.0%	6.5%	2.9%	0.0%
Clinic CORF	$5,862,882	20.9%	8.4% - 33.5%	0.0%	83.2%	0.0%	16.8%	0.0%	0.0%
FQHC	$0	0.0%	0.0% - 0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
All Type of Services (Incl. Codes Not Listed)	**$18,236,128,488**	**11.3%**	**10.1% - 12.6%**	**1.4%**	**73.4%**	**19.8%**	**2.4%**	**3.0%**	**49.7%**

Table D4: Top 20 Service Types with Highest Improper Payments: Part A Hospital IPPS

Part A Hospital IPPS Services (MS-DRGs)	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percentage of Service Type Improper Payments by Type of Error					Percent of Overall Improper Payments
				No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other	
Major Joint Replacement Or Reattachment Of Lower Extremity (469, 470)	$301,907,996	4.6%	2.9% - 6.2%	0.0%	63.5%	29.5%	4.2%	2.8%	0.8%
Heart Failure & Shock (291, 292, 293)	$248,460,547	6.6%	0.3% - 13.0%	0.0%	0.0%	78.4%	21.6%	0.0%	0.7%
Infectious & Parasitic Diseases W O.R. Procedure (853, 854, 855)	$169,084,231	5.3%	1.1% - 9.4%	0.0%	0.0%	2.0%	98.0%	0.0%	0.5%
Psychoses (885)	$163,047,797	4.3%	2.4% - 6.3%	0.0%	69.7%	30.2%	0.1%	0.0%	0.4%
G.I. Hemorrhage (377, 378, 379)	$133,691,713	7.6%	2.6% - 12.5%	0.0%	0.0%	63.7%	36.3%	0.0%	0.4%
Other Vascular Procedures (252, 253, 254)	$124,714,796	7.9%	3.4% - 12.4%	0.0%	1.3%	77.8%	21.0%	0.0%	0.3%
Septicemia Or Severe Sepsis WO MV >96 Hours (871, 872)	$103,191,439	1.3%	(0.5%) - 3.1%	0.0%	0.0%	0.0%	100.0%	0.0%	0.3%
Extensive O.R. Procedure Unrelated To Principal Diagnosis (981, 982, 983)	$100,792,373	6.5%	0.8% - 12.3%	0.0%	0.0%	53.0%	47.0%	0.0%	0.3%
Pulmonary Edema & Respiratory Failure (189)	$94,938,328	6.1%	0.2% - 12.1%	0.0%	17.7%	66.9%	15.4%	0.0%	0.3%
Renal Failure (682, 683, 684)	$87,488,306	3.9%	1.2% - 6.7%	0.0%	0.0%	52.3%	47.7%	0.0%	0.2%
Chest Pain (313)	$85,276,990	30.5%	23.1% - 37.8%	1.7%	1.9%	94.9%	1.5%	0.0%	0.2%
Degenerative Nervous System Disorders (056, 057)	$84,194,484	10.9%	6.2% - 15.7%	0.0%	14.8%	81.0%	4.2%	0.0%	0.2%
Kidney & Urinary Tract Infections (689, 690)	$78,762,703	5.4%	3.5% - 7.4%	4.6%	9.4%	63.1%	22.9%	0.0%	0.2%
Esophagitis, Gastroent & Misc Digest Disorders (391, 392)	$73,826,857	6.0%	3.8% - 8.3%	0.0%	0.0%	88.0%	12.0%	0.0%	0.2%
Chronic Obstructive Pulmonary Disease (190, 191, 192)	$71,118,779	3.7%	1.3% - 6.1%	0.0%	0.0%	81.1%	18.9%	0.0%	0.2%
Misc Disorders Of Nutrition,metabolism fluids/Electrolytes (640, 641)	$66,130,022	6.5%	1.9% - 11.0%	0.0%	0.0%	78.0%	22.0%	0.0%	0.2%
Syncope & Collapse (312)	$65,090,577	15.3%	9.8% - 20.8%	0.0%	0.0%	91.8%	8.2%	0.0%	0.2%

Part A Hospital IPPS Services (MS-DRGs)	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percentage of Service Type Improper Payments by Type of Error					Percent of Overall Improper Payments
				No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other	
Circulatory Disorders Except AMI, W Card Cath (286, 287)	$64,528,913	6.3%	3.2% - 9.5%	0.0%	3.2%	55.0%	41.7%	0.0%	0.2%
Back & Neck Proc Exc Spinal Fusion (518, 519, 520)	$64,012,037	22.8%	16.7% - 28.9%	0.0%	7.8%	84.1%	8.1%	0.0%	0.2%
Cardiac Defibrillator Implant WO Cardiac Cath (226, 227)	$60,035,769	14.7%	11.7% - 17.6%	0.0%	5.7%	70.4%	11.9%	12.0%	0.2%
All Type of Services (Incl. Codes Not Listed)	**$4,975,260,494**	**4.4%**	**3.9% - 4.8%**	**0.2%**	**10.1%**	**55.6%**	**32.4%**	**1.6%**	**13.5%**

Appendix E: Improper Payment Rates and Type of Error by Type of Service for Each Claim Type

Appendix E tables are sorted in descending order by improper payment rate. For a full listing of all services with 30 or more claims, see Appendix G.

Table E1: Top 20 Service Type Improper Payment Rates: Part B

Part B Services (BETOS Codes)	Improper Payment Rate	95% Confidence Interval	Percentage of Service Type Improper Payments by Type of Error					Percent of Overall Improper Payments
			No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other	
Other - non-Medicare fee schedule	60.1%	44.7% - 75.5%	0.0%	89.9%	10.1%	0.0%	0.0%	0.1%
Undefined codes	43.5%	31.2% - 55.8%	0.0%	15.5%	84.5%	0.0%	0.0%	0.0%
Chiropractic	41.7%	34.7% - 48.6%	5.5%	89.9%	3.8%	0.9%	0.0%	0.6%
Lab tests - other (non-Medicare fee schedule)	32.4%	27.0% - 37.8%	0.5%	98.9%	0.6%	0.0%	0.0%	3.1%
Lab tests - bacterial cultures	30.3%	19.5% - 41.2%	0.0%	97.7%	2.3%	0.0%	0.0%	0.1%
Lab tests - urinalysis	26.1%	19.6% - 32.5%	1.4%	98.4%	0.1%	0.1%	0.0%	0.0%
Hospital visit - initial	26.1%	24.0% - 28.1%	3.2%	21.9%	0.2%	74.5%	0.3%	2.1%
Specialist - psychiatry	25.7%	17.1% - 34.3%	1.7%	91.9%	0.0%	6.5%	0.0%	0.8%
Other - Medicare fee schedule	24.5%	9.6% - 39.5%	0.0%	99.9%	0.0%	0.0%	0.1%	0.1%
Specialist - other	20.3%	11.9% - 28.8%	0.0%	97.2%	0.0%	2.8%	0.0%	0.5%
Lab tests - blood counts	19.2%	15.3% - 23.0%	2.7%	89.0%	0.0%	8.3%	0.0%	0.2%
Hospital visit - critical care	19.1%	14.4% - 23.8%	0.9%	28.5%	0.0%	70.7%	0.0%	0.5%
Office visits - new	18.4%	15.7% - 21.1%	3.6%	15.8%	0.0%	72.6%	8.0%	1.4%
Standard imaging - chest	17.9%	12.8% - 23.1%	1.8%	98.2%	0.0%	0.0%	0.0%	0.1%
Echography/ultrasonography - carotid arteries	17.5%	(0.3%) - 35.4%	0.0%	100.0%	0.0%	0.0%	0.0%	0.2%
Minor procedures - other (Medicare fee schedule)	17.4%	13.4% - 21.4%	1.1%	88.2%	1.1%	9.1%	0.4%	1.5%
Nursing home visit	17.3%	13.9% - 20.6%	11.2%	35.9%	0.0%	52.9%	0.0%	1.0%
Home visit	16.9%	3.7% - 30.1%	0.0%	63.9%	0.0%	36.1%	0.0%	0.1%
Ambulance	15.5%	12.6% - 18.4%	2.7%	57.3%	36.9%	2.3%	1.0%	1.9%
Lab tests - routine venipuncture (non Medicare fee schedule)	15.5%	12.4% - 18.6%	1.9%	5.7%	92.4%	0.0%	0.0%	0.1%
Overall (incl. Service Types Not Listed)	**10.2%**	**9.3% - 11.0%**	**3.0%**	**65.6%**	**3.4%**	**27.1%**	**0.9%**	**26.8%**

Table E2: Top 20 Service Type Improper Payment Rates: DMEPOS

DMEPOS (HCPCS)	Improper Payment Rate	95% Confidence Interval	Percentage of Service Type Improper Payments by Type of Error					Percent of Overall Improper Payments
			No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other	
Orthopedic Footwear	97.5%	93.7% -101.2%	0.0%	62.5%	22.4%	0.0%	15.1%	0.0%
Commodes/Bed Pans/Urinals	96.5%	93.6% - 99.4%	3.1%	82.2%	0.0%	0.0%	14.7%	0.1%
TENS	86.6%	71.9% -101.4%	0.0%	91.0%	9.0%	0.0%	0.0%	0.0%
Lenses	82.5%	75.4% - 89.7%	1.0%	80.3%	0.0%	0.0%	18.7%	0.1%
Misc. DMEPOS	80.2%	58.3% -102.2%	0.0%	41.5%	0.0%	0.0%	58.5%	0.1%
Hospital Beds/Accessories	78.5%	72.5% - 84.6%	1.3%	87.4%	2.0%	0.0%	9.3%	0.2%
Upper Limb Orthoses	76.1%	67.8% - 84.4%	0.0%	77.3%	0.5%	0.0%	22.2%	0.2%
Wheelchairs Manual	73.5%	60.3% - 86.7%	0.6%	88.5%	0.0%	0.0%	10.9%	0.2%
Repairs/DMEPOS	72.1%	52.4% - 91.8%	15.6%	82.8%	0.0%	0.0%	1.7%	0.0%
Surgical Dressings	71.3%	62.0% - 80.6%	0.8%	87.8%	0.1%	0.0%	11.4%	0.3%
Support Surfaces	71.1%	46.4% - 95.7%	0.0%	92.9%	0.0%	0.0%	7.1%	0.1%
Canes/Crutches	68.4%	53.4% - 83.5%	0.0%	95.5%	0.0%	0.0%	4.5%	0.0%
Diabetic Shoes	67.8%	58.3% - 77.2%	0.1%	84.9%	2.5%	0.0%	12.4%	0.3%
Walkers	67.8%	52.6% - 82.9%	2.2%	78.4%	0.0%	0.0%	19.4%	0.1%
Lower Limb Orthoses	66.7%	59.4% - 73.9%	2.1%	92.2%	1.5%	0.0%	4.2%	0.9%
All Policy Groups with Less than 30 Claims	65.1%	49.0% - 81.2%	0.2%	73.3%	1.8%	0.0%	24.7%	0.2%
Tracheostomy Supplies	63.7%	37.5% - 90.0%	4.2%	83.8%	0.0%	0.0%	11.9%	0.0%
Respiratory Assist Device	62.7%	54.8% - 70.7%	0.9%	95.0%	1.6%	0.0%	2.4%	0.2%
Patient Lift	62.6%	48.4% - 76.7%	0.0%	86.7%	0.0%	0.0%	13.3%	0.0%
CPAP	59.0%	52.2% - 65.7%	0.6%	87.8%	0.0%	0.0%	11.6%	1.3%
Overall (incl. Service Types Not Listed)	**44.6%**	**42.5% - 46.7%**	**1.4%**	**78.7%**	**4.0%**	**0.4%**	**15.5%**	**10.0%**

Table E3: Top 20 Service Type Improper Payment Rates: Part A Excluding Hospital IPPS

Part A Excluding Hospital IPPS Services (TOB)	Improper Payment Rate	95% Confidence Interval	Percentage of Service Type Improper Payments by Type of Error					Percent of Overall Improper Payments
			No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other	
Home Health	32.3%	29.3% - 35.3%	0.7%	89.0%	4.3%	0.3%	5.8%	16.6%
All Codes With Less Than 30 Claims	28.2%	(15.6%) - 72.1%	0.0%	100.0%	0.0%	0.0%	0.0%	2.1%
Hospital Inpatient (Part A)	27.9%	23.8% - 32.0%	0.0%	7.2%	92.7%	0.0%	0.0%	7.5%
Clinic CORF	20.9%	8.4% - 33.5%	0.0%	83.2%	0.0%	16.8%	0.0%	0.0%
Nonhospital based hospice	15.0%	11.8% - 18.3%	5.4%	57.2%	31.8%	4.4%	1.2%	6.1%
Hospital Other Part B	14.8%	7.4% - 22.1%	2.4%	96.8%	0.0%	0.8%	0.0%	0.3%
Hospital based hospice	10.5%	0.7% - 20.4%	6.6%	93.3%	0.0%	0.1%	0.0%	0.4%
SNF Inpatient	9.7%	7.9% - 11.4%	2.4%	84.5%	0.0%	7.9%	5.2%	8.4%
CAH	7.9%	3.9% - 11.9%	0.0%	87.7%	10.9%	1.4%	0.0%	1.0%
Clinic OPT	7.6%	(0.9%) - 16.1%	0.0%	100.0%	0.0%	0.0%	0.0%	0.1%
SNF Inpatient Part B	6.0%	(0.8%) - 12.9%	0.0%	94.4%	4.1%	1.4%	0.0%	0.5%
Clinic ESRD	4.8%	3.1% - 6.5%	0.0%	100.0%	0.0%	0.0%	0.0%	1.4%
SNF Outpatient	4.1%	(1.1%) - 9.3%	0.0%	90.6%	0.0%	6.5%	2.9%	0.0%
Hospital Inpatient Part B	3.7%	(0.5%) - 8.0%	9.8%	90.2%	0.0%	0.0%	0.0%	0.0%
Hospital Outpatient	3.2%	1.9% - 4.5%	0.3%	94.9%	0.6%	3.9%	0.4%	5.2%
Clinical Rural Health	3.1%	0.1% - 6.1%	0.0%	100.0%	0.0%	0.0%	0.0%	0.1%
FQHC	0.0%	0.0% - 0.0%	N/A	N/A	N/A	N/A	N/A	0.0%
Overall (incl. Service Types Not Listed)	**11.3%**	**10.1% - 12.6%**	**1.4%**	**73.4%**	**19.8%**	**2.4%**	**3.0%**	**49.7%**

Table E4: Top 20 Service Type Improper Payment Rates: Part A Hospital IPPS

Part A Hospital IPPS Services (MS-DRGs)	Improper Payment Rate	95% Confidence Interval	Percentage of Service Type Improper Payments by Type of Error					Percent of Overall Improper Payments
			No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other	
Chest Pain (313)	30.5%	23.1% - 37.8%	1.7%	1.9%	94.9%	1.5%	0.0%	0.2%
Dysequilibrium (149)	29.4%	15.8% - 43.1%	0.0%	0.0%	94.1%	5.9%	0.0%	0.1%
Cranial & Peripheral Nerve Disorders (073, 074)	24.9%	11.8% - 37.9%	0.0%	5.7%	80.9%	13.4%	0.0%	0.1%
Back & Neck Proc Exc Spinal Fusion (518, 519, 520)	22.8%	16.7% - 28.9%	0.0%	7.8%	84.1%	8.1%	0.0%	0.2%
Signs & Symptoms Of Musculoskeletal System & Conn Tissue (555, 556)	22.0%	4.6% - 39.4%	0.0%	0.0%	98.0%	2.0%	0.0%	0.1%
Hypertension (304, 305)	18.1%	4.2% - 32.0%	0.0%	0.0%	74.8%	25.2%	0.0%	0.1%
Fx, Sprn, Strn & Disl Except Femur, Hip, Pelvis & Thigh (562, 563)	18.0%	7.7% - 28.4%	0.0%	0.0%	96.0%	4.0%	0.0%	0.1%
Signs & Symptoms (947, 948)	17.0%	7.8% - 26.1%	0.0%	0.0%	82.3%	12.2%	5.5%	0.2%
Fractures Of Hip & Pelvis (535, 536)	16.9%	6.4% - 27.5%	0.0%	0.0%	81.9%	18.1%	0.0%	0.1%
Uterine & Adnexa Proc For Non-Malignancy (742, 743)	15.4%	7.2% - 23.7%	0.0%	17.6%	78.7%	3.6%	0.0%	0.0%
Syncope & Collapse (312)	15.3%	9.8% - 20.8%	0.0%	0.0%	91.8%	8.2%	0.0%	0.2%
Bone Diseases & Arthropathies (553, 554)	15.0%	4.9% - 25.1%	0.0%	0.0%	89.7%	10.3%	0.0%	0.0%
Cardiac Defibrillator Implant WO Cardiac Cath (226, 227)	14.7%	11.7% - 17.6%	0.0%	5.7%	70.4%	11.9%	12.0%	0.2%
Transient Ischemia (069)	14.3%	8.9% - 19.8%	0.0%	0.0%	98.2%	1.8%	0.0%	0.1%
Medical Back Problems (551, 552)	11.9%	7.3% - 16.4%	0.0%	0.0%	84.9%	15.1%	0.0%	0.1%
Degenerative Nervous System Disorders (056, 057)	10.9%	6.2% - 15.7%	0.0%	14.8%	81.0%	4.2%	0.0%	0.2%
Other Skin, Subcut Tiss & Breast Proc (579, 580, 581)	10.8%	0.8% - 20.7%	0.0%	0.0%	70.4%	29.6%	0.0%	0.1%
Alcohol/Drug Abuse Or Dependence WO Rehabilitation Therapy (896, 897)	10.7%	1.1% - 20.3%	0.0%	82.3%	12.5%	5.2%	0.0%	0.1%
Other Respiratory System Diagnoses (205, 206)	10.5%	0.5% - 20.5%	0.0%	0.0%	72.2%	27.8%	0.0%	0.0%
Seizures (100, 101)	10.5%	4.2% - 16.7%	10.8%	0.0%	70.8%	18.4%	0.0%	0.1%
Overall (incl. Service Types Not Listed)	**4.4%**	**3.9% - 4.8%**	**0.2%**	**10.1%**	**55.6%**	**32.4%**	**1.6%**	**13.5%**

Appendix F: Projected Improper Payments by Type of Service for Each Type of Error

Appendix F tables are sorted in descending order by projected improper payments.

Table F1: Top 20 Types of Services with No Documentation Errors

Medicare FFS Services	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
Nonhospital based hospice	$122,426,256	0.8%	(0.1%) - 1.8%	0.3%
SNF Inpatient	$75,087,693	0.2%	(0.2%) - 0.6%	0.2%
Hospital visit - subsequent	$48,298,640	0.9%	0.5% - 1.3%	0.1%
Home Health	$42,962,587	0.2%	(0.1%) - 0.5%	0.1%
Nursing home visit	$39,063,002	1.9%	0.3% - 3.6%	0.1%
Hospital visit - initial	$24,217,940	0.8%	0.2% - 1.4%	0.1%
Anesthesia	$23,481,669	1.2%	(1.1%) - 3.6%	0.1%
Office visits - established	$21,948,231	0.1%	(0.1%) - 0.3%	0.1%
Office visits - new	$18,769,981	0.7%	0.0% - 1.3%	0.1%
Ambulance	$18,218,309	0.4%	(0.2%) - 1.0%	0.0%
Chiropractic	$12,844,283	2.3%	(2.1%) - 6.6%	0.0%
Other tests - other	$12,754,027	0.8%	(0.2%) - 1.8%	0.0%
Emergency room visit	$12,337,812	0.5%	(0.2%) - 1.3%	0.0%
Oxygen Supplies/Equipment	$11,634,257	1.1%	0.4% - 1.7%	0.0%
Echography/ultrasonography - other	$11,102,959	2.0%	(1.9%) - 5.8%	0.0%
Hospital based hospice	$8,694,470	0.7%	(0.7%) - 2.1%	0.0%
Oncology - radiation therapy	$8,539,209	0.7%	(0.7%) - 2.0%	0.0%
Lower Limb Orthoses	$6,598,453	1.4%	(1.2%) - 3.9%	0.0%
Minor procedures - other (Medicare fee schedule)	$6,430,981	0.2%	(0.1%) - 0.5%	0.0%
Lab tests - other (non-Medicare fee schedule)	$5,920,676	0.2%	0.0% - 0.3%	0.0%
Overall (Incl. Codes Not Listed)	**$613,235,311**	**0.2%**	**0.1% - 0.2%**	**1.7%**

Table F2: Top 20 Types of Services with Insufficient Documentation Errors

Medicare FFS Services	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
Home Health	$5,416,687,603	28.7%	25.8% - 31.6%	14.8%
SNF Inpatient	$2,603,335,132	8.2%	6.5% - 9.9%	7.1%
Hospital Outpatient	$1,811,983,760	3.0%	1.7% - 4.4%	4.9%
Nonhospital based hospice	$1,291,442,888	8.6%	6.0% - 11.2%	3.5%
Lab tests - other (non-Medicare fee schedule)	$1,108,453,929	32.1%	26.7% - 37.4%	3.0%
Other drugs	$680,602,457	6.9%	2.0% - 11.8%	1.9%
Clinic ESRD	$521,628,366	4.8%	3.1% - 6.5%	1.4%
Minor procedures - other (Medicare fee schedule)	$494,149,711	15.4%	11.9% - 18.8%	1.3%
Oxygen Supplies/Equipment	$484,353,464	44.9%	41.6% - 48.1%	1.3%
CPAP	$434,494,128	51.8%	44.9% - 58.7%	1.2%
Ambulance	$393,781,442	8.9%	6.6% - 11.1%	1.1%
Hospital visit - subsequent	$390,895,869	7.2%	5.6% - 8.7%	1.1%
CAH	$306,117,987	6.9%	3.2% - 10.7%	0.8%
Lower Limb Orthoses	$294,706,096	61.5%	53.9% - 69.0%	0.8%
Specialist - psychiatry	$285,492,713	23.6%	14.9% - 32.3%	0.8%
Office visits - established	$247,924,665	1.6%	0.9% - 2.4%	0.7%
Chiropractic	$211,116,199	37.4%	30.8% - 44.1%	0.6%
Hospital Inpatient (Part A)	$200,178,107	2.0%	0.8% - 3.2%	0.5%
Major Joint Replacement Or Reattachment Of Lower Extremity (469, 470)	$191,813,356	2.9%	1.5% - 4.3%	0.5%
Specialist - other	$180,892,813	19.8%	11.3% - 28.2%	0.5%
Overall (Incl. Codes Not Listed)	**$23,226,213,203**	**6.1%**	**5.6% - 6.6%**	**63.3%**

Table F3: Top 20 Types of Services with Medical Necessity Errors

Medicare FFS Services	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
Hospital Inpatient (Part A)	$2,568,002,955	25.9%	21.9% - 29.9%	7.0%
Nonhospital based hospice	$717,864,190	4.8%	2.9% - 6.7%	2.0%
Home Health	$261,596,093	1.4%	0.8% - 2.0%	0.7%
Ambulance	$253,344,957	5.7%	3.8% - 7.6%	0.7%
Heart Failure & Shock (291, 292, 293)	$194,789,523	5.2%	(1.2%) - 11.6%	0.5%
Ventilators	$111,539,269	33.3%	25.4% - 41.1%	0.3%
Other Vascular Procedures (252, 253, 254)	$96,984,342	6.1%	2.0% - 10.3%	0.3%
Major Joint Replacement Or Reattachment Of Lower Extremity (469, 470)	$89,075,544	1.3%	0.4% - 2.3%	0.2%
G.I. Hemorrhage (377, 378, 379)	$85,191,981	4.8%	0.4% - 9.2%	0.2%
Chest Pain (313)	$80,906,209	28.9%	21.6% - 36.2%	0.2%
Degenerative Nervous System Disorders (056, 057)	$68,183,242	8.8%	4.5% - 13.1%	0.2%
Esophagitis, Gastroent & Misc Digest Disorders (391, 392)	$64,948,958	5.3%	3.1% - 7.5%	0.2%
Pulmonary Edema & Respiratory Failure (189)	$63,531,964	4.1%	(1.4%) - 9.6%	0.2%
Syncope & Collapse (312)	$59,766,943	14.1%	8.7% - 19.4%	0.2%
Chronic Obstructive Pulmonary Disease (190, 191, 192)	$57,693,390	3.0%	0.7% - 5.3%	0.2%
Back & Neck Proc Exc Spinal Fusion (518, 519, 520)	$53,836,865	19.2%	13.2% - 25.2%	0.1%
Other Kidney & Urinary Tract Diagnoses (698, 699, 700)	$53,663,439	7.1%	1.3% - 12.9%	0.1%
Extensive O.R. Procedure Unrelated To Principal Diagnosis (981, 982, 983)	$53,410,832	3.5%	(2.0%) - 8.9%	0.1%
Misc Disorders Of Nutrition, metabolism, fluids/Electrolytes (640, 641)	$51,557,857	5.0%	1.0% - 9.1%	0.1%
Kidney & Urinary Tract Infections (689, 690)	$49,710,839	3.4%	1.9% - 4.9%	0.1%
Overall (Incl. Codes Not Listed)	**$6,853,679,083**	**1.8%**	**1.6% - 2.0%**	**18.7%**

Table F4: Top 20 Types of Services with Incorrect Coding Errors

Medicare FFS Services	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
Hospital visit - initial	$570,297,589	19.4%	18.0% - 20.9%	1.6%
Office visits - established	$562,427,107	3.7%	3.1% - 4.4%	1.5%
Hospital visit - subsequent	$386,866,692	7.1%	6.2% - 8.0%	1.1%
Office visits - new	$380,960,572	13.4%	11.4% - 15.3%	1.0%
SNF Inpatient	$242,828,611	0.8%	0.4% - 1.1%	0.7%
Emergency room visit	$238,837,423	10.6%	8.8% - 12.5%	0.7%
Nursing home visit	$184,835,505	9.1%	7.1% - 11.1%	0.5%
Infectious & Parasitic Diseases W O.R. Procedure (853, 854, 855)	$165,701,677	5.2%	1.0% - 9.3%	0.5%
Hospital visit - critical care	$129,766,542	13.5%	9.1% - 17.9%	0.4%
Septicemia Or Severe Sepsis WO MV >96 Hours (871, 872)	$103,191,439	1.3%	(0.5%) - 3.1%	0.3%
Nonhospital based hospice	$99,288,557	0.7%	0.2% - 1.1%	0.3%
Hospital Outpatient	$74,033,468	0.1%	0.0% - 0.2%	0.2%
Heart Failure & Shock (291, 292, 293)	$53,671,024	1.4%	0.6% - 2.3%	0.1%
Other drugs	$51,745,369	0.5%	(0.2%) - 1.3%	0.1%
Minor procedures - other (Medicare fee schedule)	$51,145,343	1.6%	(0.9%) - 4.1%	0.1%
G.I. Hemorrhage (377, 378, 379)	$48,499,731	2.7%	0.2% - 5.2%	0.1%
Extensive O.R. Procedure Unrelated To Principal Diagnosis (981, 982, 983)	$47,381,541	3.1%	1.1% - 5.0%	0.1%
Renal Failure (682, 683, 684)	$41,755,086	1.9%	0.2% - 3.5%	0.1%
Simple Pneumonia & Pleurisy (193, 194, 195)	$35,806,368	1.7%	0.2% - 3.2%	0.1%
Hip & Femur Procedures Except Major Joint (480, 481, 482)	$33,814,365	2.1%	(0.1%) - 4.2%	0.1%
Overall (Incl. Codes Not Listed)	**$4,738,276,147**	**1.2%**	**1.1% - 1.3%**	**12.9%**

Table F5: Top 20 Types of Services with Downcoding[21] Errors

Medicare FFS Services	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
Office visits - established	$203,949,697	1.3%	0.9% - 1.8%	0.6%
Hospital visit - subsequent	$47,270,673	0.9%	0.5% - 1.2%	0.1%
G.I. Hemorrhage (377, 378, 379)	$39,943,474	2.3%	(0.1%) - 4.6%	0.1%
Heart Failure & Shock (291, 292, 293)	$33,521,388	0.9%	0.3% - 1.5%	0.1%
Septicemia Or Severe Sepsis WO MV >96 Hours (871, 872)	$31,339,047	0.4%	(0.2%) - 0.9%	0.1%
Hospital Outpatient[22]	$29,428,848	0.0%	(0.0%) - 0.1%	0.1%
Simple Pneumonia & Pleurisy (193, 194, 195)	$29,146,622	1.4%	(0.1%) - 2.8%	0.1%
Hip & Femur Procedures Except Major Joint (480, 481, 482)	$27,181,808	1.7%	(0.4%) - 3.8%	0.1%
Office visits - new	$23,005,107	0.8%	0.0% - 1.6%	0.1%
Circulatory Disorders Except AMI, W Card Cath (286, 287)	$19,646,496	1.9%	(0.4%) - 4.3%	0.1%
Renal Failure (682, 683, 684)	$18,884,565	0.8%	(0.4%) - 2.1%	0.1%
Nursing home visit	$17,173,310	0.8%	0.2% - 1.5%	0.0%
Kidney & Urinary Tract Infections (689, 690)	$14,616,759	1.0%	0.4% - 1.6%	0.0%
Pulmonary Edema & Respiratory Failure (189)	$14,599,618	0.9%	(0.4%) - 2.3%	0.0%
Misc Disorders Of Nutrition, metabolism, fluids/Electrolytes (640, 641)	$14,572,165	1.4%	(0.7%) - 3.5%	0.0%
Other Digestive System Diagnoses (393 , 394, 395)	$14,067,514	1.8%	(0.7%) - 4.3%	0.0%
Acute Myocardial Infarction, Discharged Alive (280, 281, 282)	$13,498,455	1.2%	(0.4%) - 2.7%	0.0%
Other Circulatory System Diagnoses (314, 315, 316)	$13,476,048	1.5%	(0.4%) - 3.5%	0.0%
Permanent Cardiac Pacemaker Implant (242, 243, 244)	$12,708,669	1.2%	(0.6%) - 3.1%	0.0%
Home Health	$11,640,019	0.1%	(0.0%) - 0.2%	0.0%
Overall (Incl. Codes Not Listed)	**$1,051,406,267**	**0.3%**	**0.2% - 0.3%**	**2.9%**

[21] Downcoding refers to billing a lower level service or a service with a lower payment than is supported by the medical record documentation.
[22] Downcoding errors represent less than one one-hundredth of a percent of Hospital Outpatient expenditures.

Table F6: Top 20 Types of Services with Other Errors

Medicare FFS Services	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
Home Health	$352,039,110	1.9%	1.0% - 2.8%	1.0%
SNF Inpatient	$159,939,644	0.5%	0.2% - 0.8%	0.4%
Oxygen Supplies/Equipment	$72,794,045	6.7%	5.1% - 8.4%	0.2%
CPAP	$57,510,684	6.9%	3.0% - 10.7%	0.2%
Office visits - new	$41,997,963	1.5%	0.1% - 2.9%	0.1%
Immunosuppressive Drugs	$38,206,789	11.3%	6.1% - 16.5%	0.1%
Parenteral Nutrition	$34,922,303	15.1%	3.3% - 27.0%	0.1%
Infusion Pumps & Related Drugs	$33,020,246	5.1%	2.9% - 7.4%	0.1%
Ventilators	$31,123,083	9.3%	2.7% - 15.9%	0.1%
Oncology - radiation therapy	$29,710,739	2.4%	(2.2%) - 7.0%	0.1%
Nonhospital based hospice	$26,119,020	0.2%	(0.2%) - 0.5%	0.1%
Osteogenesis Stimulator	$24,520,504	25.3%	1.7% - 49.0%	0.1%
All Policy Groups with Less than 30 Claims	$21,978,226	16.1%	(3.8%) - 36.0%	0.1%
LSO	$19,565,454	8.8%	2.1% - 15.5%	0.1%
Trach W MV >96 Hrs Or PDX Exc Face, Mouth & Neck (004)	$18,394,111	1.4%	(1.3%) - 4.1%	0.1%
Misc DMEPOS	$17,999,890	46.9%	15.6% - 78.3%	0.0%
Oral Anti-Cancer Drugs	$16,451,853	10.8%	7.9% - 13.6%	0.0%
Glucose Monitor	$16,201,592	5.9%	3.0% - 8.9%	0.0%
Ostomy Supplies	$15,573,852	8.2%	3.8% - 12.7%	0.0%
Upper Limb Orthoses	$15,376,168	16.9%	4.3% - 29.4%	0.0%
Overall (Incl. Codes Not Listed)	**$1,287,357,691**	**0.3%**	**0.3% - 0.4%**	**3.5%**

Appendix G: Projected Improper Payments by Type of Service for Each Claim Type

This series of tables is sorted in descending order by projected improper payments. All estimates in these tables are based on a minimum of 30 lines in the sample.

Table G1: Improper Payment Rates by Service Type: Part B

Part B Services (BETOS Codes)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	Standard Error	95% Confidence Interval	Percent of Overall Improper Payments
Lab tests - other (non-Medicare fee schedule)	4,803	$1,121,237,359	32.4%	2.8%	27.0% - 37.8%	3.1%
Office visits - established	1,462	$832,300,002	5.5%	0.5%	4.5% - 6.5%	2.3%
Hospital visit - subsequent	1,552	$830,470,464	15.2%	0.8%	13.5% - 16.8%	2.3%
Hospital visit - initial	1,050	$765,933,412	26.1%	1.0%	24.0% - 28.1%	2.1%
Other drugs	1,082	$744,482,041	7.6%	2.6%	2.5% - 12.6%	2.0%
Ambulance	830	$687,458,438	15.5%	1.5%	12.6% - 18.4%	1.9%
Minor procedures - other (Medicare fee schedule)	1,101	$560,063,138	17.4%	2.0%	13.4% - 21.4%	1.5%
Office visits - new	515	$524,625,770	18.4%	1.4%	15.7% - 21.1%	1.4%
Nursing home visit	400	$349,210,260	17.3%	1.7%	13.9% - 20.6%	1.0%
Specialist - psychiatry	870	$310,744,929	25.7%	4.4%	17.1% - 34.3%	0.8%
Emergency room visit	378	$282,298,975	12.6%	1.1%	10.4% - 14.8%	0.8%
Chiropractic	330	$234,938,161	41.7%	3.6%	34.7% - 48.6%	0.6%
Specialist - other	730	$186,190,310	20.3%	4.3%	11.9% - 28.8%	0.5%
Hospital visit - critical care	329	$183,660,601	19.1%	2.4%	14.4% - 23.8%	0.5%
Anesthesia	133	$135,762,748	7.0%	3.1%	1.0% - 13.0%	0.4%
Other tests - other	480	$134,307,177	8.6%	2.1%	4.5% - 12.6%	0.4%
Minor procedures - musculoskeletal	135	$107,899,145	8.9%	3.8%	1.4% - 16.4%	0.3%
Minor procedures - skin	172	$92,681,787	7.1%	2.2%	2.7% - 11.5%	0.3%
Lab tests - other (Medicare fee schedule)	164	$90,336,566	5.9%	3.1%	(0.2%) - 11.9%	0.2%
Ambulatory procedures - skin	147	$88,103,714	3.9%	1.6%	0.8% - 7.0%	0.2%
Advanced imaging - CAT/CT/CTA: other	270	$87,188,031	7.2%	1.7%	3.9% - 10.6%	0.2%
Echography/ultrasonography - heart	139	$86,775,906	9.5%	3.4%	2.9% - 16.1%	0.2%
Echography/ultrasonography - other	110	$85,547,516	15.2%	5.1%	5.2% - 25.1%	0.2%
Oncology - radiation therapy	217	$84,188,338	6.7%	3.0%	0.8% - 12.6%	0.2%
Specialist - ophthalmology	426	$76,244,861	3.1%	1.1%	1.0% - 5.3%	0.2%
Eye procedure - cataract removal/lens insertion	100	$72,794,419	3.7%	1.7%	0.3% - 7.1%	0.2%
Dialysis services (Medicare fee schedule)	132	$72,661,976	9.3%	2.6%	4.2% - 14.3%	0.2%

Part B Services (BETOS Codes)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	Standard Error	95% Confidence Interval	Percent of Overall Improper Payments
Chemotherapy	172	$71,892,254	4.2%	2.9%	(1.6%) - 10.0%	0.2%
All Codes With Less Than 30 Claims	185	$59,143,591	1.7%	0.9%	0.0% - 3.4%	0.2%
Standard imaging - musculoskeletal	297	$58,105,126	10.6%	2.3%	6.1% - 15.2%	0.2%
Echography/ultrasonography - carotid arteries	34	$57,325,308	17.5%	9.1%	(0.3%) - 35.4%	0.2%
Lab tests - blood counts	967	$56,577,703	19.2%	2.0%	15.3% - 23.0%	0.2%
Standard imaging - chest	329	$52,509,051	17.9%	2.6%	12.8% - 23.1%	0.1%
Ambulatory procedures - other	261	$52,471,204	8.0%	2.7%	2.8% - 13.3%	0.1%
Other - non-Medicare fee schedule	202	$50,088,308	60.1%	7.9%	44.7% - 75.5%	0.1%
Lab tests - automated general profiles	1,273	$48,909,725	14.8%	1.6%	11.8% - 17.9%	0.1%
Other - Medicare fee schedule	84	$44,553,404	24.5%	7.6%	9.6% - 39.5%	0.1%
Home visit	30	$43,489,181	16.9%	6.7%	3.7% - 30.1%	0.1%
Other tests - electrocardiograms	364	$38,731,699	14.5%	2.7%	9.1% - 19.8%	0.1%
Lab tests - bacterial cultures	122	$38,643,290	30.3%	5.5%	19.5% - 41.2%	0.1%
Endoscopy - upper gastrointestinal	31	$36,263,710	9.1%	6.0%	(2.6%) - 20.8%	0.1%
Standard imaging - nuclear medicine	137	$35,489,269	3.6%	1.8%	0.1% - 7.2%	0.1%
Standard imaging - other	151	$35,354,067	10.4%	4.3%	1.9% - 18.9%	0.1%
Major procedure - Other	187	$33,738,289	1.9%	0.9%	0.2% - 3.6%	0.1%
Imaging/procedure - other	106	$24,204,864	11.5%	6.9%	(2.0%) - 25.1%	0.1%
Echography/ultrasonography - abdomen/pelvis	52	$21,635,229	9.4%	3.7%	2.1% - 16.8%	0.1%
Advanced imaging - CAT/CT/CTA: brain/head/neck	62	$19,565,103	7.8%	3.3%	1.4% - 14.2%	0.1%
Lab tests - routine venipuncture (non Medicare fee schedule)	1,200	$18,768,848	15.5%	1.6%	12.4% - 18.6%	0.1%
Major procedure, orthopedic - Knee replacement	97	$18,017,975	5.7%	2.8%	0.2% - 11.2%	0.0%
Other tests - cardiovascular stress tests	86	$16,624,886	13.6%	6.8%	0.3% - 26.9%	0.0%
Lab tests - urinalysis	577	$15,869,176	26.1%	3.3%	19.6% - 32.5%	0.0%
Advanced imaging - MRI/MRA: other	55	$15,325,229	2.1%	1.7%	(1.2%) - 5.4%	0.0%
Major procedure, orthopedic - other	210	$13,730,065	0.5%	0.4%	(0.4%) - 1.3%	0.0%
Echography/ultrasonography - eye	35	$8,972,262	8.0%	4.3%	(0.5%) - 16.5%	0.0%
Undefined codes	742	$8,970,534	43.5%	6.3%	31.2% - 55.8%	0.0%
Oncology - other	375	$7,635,090	2.3%	0.9%	0.6% - 4.0%	0.0%
Major procedure, cardiovascular-Other	42	$4,963,505	0.5%	0.5%	(0.5%) - 1.5%	0.0%
Eye procedure - other	328	$4,084,413	0.4%	0.2%	0.0% - 0.8%	0.0%
Standard imaging - breast	80	$3,933,604	1.0%	1.0%	(0.9%) - 2.9%	0.0%
Endoscopy - arthroscopy	156	$3,045,809	1.5%	1.0%	(0.4%) - 3.4%	0.0%

Part B Services (BETOS Codes)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	Standard Error	95% Confidence Interval	Percent of Overall Improper Payments
Lab tests - glucose	86	$2,950,530	9.4%	5.7%	(1.8%) - 20.5%	0.0%
Immunizations/Vaccinations	229	$1,591,272	0.1%	0.1%	(0.1%) - 0.3%	0.0%
Eye procedure - treatment of retinal lesions	129	$1,166,307	0.7%	0.4%	(0.1%) - 1.6%	0.0%
Ambulatory procedures - musculoskeletal	80	$201,758	0.1%	0.0%	(0.0%) - 0.2%	0.0%
Endoscopy - colonoscopy	32	$0	0.0%	0.0%	0.0% - 0.0%	0.0%
All Type of Services (Incl. Codes Not Listed)	**17,000**	**$9,852,647,684**	**10.2%**	**0.4%**	**9.3% - 11.0%**	**26.8%**

Table G2: Improper Payment Rates by Service Type: DMEPOS

DMEPOS (HCPCS)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	Standard Error	95% Confidence Interval	Percent of Overall Improper Payments
Oxygen Supplies/Equipment	1,491	$570,310,929	52.8%	1.7%	49.6% - 56.1%	1.6%
CPAP	833	$494,860,284	59.0%	3.4%	52.2% - 65.7%	1.3%
Lower Limb Orthoses	451	$319,628,556	66.7%	3.7%	59.4% - 73.9%	0.9%
Ventilators	235	$192,280,208	57.4%	4.0%	49.6% - 65.1%	0.5%
Infusion Pumps & Related Drugs	577	$148,206,151	23.1%	2.7%	17.8% - 28.4%	0.4%
Glucose Monitor	951	$130,830,692	47.9%	3.0%	42.0% - 53.8%	0.4%
Surgical Dressings	334	$126,899,334	71.3%	4.7%	62.0% - 80.6%	0.3%
LSO	180	$116,674,416	52.5%	5.6%	41.5% - 63.5%	0.3%
Nebulizers & Related Drugs	661	$106,209,329	13.4%	2.0%	9.5% - 17.2%	0.3%
Urological Supplies	458	$105,993,266	38.2%	4.1%	30.3% - 46.2%	0.3%
Lower Limb Prostheses	42	$102,951,896	24.5%	9.6%	5.7% - 43.3%	0.3%
Immunosuppressive Drugs	1,123	$93,483,725	27.6%	3.4%	20.8% - 34.3%	0.3%
Diabetic Shoes	311	$92,321,536	67.8%	4.8%	58.3% - 77.2%	0.3%
All Policy Groups with Less than 30 Claims	190	$88,855,077	65.1%	8.2%	49.0% - 81.2%	0.2%
Ostomy Supplies	348	$85,519,409	45.3%	3.9%	37.6% - 52.9%	0.2%
Enteral Nutrition	362	$72,741,148	37.0%	4.5%	28.1% - 45.8%	0.2%
Respiratory Assist Device	202	$71,787,176	62.7%	4.1%	54.8% - 70.7%	0.2%
Wheelchairs Manual	320	$70,720,235	73.5%	6.7%	60.3% - 86.7%	0.2%
Parenteral Nutrition	127	$70,149,030	30.4%	7.1%	16.4% - 44.3%	0.2%
Upper Limb Orthoses	194	$69,327,240	76.1%	4.2%	67.8% - 84.4%	0.2%
Hospital Beds/Accessories	280	$66,248,488	78.5%	3.1%	72.5% - 84.6%	0.2%
Oral Anti-Cancer Drugs	661	$66,094,782	43.2%	2.3%	38.7% - 47.7%	0.2%
Osteogenesis Stimulator	102	$39,542,214	40.9%	10.2%	20.8% - 60.9%	0.1%
Walkers	69	$34,634,554	67.8%	7.7%	52.6% - 82.9%	0.1%
Lenses	127	$34,191,825	82.5%	3.6%	75.4% - 89.7%	0.1%
Wheelchairs Options/Accessories	255	$30,992,467	42.5%	8.2%	26.5% - 58.6%	0.1%
Misc DMEPOS	30	$30,789,552	80.2%	11.2%	58.3% -102.2%	0.1%
Negative Pressure Wound Therapy	104	$29,313,405	32.8%	6.0%	21.1% - 44.6%	0.1%
Breast Prostheses	70	$27,446,785	48.7%	7.6%	33.9% - 63.5%	0.1%
Commodes/Bed Pans/Urinals	128	$25,718,535	96.5%	1.5%	93.6% - 99.4%	0.1%
Support Surfaces	66	$23,815,353	71.1%	12.6%	46.4% - 95.7%	0.1%
Automatic External Defibrillator	116	$18,495,395	11.5%	3.0%	5.6% - 17.5%	0.1%
Orthopedic Footwear	55	$18,055,339	97.5%	1.9%	93.7% -101.2%	0.0%

DMEPOS (HCPCS)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	Standard Error	95% Confidence Interval	Percent of Overall Improper Payments
Patient Lift	91	$15,965,386	62.6%	7.2%	48.4% - 76.7%	0.0%
Wheelchairs Motorized	149	$15,568,291	20.8%	4.9%	11.2% - 30.5%	0.0%
TENS	54	$11,967,483	86.6%	7.5%	71.9% -101.4%	0.0%
Wheelchairs Seating	51	$11,146,951	33.8%	11.3%	11.6% - 55.9%	0.0%
Tracheostomy Supplies	42	$10,585,251	63.7%	13.4%	37.5% - 90.0%	0.0%
Repairs/DMEPOS	40	$5,471,243	72.1%	10.0%	52.4% - 91.8%	0.0%
Suction Pump	122	$5,274,794	33.7%	8.8%	16.5% - 51.0%	0.0%
Canes/Crutches	56	$3,657,039	68.4%	7.7%	53.4% - 83.5%	0.0%
Intravenous Immune Globulin	51	$0	0.0%	0.0%	0.0% - 0.0%	0.0%
Routinely Denied Items	165	$0	0.0%	0.0%	0.0% - 0.0%	0.0%
All Type of Services (Incl. Codes Not Listed)	**11,001**	**$3,654,724,769**	**44.6%**	**1.1%**	**42.5% - 46.7%**	**10.0%**

Table G3: Improper Payment Rates by Service Type: Part A Excluding Hospital IPPS

Part A Excluding Hospital IPPS Services (TOB)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	Standard Error	95% Confidence Interval	Percent of Overall Improper Payments
Home Health	1,158	$6,088,612,740	32.3%	1.5%	29.3% - 35.3%	16.6%
SNF Inpatient	1,627	$3,081,191,079	9.7%	0.9%	7.9% - 11.4%	8.4%
Hospital Inpatient (Part A)	906	$2,769,231,702	27.9%	2.1%	23.8% - 32.0%	7.5%
Nonhospital based hospice	565	$2,257,140,911	15.0%	1.6%	11.8% - 18.3%	6.1%
Hospital Outpatient	1,636	$1,909,714,440	3.2%	0.7%	1.9% - 4.5%	5.2%
All Codes With Less Than 30 Claims	9	$755,175,571	28.2%	22.4%	(15.6%) - 72.1%	2.1%
Clinic ESRD	626	$521,628,366	4.8%	0.9%	3.1% - 6.5%	1.4%
Critical Access Hospital	274	$349,165,586	7.9%	2.0%	3.9% - 11.9%	1.0%
SNF Inpatient Part B	85	$167,916,283	6.0%	3.5%	(0.8%) - 12.9%	0.5%
Hospital based hospice	51	$131,763,614	10.5%	5.0%	0.7% - 20.4%	0.4%
Hospital Other Part B	113	$97,857,384	14.8%	3.7%	7.4% - 22.1%	0.3%
Clinic OPT	45	$45,922,071	7.6%	4.3%	(0.9%) - 16.1%	0.1%
Clinical Rural Health	212	$32,183,158	3.1%	1.5%	0.1% - 6.1%	0.1%
Hospital Inpatient Part B	48	$12,650,930	3.7%	2.2%	(0.5%) - 8.0%	0.0%
SNF Outpatient	48	$10,111,769	4.1%	2.7%	(1.1%) - 9.3%	0.0%
Clinic CORF	47	$5,862,882	20.9%	6.4%	8.4% - 33.5%	0.0%
FQHC	51	$0	0.0%	0.0%	0.0% - 0.0%	0.0%
All Type of Services (Incl. Codes Not Listed)	**7,501**	**$18,236,128,488**	**11.3%**	**0.6%**	**10.1% - 12.6%**	**49.7%**

Table G4: Improper Payment Rates by Service Type: Part A Hospital IPPS

Part A Hospital IPPS Services (MS-DRGs)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	Standard Error	95% Confidence Interval	Percent of Overall Improper Payments
All Codes With Less Than 30 Claims	1,754	$1,018,850,657	5.0%	0.5%	4.0% - 6.0%	2.8%
Major Joint Replacement Or Reattachment Of Lower Extremity (469, 470)	641	$301,907,996	4.6%	0.8%	2.9% - 6.2%	0.8%
Heart Failure & Shock (291, 292, 293)	312	$248,460,547	6.6%	3.3%	0.3% - 13.0%	0.7%
Infectious & Parasitic Diseases W O.R. Procedure (853, 854, 855)	69	$169,084,231	5.3%	2.1%	1.1% - 9.4%	0.5%
Psychoses (885)	588	$163,047,797	4.3%	1.0%	2.4% - 6.3%	0.4%
G.I. Hemorrhage (377, 378, 379)	133	$133,691,713	7.6%	2.5%	2.6% - 12.5%	0.4%
Other Vascular Procedures (252, 253, 254)	198	$124,714,796	7.9%	2.3%	3.4% - 12.4%	0.3%
Septicemia Or Severe Sepsis WO MV >96 Hours (871, 872)	99	$103,191,439	1.3%	0.9%	(0.5%) - 3.1%	0.3%
Extensive O.R. Procedure Unrelated To Principal Diagnosis (981, 982, 983)	115	$100,792,373	6.5%	2.9%	0.8% - 12.3%	0.3%
Pulmonary Edema & Respiratory Failure (189)	151	$94,938,328	6.1%	3.0%	0.2% - 12.1%	0.3%
Renal Failure (682, 683, 684)	128	$87,488,306	3.9%	1.4%	1.2% - 6.7%	0.2%
Chest Pain (313)	207	$85,276,990	30.5%	3.7%	23.1% - 37.8%	0.2%
Degenerative Nervous System Disorders (056, 057)	206	$84,194,484	10.9%	2.4%	6.2% - 15.7%	0.2%
Kidney & Urinary Tract Infections (689, 690)	592	$78,762,703	5.4%	1.0%	3.5% - 7.4%	0.2%
Esophagitis, Gastroent & Misc Digest Disorders (391, 392)	425	$73,826,857	6.0%	1.1%	3.8% - 8.3%	0.2%
Chronic Obstructive Pulmonary Disease (190, 191, 192)	143	$71,118,779	3.7%	1.2%	1.3% - 6.1%	0.2%
Misc Disorders Of Nutrition,metabolism,fluids/Electrolytes (640, 641)	102	$66,130,022	6.5%	2.3%	1.9% - 11.0%	0.2%
Syncope & Collapse (312)	205	$65,090,577	15.3%	2.8%	9.8% - 20.8%	0.2%
Circulatory Disorders Except AMI, W Card Cath (286, 287)	266	$64,528,913	6.3%	1.6%	3.2% - 9.5%	0.2%
Back & Neck Proc Exc Spinal Fusion (518, 519, 520)	294	$64,012,037	22.8%	3.1%	16.7% - 28.9%	0.2%
Cardiac Defibrillator Implant WO Cardiac Cath (226, 227)	906	$60,035,769	14.7%	1.5%	11.7% - 17.6%	0.2%
Signs & Symptoms (947, 948)	72	$59,742,948	17.0%	4.7%	7.8% - 26.1%	0.2%
Other Kidney & Urinary Tract Diagnoses (698, 699, 700)	94	$56,044,101	7.4%	3.0%	1.6% - 13.2%	0.2%
Permanent Cardiac Pacemaker Implant (242, 243, 244)	256	$55,393,594	5.3%	1.5%	2.4% - 8.3%	0.2%
Seizures (100 , 101)	84	$52,901,907	10.5%	3.2%	4.2% - 16.7%	0.1%
Other Circulatory System Diagnoses (314, 315, 316)	81	$52,212,500	5.9%	2.5%	1.0% - 10.9%	0.1%
Respiratory Infections & Inflammations (177, 178, 179)	145	$48,860,457	3.8%	1.2%	1.4% - 6.1%	0.1%
Other Digestive System Diagnoses (393, 394, 395)	88	$48,821,170	6.4%	2.6%	1.4% - 11.4%	0.1%
Medical Back Problems (551, 552)	194	$47,803,428	11.9%	2.3%	7.3% - 16.4%	0.1%

Part A Hospital IPPS Services (MS-DRGs)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	Standard Error	95% Confidence Interval	Percent of Overall Improper Payments
Intracranial Hemorrhage Or Cerebral Infarction (064, 065, 066)	196	$47,374,192	2.3%	1.2%	0.0% - 4.7%	0.1%
Major Joint/Limb Reattachment Procedure Of Upper Extremities (483)	51	$44,870,041	6.1%	3.4%	(0.6%) - 12.8%	0.1%
Organic Disturbances & Mental Retardation (884)	51	$42,352,182	9.5%	4.5%	0.7% - 18.3%	0.1%
Cranial & Peripheral Nerve Disorders (073, 074)	55	$42,260,036	24.9%	6.7%	11.8% - 37.9%	0.1%
Hip & Femur Procedures Except Major Joint (480, 481, 482)	152	$42,202,367	2.6%	1.2%	0.2% - 5.0%	0.1%
Trach W MV >96 Hrs Or PDX Exc Face, Mouth & Neck (004)	50	$39,990,437	3.0%	2.1%	(1.1%) - 7.1%	0.1%
Transient Ischemia (069)	182	$38,510,985	14.3%	2.8%	8.9% - 19.8%	0.1%
Fx, Sprn, Strn & Disl Except Femur, Hip, Pelvis & Thigh (562, 563)	57	$38,400,209	18.0%	5.3%	7.7% - 28.4%	0.1%
Simple Pneumonia & Pleurisy (193, 194, 195)	149	$35,806,368	1.7%	0.8%	0.2% - 3.2%	0.1%
Stomach, Esophageal & Duodenal Proc (326, 327, 328)	85	$34,724,030	3.6%	1.8%	0.2% - 7.1%	0.1%
Other Kidney & Urinary Tract Procedures (673, 674, 675)	107	$34,239,734	10.0%	4.1%	2.0% - 18.0%	0.1%
Lower Extrem & Humer Proc Except Hip,foot,femur (492, 493, 494)	193	$34,017,061	7.7%	1.9%	4.0% - 11.5%	0.1%
Fractures Of Hip & Pelvis (535, 536)	60	$33,633,424	16.9%	5.4%	6.4% - 27.5%	0.1%
Alcohol/Drug Abuse Or Dependence WO Rehabilitation Therapy (896, 897)	68	$33,159,947	10.7%	4.9%	1.1% - 20.3%	0.1%
Red Blood Cell Disorders (811, 812)	97	$31,948,832	4.4%	1.9%	0.8% - 8.1%	0.1%
Major Small & Large Bowel Procedures (329, 330, 331)	182	$31,932,132	1.3%	0.7%	0.0% - 2.6%	0.1%
Laparoscopic Cholecystectomy WO C.D.E. (417, 418, 419)	186	$30,648,937	4.5%	1.7%	1.2% - 7.8%	0.1%
Other Skin, Subcut Tiss & Breast Proc (579, 580, 581)	115	$30,064,043	10.8%	5.1%	0.8% - 20.7%	0.1%
Perc Cardiovasc Proc W Drug-Eluting Stent (246, 247)	394	$28,242,823	1.5%	0.5%	0.5% - 2.5%	0.1%
Signs & Symptoms Of Musculoskeletal System & Conn Tissue (555, 556)	51	$26,586,101	22.0%	8.9%	4.6% - 39.4%	0.1%
Nonspecific Cerebrovascular Disorders (070, 071, 072)	48	$26,529,383	7.3%	3.4%	0.7% - 14.0%	0.1%
Hypertension (304 , 305)	53	$24,549,814	18.1%	7.1%	4.2% - 32.0%	0.1%
Cardiac Arrhythmia & Conduction Disorders (308, 309, 310)	149	$24,063,137	1.7%	0.9%	(0.2%) - 3.5%	0.1%
Dysequilibrium (149)	49	$23,309,239	29.4%	7.0%	15.8% - 43.1%	0.1%
Other Major Cardiovascular Procedures (270, 271, 272)	150	$22,087,834	4.4%	1.4%	1.6% - 7.2%	0.1%
Poisoning & Toxic Effects Of Drugs (917, 918)	59	$20,657,077	5.9%	2.5%	1.1% - 10.8%	0.1%
Traumatic Stupor & Coma, Coma <1 Hr (085, 086, 087)	41	$19,118,250	6.2%	3.4%	(0.5%) - 12.8%	0.1%
Acute Myocardial Infarction, Discharged Alive (280, 281, 282)	122	$18,877,690	1.6%	0.8%	(0.0%) - 3.3%	0.1%
Other Disorders Of Nervous System (091, 092, 093)	38	$18,857,219	8.2%	5.2%	(2.1%) - 18.4%	0.1%

Part A Hospital IPPS Services (MS-DRGs)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	Standard Error	95% Confidence Interval	Percent of Overall Improper Payments
Respiratory Neoplasms (180, 181, 182)	121	$18,703,891	5.0%	2.2%	0.6% - 9.4%	0.1%
Cellulitis (602, 603)	86	$18,486,554	2.0%	0.9%	0.1% - 3.8%	0.1%
Perc Cardiovasc Proc WO Coronary Artery Stent (250, 251)	106	$17,558,160	9.8%	4.2%	1.5% - 18.1%	0.0%
Uterine & Adnexa Proc For Non-Malignancy (742, 743)	105	$17,259,033	15.4%	4.2%	7.2% - 23.7%	0.0%
Peripheral Vascular Disorders (299, 300, 301)	83	$17,231,136	4.0%	1.6%	0.9% - 7.1%	0.0%
Respiratory System Diagnosis W Ventilator Support >96 Hours (207)	101	$16,566,731	1.0%	0.6%	(0.3%) - 2.2%	0.0%
Other Respiratory System Diagnoses (205, 206)	66	$16,515,397	10.5%	5.1%	0.5% - 20.5%	0.0%
Perc Cardiovasc Proc W Non-Drug-Eluting Stent (248, 249)	51	$15,142,063	5.7%	3.1%	(0.3%) - 11.7%	0.0%
Bone Diseases & Arthropathies (553, 554)	53	$14,234,256	15.0%	5.2%	4.9% - 25.1%	0.0%
Major Gastrointestinal Disorders & Peritoneal Infections (371, 372, 373)	72	$13,957,726	2.3%	1.3%	(0.2%) - 4.8%	0.0%
Spinal Fusion Except Cervical (459, 460)	59	$13,887,746	0.6%	0.6%	(0.6%) - 1.7%	0.0%
Respiratory System Diagnosis W Ventilator Support <96 Hours (208)	68	$13,522,268	1.7%	1.0%	(0.2%) - 3.6%	0.0%
Extracranial Procedures (037, 038, 039)	57	$12,739,803	2.9%	2.4%	(1.7%) - 7.6%	0.0%
Craniotomy & Endovascular Intracranial Procedures (025, 026, 027)	68	$12,565,286	1.5%	1.1%	(0.6%) - 3.6%	0.0%
Other Circulatory System O.R. Procedures (264)	96	$12,396,197	5.2%	2.2%	0.9% - 9.4%	0.0%
Biopsies Of Musculoskeletal System & Connective Tissue (477, 478, 479)	108	$12,343,968	6.3%	3.6%	(0.7%) - 13.2%	0.0%
Pulmonary Embolism (175, 176)	59	$12,111,203	3.2%	2.1%	(1.0%) - 7.4%	0.0%
Disorders Of Pancreas Except Malignancy (438, 439, 440)	40	$10,050,624	4.6%	2.7%	(0.8%) - 10.0%	0.0%
Complications Of Treatment (919, 920, 921)	33	$9,838,806	5.7%	5.5%	(5.1%) - 16.5%	0.0%
G.I. Obstruction (388, 389, 390)	112	$9,587,910	1.4%	0.7%	(0.0%) - 2.8%	0.0%
Bilateral Or Multiple Major Joint Procs Of Lower Extremity (461, 462)	98	$9,541,942	5.5%	2.2%	1.2% - 9.8%	0.0%
Major Chest Procedures (163, 164, 165)	85	$9,370,795	1.1%	0.7%	(0.1%) - 2.4%	0.0%
ECMO Or Trach W MV >96 Hrs Or PDX Exc Face, Mouth & Neck (003)	100	$8,421,392	0.4%	0.3%	(0.2%) - 1.0%	0.0%
Revision Of Hip Or Knee Replacement (466, 467, 468)	122	$7,856,071	1.2%	0.7%	(0.2%) - 2.5%	0.0%
Cervical Spinal Fusion (471, 472, 473)	71	$7,603,043	1.2%	0.7%	(0.1%) - 2.4%	0.0%
Coronary Bypass WO Cardiac Cath (235, 236)	62	$7,194,921	1.1%	0.6%	(0.1%) - 2.3%	0.0%
Cardiac Valve & Oth Maj Cardiothoracic Proc WO Card Cath (219, 220, 221)	71	$6,781,403	0.5%	0.5%	(0.5%) - 1.5%	0.0%
Aortic And Heart Assist Procedures Except Pulsation Balloon (268, 269)	98	$5,889,696	1.4%	0.8%	(0.2%) - 2.9%	0.0%
Peritoneal Adhesiolysis (335, 336 , 337)	37	$5,235,716	1.1%	1.0%	(0.8%) - 3.0%	0.0%
Major Hematol/Immun Diag Exc Sickle Cell Crisis & Coagul (808, 809, 810)	30	$5,217,855	2.3%	2.2%	(2.1%) - 6.7%	0.0%

Part A Hospital IPPS Services (MS-DRGs)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	Standard Error	95% Confidence Interval	Percent of Overall Improper Payments
Disorders Of Liver Except Malig,cirr,alc Hepa (441, 442, 443)	52	$3,927,660	1.1%	0.9%	(0.6%) - 2.8%	0.0%
Diabetes (637, 638, 639)	86	$3,735,389	0.8%	0.6%	(0.4%) - 2.0%	0.0%
Septicemia Or Severe Sepsis W MV >96 Hours (870)	37	$3,475,355	0.3%	0.3%	(0.2%) - 0.9%	0.0%
Cardiac Valve & Oth Maj Cardiothoracic Proc W Card Cath (216, 217, 218)	105	$3,171,962	0.6%	0.3%	(0.1%) - 1.3%	0.0%
Bronchitis & Asthma (202, 203)	62	$2,410,338	0.8%	0.6%	(0.3%) - 1.9%	0.0%
Heart Transplant Or Implant Of Heart Assist System (001, 002)	53	$789,250	0.2%	0.2%	(0.2%) - 0.6%	0.0%
Coronary Bypass W Cardiac Cath (233, 234)	49	$0	0.0%	0.0%	0.0% - 0.0%	0.0%
All Type of Services (Incl. Codes Not Listed)	**14,500**	**$4,975,260,494**	**4.4%**	**0.2%**	**3.9% - 4.8%**	**13.5%**

Appendix H: Projected Improper Payments by Referring Provider Type for Specific Types of Service

This series of tables is sorted in descending order by projected improper payments. All estimates in these tables are based on a minimum of 30 lines in the sample.

Table H1: Improper Payment Rates for Lab tests - other (non-Medicare fee schedule) by Referring Provider

Lab tests - other (non-Medicare fee schedule)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	Standard Error	95% Confidence Interval	Percent of Type of Service Improper Payments
Internal Medicine	1,465	$284,021,646	22.4%	2.2%	18.1% - 26.8%	25.3%
Family Practice	1,171	$234,170,115	32.0%	3.7%	24.7% - 39.3%	20.9%
Anesthesiology	285	$123,877,653	88.2%	4.1%	80.2% - 96.2%	11.0%
Nurse Practitioner	384	$88,109,149	45.4%	5.4%	34.8% - 56.1%	7.9%
Interventional Pain Management	170	$75,518,699	87.0%	3.2%	80.8% - 93.3%	6.7%
No Referring Provider Type	227	$64,140,305	49.0%	6.4%	36.4% - 61.6%	5.7%
Physician Assistant	178	$59,602,673	45.4%	12.2%	21.5% - 69.3%	5.3%
Physical Medicine and Rehabilitation	181	$50,036,279	84.3%	4.8%	74.8% - 93.8%	4.5%
Pain Management	81	$24,506,225	80.3%	7.7%	65.2% - 95.3%	2.2%
Psychiatry	142	$17,867,365	57.8%	10.5%	37.3% - 78.4%	1.6%
General Practice	71	$13,647,032	40.9%	8.1%	25.1% - 56.7%	1.2%
Gastroenterology	64	$12,500,039	24.8%	14.5%	(3.6%) - 53.2%	1.1%
Cardiology	103	$12,246,742	3.9%	3.2%	(2.3%) - 10.2%	1.1%
Neurology	47	$10,185,885	34.5%	15.5%	4.0% - 64.9%	0.9%
General Surgery	51	$8,983,382	55.0%	17.6%	20.5% - 89.5%	0.8%
Obstetrics/Gynecology	32	$2,218,437	6.7%	3.8%	(0.8%) - 14.3%	0.2%
All Referring Providers	**4,803**	**$1,121,237,359**	**32.4%**	**2.8%**	**27.0% - 37.8%**	**100.0%**

Table H2: Improper Payment Rates for Office visits - established by Provider Type

Office visits - established	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	Standard Error	95% Confidence Interval	Percent of Type of Service Improper Payments
Internal Medicine	299	$185,683,628	5.6%	1.1%	3.5% - 7.8%	22.3%
Family Practice	263	$117,493,178	4.2%	1.0%	2.3% - 6.1%	14.1%
Hematology/Oncology	65	$50,153,636	10.9%	5.7%	(0.2%) - 22.0%	6.0%

Office visits - established	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	Standard Error	95% Confidence Interval	Percent of Type of Service Improper Payments
Nurse Practitioner	79	$47,268,380	6.6%	2.4%	1.9% - 11.3%	5.7%
Podiatry	40	$42,223,531	11.1%	5.2%	0.8% - 21.3%	5.1%
Cardiology	99	$38,441,796	3.5%	1.1%	1.4% - 5.7%	4.6%
Psychiatry	35	$38,268,402	9.0%	4.4%	0.4% - 17.5%	4.6%
Neurology	42	$35,091,050	7.8%	3.5%	1.0% - 14.7%	4.2%
All Provider Types With Less Than 30 Claims	42	$30,522,843	8.7%	2.8%	3.3% - 14.1%	3.7%
Urology	34	$25,558,750	6.8%	2.6%	1.7% - 11.9%	3.1%
Ophthalmology	40	$22,253,223	6.8%	4.0%	(1.1%) - 14.6%	2.7%
Dermatology	47	$19,228,729	3.4%	1.5%	0.4% - 6.4%	2.3%
Physician Assistant	52	$16,417,626	3.3%	2.2%	(0.9%) - 7.6%	2.0%
Orthopedic Surgery	42	$8,826,567	1.7%	1.2%	(0.7%) - 4.2%	1.1%
Pulmonary Disease	30	$8,348,977	2.6%	1.2%	0.3% - 4.9%	1.0%
All Provider Types	**1,462**	**$832,300,002**	**5.5%**	**0.5%**	**4.5% - 6.5%**	**100.0%**

Table H3: Improper Payment Rates for Hospital visit - subsequent by Provider Type

Hospital visit - subsequent	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	Standard Error	95% Confidence Interval	Percent of Type of Service Improper Payments
Internal Medicine	603	$328,659,743	15.0%	1.4%	12.3% - 17.7%	39.6%
Pulmonary Disease	103	$72,065,223	16.4%	3.4%	9.7% - 23.2%	8.7%
Family Practice	99	$71,002,455	17.8%	3.3%	11.3% - 24.4%	8.5%
Cardiology	115	$66,823,223	17.6%	2.9%	11.9% - 23.2%	8.0%
Nephrology	104	$51,076,531	13.4%	2.7%	8.1% - 18.6%	6.2%
Psychiatry	65	$40,432,614	14.7%	4.0%	6.9% - 22.6%	4.9%
Infectious Disease	61	$21,928,219	8.2%	2.3%	3.7% - 12.7%	2.6%
Gastroenterology	44	$17,353,517	12.4%	3.7%	5.1% - 19.7%	2.1%
Nurse Practitioner	51	$16,500,271	13.1%	4.7%	3.9% - 22.3%	2.0%
Hematology/Oncology	32	$15,396,289	17.6%	4.6%	8.5% - 26.7%	1.9%
Physical Medicine and Rehabilitation	51	$15,138,344	8.3%	2.5%	3.4% - 13.1%	1.8%
Neurology	35	$11,215,431	12.5%	4.3%	4.1% - 20.9%	1.4%
All Provider Types	**1,552**	**$830,470,464**	**15.2%**	**0.8%**	**13.5% - 16.8%**	**100.0%**

Table H4: Improper Payment Rates for Oxygen Supplies/Equipment by Referring Provider

Oxygen Supplies/Equipment	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	Standard Error	95% Confidence Interval	Percent of Type of Service Improper Payments
Internal Medicine	797	$274,845,382	49.6%	2.3%	45.1% - 54.1%	48.2%
Family Practice	408	$179,883,082	55.8%	3.1%	49.7% - 61.9%	31.5%
Nurse Practitioner	121	$50,598,813	59.1%	5.6%	48.2% - 70.1%	8.9%
Physician Assistant	55	$20,478,097	53.5%	10.1%	33.6% - 73.4%	3.6%
No Referring Provider Type	40	$16,936,813	68.8%	9.1%	50.9% - 86.6%	3.0%
All Referring Providers	**1,491**	**$570,310,929**	**52.8%**	**1.7%**	**49.6% - 56.1%**	**100.0%**

Table H5: Improper Payment Rates for CPAP by Referring Provider

CPAP	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	Standard Error	95% Confidence Interval	Percent of Type of Service Improper Payments
Internal Medicine	472	$272,158,963	54.0%	4.5%	45.2% - 62.8%	55.0%
Family Practice	124	$69,870,671	68.1%	7.3%	53.7% - 82.5%	14.1%
Nurse Practitioner	58	$43,032,435	64.7%	11.7%	41.8% - 87.6%	8.7%
Neurology	50	$32,259,014	56.3%	16.9%	23.2% - 89.3%	6.5%
No Referring Provider Type	35	$11,549,703	83.0%	12.9%	57.7% -108.2%	2.3%
All Referring Providers	**833**	**$494,860,284**	**59.0%**	**3.4%**	**52.2% - 65.7%**	**100.0%**

Appendix I: Projected Improper Payments by Provider Type for Each Claim Type

This series of tables is sorted in descending order by projected improper payments. All estimates in these tables are based on a minimum of 30 lines in the sample.

Table I1: Improper Payment Rates and Amounts by Provider Type: Part B[23]

Providers Billing to Part B	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Provider Compliance Improper Payment Rate	Percent of Overall Improper Payments
Internal Medicine	1,841	$1,312,271,564	13.3%	11.5% - 15.1%	19.6%	3.6%
Clinical Laboratory (Billing Independently)	3,915	$1,048,064,314	29.0%	24.0% - 34.1%	27.4%	2.9%
Ambulance Service Supplier (e.g., private ambulance companies)	831	$687,458,438	15.5%	12.6% - 18.4%	23.4%	1.9%
Family Practice	858	$570,531,049	10.3%	8.2% - 12.4%	15.7%	1.6%
Cardiology	642	$390,320,363	8.6%	6.5% - 10.7%	14.8%	1.1%
Physical Therapist in Private Practice	378	$355,246,150	16.9%	12.6% - 21.3%	23.0%	1.0%
Hematology/Oncology	414	$343,690,266	7.8%	1.5% - 14.1%	49.4%	0.9%
Emergency Medicine	479	$315,313,447	12.7%	10.5% - 15.0%	19.3%	0.9%
Psychiatry	167	$283,395,574	24.1%	17.4% - 30.8%	29.3%	0.8%
Rheumatology	176	$265,384,661	14.8%	0.9% - 28.6%	16.0%	0.7%
Physical Medicine and Rehabilitation	198	$265,356,568	24.8%	1.1% - 48.5%	32.2%	0.7%
Diagnostic Radiology	836	$260,448,483	7.8%	5.9% - 9.8%	16.6%	0.7%
Podiatry	199	$254,763,597	15.2%	7.7% - 22.7%	22.1%	0.7%
Ophthalmology	734	$240,871,586	3.3%	1.7% - 4.9%	7.2%	0.7%
Chiropractic	338	$234,938,161	41.7%	34.7% - 48.6%	49.7%	0.6%
Nephrology	297	$234,675,965	14.7%	9.4% - 19.9%	18.0%	0.6%
All Provider Types With Less Than 30 Claims	251	$229,291,680	5.6%	1.7% - 9.5%	17.4%	0.6%
Nurse Practitioner	430	$207,003,569	9.6%	6.9% - 12.2%	18.8%	0.6%
Gastroenterology	181	$181,647,203	12.2%	7.5% - 16.9%	19.5%	0.5%
Pulmonary Disease	262	$169,447,363	11.3%	7.8% - 14.7%	19.7%	0.5%
Anesthesiology	238	$152,795,925	8.7%	4.2% - 13.3%	16.4%	0.4%
Orthopedic Surgery	391	$132,870,416	3.4%	1.1% - 5.7%	12.4%	0.4%
Neurology	193	$125,862,872	10.0%	6.2% - 13.7%	15.3%	0.3%

[23] The dollars in error for the improper payment rate are based on the final allowed charges. The dollars in error for the provider compliance improper payment rate are based on initial allowed charges, which excludes MAC reductions and denials. The provider compliance rate is what the improper payment rate would be without MAC activities.

Providers Billing to Part B	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Provider Compliance Improper Payment Rate	Percent of Overall Improper Payments
Radiation Oncology	229	$109,680,503	6.9%	1.8% - 12.0%	8.2%	0.3%
Physician Assistant	311	$108,869,629	7.8%	4.5% - 11.0%	14.4%	0.3%
Interventional Pain Management	138	$89,654,184	20.4%	1.7% - 39.0%	24.9%	0.2%
Pain Management	111	$89,008,372	25.2%	8.5% - 42.0%	34.0%	0.2%
General Surgery	137	$82,598,393	4.4%	1.8% - 7.1%	22.8%	0.2%
Clinical Social Worker	120	$81,683,264	18.3%	8.4% - 28.1%	21.4%	0.2%
Pathology	138	$77,678,516	7.0%	(1.4%) - 15.3%	14.9%	0.2%
Infectious Disease	94	$77,586,973	15.8%	4.7% - 26.9%	23.2%	0.2%
Clinical Psychologist	96	$70,778,121	16.6%	8.4% - 24.7%	23.0%	0.2%
Urology	136	$70,511,728	4.9%	2.6% - 7.1%	8.3%	0.2%
Vascular Surgery	44	$69,729,066	8.1%	(3.0%) - 19.2%	21.3%	0.2%
Dermatology	116	$68,407,080	2.4%	0.4% - 4.3%	15.8%	0.2%
Medical Oncology	113	$60,057,080	3.3%	0.5% - 6.0%	6.6%	0.2%
Otolaryngology	54	$59,103,901	7.7%	2.1% - 13.4%	14.6%	0.2%
CRNA	56	$57,741,873	8.5%	(5.3%) - 22.2%	18.8%	0.2%
Endocrinology	75	$48,364,217	12.2%	6.3% - 18.2%	13.1%	0.1%
Portable X-Ray Supplier (Billing Independently)	122	$46,657,437	19.4%	4.7% - 34.1%	29.9%	0.1%
Optometry	100	$46,172,650	5.6%	2.1% - 9.1%	24.7%	0.1%
General Practice	43	$45,952,984	14.2%	4.0% - 24.4%	20.6%	0.1%
Obstetrics/Gynecology	41	$44,550,080	20.2%	5.0% - 35.3%	35.5%	0.1%
Unknown Provider Type	100	$37,656,169	4.6%	2.0% - 7.2%	5.0%	0.1%
Neurosurgery	31	$32,667,838	2.9%	(0.4%) - 6.2%	28.4%	0.1%
Occupational Therapist in Private Practice	35	$31,199,887	17.8%	4.8% - 30.7%	23.0%	0.1%
IDTF	43	$29,744,434	3.6%	0.1% - 7.1%	9.5%	0.1%
Ambulatory Surgical Center	150	$28,402,800	0.9%	(0.6%) - 2.5%	37.5%	0.1%
Critical Care (Intensivists)	49	$22,734,763	9.7%	3.9% - 15.6%	12.4%	0.1%
Geriatric Medicine	35	$3,806,530	2.6%	0.2% - 5.0%	3.9%	0.0%
Mass Immunization Roster Billers (Mass Immunizers have to roster bill assigned claims and can only bill for immunizations)	51	$0	0.0%	0.0% - 0.0%	1.9%	0.0%
All Provider Types (Incl. Provider Types Not Listed)	**17,000**	**$9,852,647,684**	**10.2%**	**9.3% - 11.0%**	**21.1%**	**26.8%**

Table I2: Improper Payment Rates and Amounts by Provider Type: DMEPOS[24]

Providers Billing to DMEPOS	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Provider Compliance Improper Payment Rate	Percent of Overall Improper Payments
Medical supply company not included in 51, 52, or 53	4,662	$1,839,874,367	52.4%	49.9% - 54.9%	54.6%	5.0%
Pharmacy	3,917	$758,135,664	28.5%	25.5% - 31.4%	31.1%	2.1%
Medical Supply Company with Respiratory Therapist	1,069	$411,100,551	55.9%	50.7% - 61.2%	56.1%	1.1%
All Provider Types With Less Than 30 Claims	261	$120,689,489	77.7%	69.1% - 86.2%	77.7%	0.3%
Individual prosthetic personnel certified by an accrediting organization	73	$81,470,724	34.1%	8.8% - 59.3%	38.0%	0.2%
Podiatry	164	$74,985,875	70.5%	57.0% - 83.9%	72.3%	0.2%
Medical supply company with prosthetic/orthotic personnel certified by an accrediting organization	86	$74,929,843	30.0%	9.4% - 50.5%	35.2%	0.2%
Orthopedic Surgery	181	$54,024,071	70.1%	57.3% - 82.9%	71.3%	0.1%
Medical supply company with prosthetic personnel certified by an accrediting organization	36	$51,290,624	79.7%	60.4% - 99.0%	80.3%	0.1%
Medical supply company with orthotic personnel certified by an accrediting organization	150	$47,112,287	46.4%	33.2% - 59.6%	45.6%	0.1%
Individual orthotic personnel certified by an accrediting organization	109	$43,025,550	32.9%	10.1% - 55.6%	68.8%	0.1%
Supplier of oxygen and/or oxygen related equipment	75	$40,106,069	57.1%	38.4% - 75.9%	60.4%	0.1%
General Practice	52	$15,294,691	59.2%	32.9% - 85.4%	62.1%	0.0%
Optometry	53	$13,857,563	82.1%	70.9% - 93.3%	83.4%	0.0%
Ophthalmology	36	$11,433,435	77.6%	64.5% - 90.7%	76.7%	0.0%
Hematology/Oncology	41	$8,761,956	79.4%	63.5% - 95.2%	80.4%	0.0%
Multispecialty Clinic or Group Practice	36	$8,632,011	37.9%	1.8% - 73.9%	39.6%	0.0%
All Provider Types (Incl. Provider Types Not Listed)	**11,001**	**$3,654,724,769**	**44.6%**	**42.5% - 46.7%**	**47.8%**	**10.0%**

[24] The dollars in error for the improper payment rate are based on the final allowed charges. The dollars in error for the provide compliance improper payment rate are based on the initial allowed charge, which is before MAC reductions and denials. The provider compliance rate is what the improper payment rate would be without MAC activities.

Table I3: Improper Payment Rates and Amounts by Provider Type: Part A Excluding Hospital IPPS

Providers Billing to Part A Excluding Hospital IPPS	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
HHA	1,162	$6,088,612,740	32.3%	29.3% - 35.3%	16.6%
SNF	1,760	$3,259,219,132	9.3%	7.6% - 11.0%	8.9%
OPPS, Laboratory, Ambulatory	1,802	$2,775,398,324	4.4%	1.9% - 6.9%	7.6%
Hospice	616	$2,388,904,525	14.7%	11.6% - 17.8%	6.5%
Inpatient Rehabilitation Hospitals	250	$1,616,648,285	43.9%	36.0% - 51.8%	4.4%
Inpatient Rehab Unit	225	$1,073,590,832	34.8%	27.0% - 42.6%	2.9%
ESRD	626	$521,628,366	4.8%	3.1% - 6.5%	1.4%
CAH Outpatient Services	274	$349,165,586	7.9%	3.9% - 11.9%	1.0%
Inpatient Critical Access Hospital	371	$61,135,186	2.7%	1.0% - 4.5%	0.2%
ORF	45	$45,922,071	7.6%	(0.9%) - 16.1%	0.1%
RHCs	212	$32,183,158	3.1%	0.1% - 6.1%	0.1%
All Codes With Less Than 30 Claims	12	$17,857,399	26.1%	(15.5%) - 67.6%	0.0%
CORF	47	$5,862,882	20.9%	8.4% - 33.5%	0.0%
FQHC	51	$0	0.0%	0.0% - 0.0%	0.0%
Non PPS Short Term Hospital Inpatient	41	$0	0.0%	0.0% - 0.0%	0.0%
Other FI Service Types	7	$0	0.0%	0.0% - 0.0%	0.0%
All Provider Types (Incl. Provider Types Not Listed)	**7,501**	**$18,236,128,488**	**11.3%**	**10.1% - 12.6%**	**49.7%**

Table I4: Improper Payment Rates and Amounts by Provider Type: Part A Hospital IPPS

Provider Types Billing to Part A Hospital IPPS	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
DRG Short Term	13,670	$4,510,701,196	4.3%	3.9% - 4.7%	12.3%
Other FI Service Types	658	$233,790,095	5.6%	3.5% - 7.7%	0.6%
DRG Long Term	172	$230,769,203	5.3%	(0.3%) - 10.9%	0.6%
All Provider Types (Incl. Provider Types Not Listed)	**14,500**	**$4,975,260,494**	**4.4%**	**3.9% - 4.8%**	**13.5%**

Appendix J: Improper Payment Rates and Type of Error by Provider Type for Each Claim Type

Table J1: Improper Payment Rates by Provider Type and Type of Error: Part B

Provider Types Billing to Part B	Improper Payment Rate	Claims Reviewed	Percentage of Provider Types Improper Payments by Type of Error				
			No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other
Chiropractic	41.7%	338	5.5%	89.9%	3.8%	0.9%	0.0%
Clinical Laboratory (Billing Independently)	29.0%	3,915	0.4%	97.3%	2.0%	0.2%	0.0%
Pain Management	25.2%	111	0.3%	93.9%	1.1%	4.8%	0.0%
Physical Medicine and Rehabilitation	24.8%	198	0.0%	83.8%	0.2%	16.0%	0.0%
Psychiatry	24.1%	167	0.4%	71.8%	0.0%	27.8%	0.0%
Interventional Pain Management	20.4%	138	0.8%	88.8%	3.7%	6.8%	0.0%
Obstetrics/Gynecology	20.2%	41	0.0%	75.8%	0.0%	24.2%	0.0%
Portable X-Ray Supplier (Billing Independently)	19.4%	122	0.0%	99.4%	0.0%	0.6%	0.0%
Clinical Social Worker	18.3%	120	6.4%	85.5%	0.0%	8.1%	0.0%
Occupational Therapist in Private Practice	17.8%	35	0.0%	100.0%	0.0%	0.0%	0.0%
Physical Therapist in Private Practice	16.9%	378	0.0%	97.0%	0.0%	2.4%	0.6%
Clinical Psychologist	16.6%	96	0.0%	87.3%	0.0%	12.7%	0.0%
Infectious Disease	15.8%	94	4.2%	42.3%	0.0%	53.5%	0.0%
Ambulance Service Supplier (e.g., private ambulance companies)	15.5%	831	2.7%	57.3%	36.9%	2.3%	1.0%
Podiatry	15.2%	199	0.0%	80.0%	0.4%	19.6%	0.0%
Rheumatology	14.8%	176	0.0%	91.8%	0.0%	8.2%	0.0%
Nephrology	14.7%	297	4.9%	32.2%	0.0%	62.9%	0.0%
General Practice	14.2%	43	26.4%	39.5%	0.0%	34.1%	0.0%
Internal Medicine	13.3%	1,841	4.4%	52.6%	0.4%	42.5%	0.1%
Emergency Medicine	12.7%	479	4.0%	20.5%	0.0%	75.4%	0.0%
Endocrinology	12.2%	75	2.1%	38.8%	0.1%	58.9%	0.0%
Gastroenterology	12.2%	181	6.8%	40.3%	0.1%	41.0%	11.8%
Pulmonary Disease	11.3%	262	1.3%	35.3%	0.0%	63.4%	0.0%
Family Practice	10.3%	858	3.2%	56.1%	0.4%	37.2%	3.0%
Neurology	10.0%	193	0.0%	28.6%	0.0%	71.4%	0.0%
Critical Care (Intensivists)	9.7%	49	0.0%	30.7%	0.0%	69.3%	0.0%
Nurse Practitioner	9.6%	430	4.7%	45.2%	0.0%	50.2%	0.0%
Anesthesiology	8.7%	238	15.5%	79.6%	0.9%	4.1%	0.0%

Provider Types Billing to Part B	Improper Payment Rate	Claims Reviewed	Percentage of Provider Types Improper Payments by Type of Error				
			No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other
Cardiology	8.6%	642	5.4%	49.8%	0.0%	44.8%	0.0%
CRNA	8.5%	56	0.0%	100.0%	0.0%	0.0%	0.0%
Vascular Surgery	8.1%	44	0.0%	73.1%	0.0%	26.9%	0.0%
Diagnostic Radiology	7.8%	836	2.5%	95.9%	0.0%	1.6%	0.0%
Hematology/Oncology	7.8%	414	0.0%	87.6%	0.7%	11.8%	0.0%
Physician Assistant	7.8%	311	8.4%	52.6%	1.4%	37.6%	0.0%
Otolaryngology	7.7%	54	0.0%	30.5%	0.0%	69.5%	0.0%
Pathology	7.0%	138	0.0%	97.5%	0.3%	2.3%	0.0%
Radiation Oncology	6.9%	229	12.2%	51.7%	0.0%	9.0%	27.1%
All Provider Types With Less Than 30 Claims	5.6%	251	3.5%	60.0%	2.8%	30.1%	3.5%
Optometry	5.6%	100	0.0%	41.6%	0.0%	44.7%	13.7%
Urology	4.9%	136	0.0%	23.2%	0.0%	76.8%	0.0%
Unknown Provider Type	4.6%	100	9.3%	47.6%	0.0%	43.2%	0.0%
General Surgery	4.4%	137	2.6%	36.4%	0.0%	60.9%	0.0%
IDTF	3.6%	43	0.0%	100.0%	0.0%	0.0%	0.0%
Orthopedic Surgery	3.4%	391	0.0%	51.3%	0.0%	48.7%	0.0%
Medical Oncology	3.3%	113	8.5%	50.9%	10.4%	30.3%	0.0%
Ophthalmology	3.3%	734	7.5%	51.0%	2.8%	38.7%	0.0%
Neurosurgery	2.9%	31	0.0%	23.9%	0.0%	76.1%	0.0%
Geriatric Medicine	2.6%	35	0.0%	5.2%	0.0%	94.8%	0.0%
Dermatology	2.4%	116	0.0%	41.8%	20.7%	37.5%	0.0%
Ambulatory Surgical Center	0.9%	150	0.0%	99.8%	0.0%	0.2%	0.0%
Mass Immunization Roster Billers (Mass Immunizers have to roster bill assigned claims and can only bill for immunizations)	0.0%	51	0.0%	0.0%	0.0%	0.0%	0.0%
All Provider Types	**10.2%**	**17,000**	**3.0%**	**65.6%**	**3.4%**	**27.1%**	**0.9%**

Table J2: Improper Payment Rates by Provider Type and Type of Error: DMEPOS

Provider Types Billing to DMEPOS	Improper Payment Rate	Claims Reviewed	Percentage of Provider Types Improper Payments by Type of Error				
			No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other
Optometry	82.1%	53	0.0%	83.6%	0.0%	0.0%	16.4%
Medical supply company with prosthetic personnel certified by an accrediting organization	79.7%	36	0.3%	98.0%	0.0%	0.0%	1.7%
Hematology/Oncology	79.4%	41	3.6%	93.1%	0.0%	0.0%	3.4%
All Provider Types With Less Than 30 Claims	77.7%	261	4.5%	73.7%	0.0%	0.0%	21.8%
Ophthalmology	77.6%	36	0.0%	78.3%	0.0%	0.0%	21.7%
Podiatry	70.5%	164	0.0%	80.0%	5.4%	0.0%	14.6%
Orthopedic Surgery	70.1%	181	0.0%	88.8%	1.9%	0.0%	9.2%
General Practice	59.2%	52	2.4%	92.4%	0.0%	0.0%	5.1%
Supplier of oxygen and/or oxygen related equipment	57.1%	75	0.0%	71.9%	0.0%	0.0%	28.1%
Medical Supply Company with Respiratory Therapist	55.9%	1,069	1.5%	71.5%	9.1%	0.0%	17.8%
Medical supply company not included in 51, 52, or 53	52.4%	4,662	1.6%	80.8%	4.2%	0.5%	13.0%
Medical supply company with orthotic personnel certified by an accrediting organization	46.4%	150	0.2%	89.3%	0.7%	0.0%	9.8%
Multispecialty Clinic or Group Practice	37.9%	36	0.0%	81.5%	12.5%	0.0%	5.9%
Individual prosthetic personnel certified by an accrediting organization	34.1%	73	0.0%	94.4%	0.5%	0.0%	5.1%
Individual orthotic personnel certified by an accrediting organization	32.9%	109	0.5%	93.3%	5.0%	0.0%	1.2%
Medical supply company with prosthetic/orthotic personnel certified by an accrediting organization	30.0%	86	0.0%	85.7%	3.6%	0.0%	10.7%
Pharmacy	28.5%	3,917	1.1%	72.4%	2.4%	0.9%	23.2%
All Provider Types	**44.6%**	**11,001**	**1.4%**	**78.7%**	**4.0%**	**0.4%**	**15.5%**

Table J3: Improper Payment Rates by Provider Type and Type of Error: Part A Excluding Hospital IPPS

Provider Types Billing to Part A Excluding Hospital IPPS	Improper Payment Rate	Claims Reviewed	Percentage of Provider Types Improper Payments by Type of Error				
			No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other
Inpatient Rehabilitation Hospitals	43.9%	250	0.0%	0.4%	99.5%	0.0%	0.1%
Inpatient Rehab Unit	34.8%	225	0.0%	15.7%	84.3%	0.0%	0.0%
HHA	32.3%	1,162	0.7%	89.0%	4.3%	0.3%	5.8%
All Codes With Less Than 30 Claims	26.1%	12	0.0%	100.0%	0.0%	0.0%	0.0%
CORF	20.9%	47	0.0%	83.2%	0.0%	16.8%	0.0%
Hospice	14.7%	616	5.5%	59.2%	30.0%	4.2%	1.1%
SNF	9.3%	1,760	2.3%	85.0%	0.2%	7.5%	4.9%
CAH Outpatient Services	7.9%	274	0.0%	87.7%	10.9%	1.4%	0.0%
ORF	7.6%	45	0.0%	100.0%	0.0%	0.0%	0.0%
ESRD	4.8%	626	0.0%	100.0%	0.0%	0.0%	0.0%
OPPS, Laboratory, Ambulatory	4.4%	1,802	0.3%	96.3%	0.4%	2.7%	0.2%
RHCs	3.1%	212	0.0%	100.0%	0.0%	0.0%	0.0%
Inpatient Critical Access Hospital	2.7%	371	0.0%	10.5%	89.5%	0.0%	0.0%
FQHC	0.0%	51	0.0%	0.0%	0.0%	0.0%	0.0%
Non PPS Short Term Hospital Inpatient	0.0%	41	0.0%	0.0%	0.0%	0.0%	0.0%
Other FI Service Types	0.0%	7	0.0%	0.0%	0.0%	0.0%	0.0%
All Provider Types	**11.3%**	**7,501**	**1.4%**	**73.4%**	**19.8%**	**2.4%**	**3.0%**

Table J4: Improper Payment Rates by Provider Type and Type of Error: Part A Hospital IPPS

Provider Types Billing to Part A Hospital IPPS	Improper Payment Rate	Claims Reviewed	Percentage of Provider Types Improper Payments by Type of Error				
			No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other
Other FI Service Types	5.6%	658	0.0%	80.0%	18.4%	1.5%	0.0%
DRG Long Term	5.3%	172	0.0%	0.0%	91.5%	7.5%	1.0%
DRG Short Term	4.3%	13,670	0.2%	7.0%	55.7%	35.3%	1.8%
All Provider Types	**4.4%**	**14,500**	**0.2%**	**10.1%**	**55.6%**	**32.4%**	**1.6%**

Appendix K: Coding Information

Table K1: HCPCS Code 99233

Fiscal Year	Lines Reviewed	Lines in Error	Percent of Lines in Error
1996	217	115	53.0%
1997	416	128	30.8%
1998	457	114	24.9%
1999	187	102	54.5%
2000	449	220	49.0%
2001	338	142	42.0%
2002	228	174	76.3%
2003	709	435	61.4%
2004	768	391	50.9%
2005	1,079	474	43.9%
2006	1,102	440	39.9%
2007	1,157	532	46.0%
2008	1,032	489	47.4%
2009	882	433	49.1%
2010	697	366	52.5%
2011	611	316	51.7%
2012	992	586	59.1%
2013	1,255	626	49.9%
2014	1,268	739	58.3%
2015	1,304	658	50.5%
2016	1,070	561	52.4%
2017	873	442	50.6%

Table K2: HCPCS Code 99214

Fiscal Year	Lines Reviewed	Lines in Error	Percent of Lines in Error
1996	140	54	38.6%
1997	234	86	36.8%
1998	168	63	37.5%
1999	143	81	56.6%
2000	191	71	37.2%
2001	214	67	31.3%
2002	104	24	23.1%
2003	2,798	687	24.6%
2004	3,250	589	18.1%
2005	4,436	648	14.6%
2006	4,491	609	13.6%
2007	4,287	602	14.0%
2008	4,301	608	14.1%
2009	3,342	617	18.5%
2010	2,829	569	20.1%
2011	2,316	404	17.4%
2012	1,403	260	18.5%
2013	922	111	12.0%
2014	902	131	14.5%
2015	776	111	14.3%
2016	480	60	12.5%
2017	596	45	7.6%

Table K3: HCPCS Code 99232

Fiscal Year	Lines Reviewed	Lines in Error	Percent of Lines in Error
1996	597	266	44.6%
1997	1,159	350	30.2%
1998	911	181	19.9%
1999	837	279	33.3%
2000	881	270	30.6%
2001	964	146	15.1%
2002	488	179	36.7%
2003	2,213	855	38.6%
2004	2,485	754	30.3%
2005	3,194	555	17.4%
2006	3,236	295	9.1%
2007	3,164	393	12.4%
2008	2,728	316	11.6%
2009	2,180	326	15.0%
2010	1,693	290	17.1%
2011	1,600	240	15.0%
2012	1,490	221	14.8%
2013	1,201	176	14.7%
2014	1,297	214	16.5%
2015	1,321	222	16.8%
2016	1,243	153	12.3%
2017	1,186	120	10.1%

Table K4 provides information on the impact of one-level disagreement between Part B MACs and providers when coding E&M services.

Table K4: Impact of 1-Level E&M (Top 20)

Final E & M Codes	Incorrect Coding Errors		
	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval
Subsequent hospital care (99233)	$242,001,388	13.3%	11.8% - 14.8%
Emergency dept visit (99285)	$199,898,068	12.4%	10.6% - 14.3%
Office/outpatient visit est (99214)	$165,417,007	2.1%	1.4% - 2.8%
Office/outpatient visit est (99213)	$150,127,787	2.7%	1.6% - 3.8%
Initial hospital care (99223)	$141,634,156	8.2%	7.1% - 9.4%
Office/outpatient visit new (99204)	$120,740,374	9.6%	7.6% - 11.7%
Office/outpatient visit est (99215)	$95,608,256	9.2%	7.3% - 11.1%
Initial hospital care (99222)	$80,863,658	9.9%	8.2% - 11.6%
Office/outpatient visit new (99203)	$77,011,296	8.2%	5.0% - 11.5%
Office/outpatient visit est (99212)	$59,168,299	13.2%	7.7% - 18.8%
Office/outpatient visit new (99205)	$38,408,136	7.9%	5.9% - 9.9%
Subsequent hospital care (99232)	$36,334,255	1.3%	0.8% - 1.9%
Nursing fac care subseq (99309)	$31,713,817	5.1%	3.2% - 7.1%
Subsequent hospital care (99231)	$23,755,993	10.1%	5.7% - 14.6%

Final E & M Codes	Incorrect Coding Errors		
	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval
Hospital discharge day (99239)	$19,582,099	5.2%	3.3% - 7.1%
Initial observation care (99220)	$9,329,156	4.8%	2.7% - 6.9%
Nursing facility care init (99306)	$7,290,570	4.3%	2.2% - 6.4%
Nursing fac care subseq (99308)	$5,553,240	1.0%	(0.1%) - 2.1%
Emergency dept visit (99284)	$4,282,123	0.8%	(0.8%) - 2.5%
Hospital discharge day (99238)	$642,864	0.4%	(0.4%) - 1.1%
All Other Codes	$74,012,475	0.1%	0.1% - 0.2%
Overall (E&M Services)	**$1,583,375,017**	**1.6%**	**1.5% - 1.8%**

Table K5: Type of Services with Upcoding[25] Errors: Part B

Part B Services (BETOS Codes)	Upcoding Errors		
	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval
Hospital visit - initial	$564,721,063	19.2%	17.8% - 20.6%
Office visits - established	$358,477,409	2.4%	1.9% - 2.9%
Office visits - new	$357,955,465	12.6%	10.7% - 14.4%
Hospital visit - subsequent	$339,596,019	6.2%	5.4% - 7.0%
Emergency room visit	$233,762,618	10.4%	8.6% - 12.2%
Nursing home visit	$167,662,195	8.3%	6.3% - 10.2%
Hospital visit - critical care	$129,766,542	13.5%	9.1% - 17.9%
Other drugs	$51,504,866	0.5%	(0.2%) - 1.3%
Minor procedures - other (Medicare fee schedule)	$45,546,761	1.4%	(1.1%) - 3.9%
Home visit	$15,719,604	6.1%	(1.3%) - 13.5%
Ambulance	$15,470,190	0.3%	0.1% - 0.6%
Specialist - psychiatry	$14,098,601	1.2%	0.0% - 2.3%
Dialysis services (Medicare fee schedule)	$14,004,079	1.8%	0.7% - 2.9%
Specialist - ophthalmology	$12,461,367	0.5%	(0.1%) - 1.1%
Specialist - other	$5,297,497	0.6%	(0.4%) - 1.5%
Lab tests - blood counts	$4,074,704	1.4%	0.7% - 2.0%
Ambulatory procedures - skin	$3,628,111	0.2%	(0.2%) - 0.5%
Chiropractic	$2,066,809	0.4%	(0.0%) - 0.7%
Minor procedures - skin	$1,326,981	0.1%	(0.1%) - 0.3%
Eye procedure - other	$1,299,153	0.1%	(0.1%) - 0.4%
All Other Codes	$3,209,689	0.0%	0.0% - 0.0%
Overall (Part B)	**$2,341,649,725**	**2.4%**	**2.2% - 2.6%**

[25] Upcoding refers to billing a higher level service or a service with a higher payment than is supported by the medical record documentation

Table K6: Type of Services with Upcoding Errors: DMEPOS

DMEPOS (HCPCS)	Upcoding Errors		
	Projected Improper Payments	Improper Payment Rate	Improper Payment Rate
Glucose Monitor	$15,119,829	5.5%	3.2% - 7.8%
Immunosuppressive Drugs	$247,700	0.1%	(0.0%) - 0.2%
Overall (DMEPOS)	**$15,367,529**	**0.2%**	**0.1% - 0.3%**

Table K7: Type of Services with Upcoding Errors: Part A Excluding Hospital IPPS

Part A Excluding Hospital IPPS Services (TOB)	Upcoding Errors		
	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval
SNF Inpatient	$239,678,507	0.8%	0.4% - 1.1%
Nonhospital based hospice	$98,644,542	0.7%	0.2% - 1.1%
Hospital Outpatient	$44,604,619	0.1%	0.0% - 0.1%
Home Health	$3,687,329	0.0%	(0.0%) - 0.1%
CAH	$2,695,514	0.1%	(0.0%) - 0.1%
SNF Inpatient Part B	$1,173,231	0.0%	(0.0%) - 0.1%
Clinic CORF	$983,250	3.5%	(2.8%) - 9.8%
Hospital Other Part B	$794,470	0.1%	(0.0%) - 0.2%
Hospital based hospice	$95,791	0.0%	(0.0%) - 0.0%
Overall (Part A Excl. Hospital IPPS)	**$392,357,253**	**0.2%**	**0.2% - 0.3%**

Table K8: Type of Services with Upcoding Errors: Part A Hospital IPPS

Part A Hospital IPPS Services (MS-DRGs)	Upcoding Errors		
	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval
Infectious & Parasitic Diseases W O.R. Procedure (853, 854, 855)	$158,384,957	5.0%	0.8% - 9.1%
Septicemia Or Severe Sepsis WO MV >96 Hours (871, 872)	$71,852,391	0.9%	(0.8%) - 2.6%
Extensive O.R. Procedure Unrelated To Principal Diagnosis (981, 982, 983)	$42,251,956	2.7%	0.9% - 4.6%
Major Small & Large Bowel Procedures (329, 330, 331)	$26,699,981	1.1%	(0.1%) - 2.3%
Stomach, Esophageal & Duodenal Proc (326, 327, 328)	$26,221,175	2.7%	(0.3%) - 5.7%
Renal Failure (682, 683, 684)	$22,870,522	1.0%	(0.1%) - 2.1%
Respiratory Infections & Inflammations (177, 178, 179)	$21,785,884	1.7%	0.4% - 3.0%
Trach W MV >96 Hrs Or PDX Exc Face, Mouth & Neck (004)	$21,596,326	1.6%	(1.5%) - 4.7%
Heart Failure & Shock (291, 292, 293)	$20,149,636	0.5%	(0.1%) - 1.2%
Other Vascular Procedures (252, 253, 254)	$19,745,462	1.3%	(0.3%) - 2.8%
Respiratory System Diagnosis W Ventilator Support >96 Hours (207)	$15,498,637	0.9%	(0.3%) - 2.1%
Spinal Fusion Except Cervical (459, 460)	$13,887,746	0.6%	(0.6%) - 1.7%
Respiratory System Diagnosis W Ventilator Support <96 Hours (208)	$13,522,268	1.7%	(0.2%) - 3.6%
Major Gastrointestinal Disorders & Peritoneal Infections (371, 372, 373)	$12,875,562	2.1%	(0.4%) - 4.6%
Craniotomy & Endovascular Intracranial Procedures (025, 026, 027)	$12,565,286	1.5%	(0.6%) - 3.6%
Other Circulatory System Diagnoses (314, 315, 316)	$10,921,317	1.2%	(0.4%) - 2.9%
Extracranial Procedures (037, 038, 039)	$10,405,968	2.4%	(2.2%) - 7.0%
G.I. Hemorrhage (377, 378, 379)	$8,556,258	0.5%	(0.5%) - 1.4%
ECMO Or Trach W MV >96 Hrs Or PDX Exc Face, Mouth & Neck (003)	$8,421,045	0.4%	(0.2%) - 1.0%
Perc Cardiovasc Proc W Drug-Eluting Stent (246, 247)	$8,339,666	0.4%	0.1% - 0.8%
All Other Codes	$390,943,330	0.5%	0.4% - 0.7%
Overall (Part A Hospital IPPS)	**$937,495,374**	**0.8%**	**0.6% - 1.0%**

Appendix L: Overpayments

Tables L1 through L4 provide for each claim type the service-specific overpayment rates. The tables are sorted in descending order by projected improper payments.

Table L1: Top 20 Service-Specific Overpayment Rates: Part B

Part B Services (BETOS Codes)	Claims Reviewed	Lines Reviewed	Sample Dollars Overpaid	Total Sample Dollars Paid	Projected Dollars Overpaid	Overpayment Rate
All Codes With Less Than 30 Claims	4,554	7,946	$62,767	$822,572	$2,610,415,731	7.2%
Initial hospital care (99223)	646	647	$35,008	$121,596	$501,742,748	29.1%
Subsequent hospital care (99233)	609	889	$19,494	$86,107	$399,233,628	21.9%
Office/outpatient visit est (99214)	592	596	$2,082	$57,569	$309,023,385	3.9%
Emergency dept visit (99285)	288	288	$7,515	$47,820	$248,058,346	15.4%
Office/outpatient visit new (99204)	248	248	$6,764	$35,602	$240,011,059	19.1%
BLS (A0428)	241	252	$11,785	$45,802	$229,671,508	24.9%
Subsequent hospital care (99232)	701	1,217	$6,928	$81,072	$206,470,053	7.6%
Therapeutic exercises (97110)	305	322	$2,437	$14,278	$176,768,800	16.9%
Critical care first hour (99291)	329	387	$14,452	$81,254	$174,240,332	18.9%
Chiropract manj 3-4 regions (98941)	211	249	$4,022	$8,862	$172,487,958	43.5%
Initial hospital care (99222)	279	279	$6,533	$35,568	$150,822,457	18.5%
Office/outpatient visit est (99215)	183	184	$3,212	$23,624	$148,691,729	14.3%
Ground mileage (A0425)	728	739	$8,086	$53,440	$145,680,160	16.3%
Office/outpatient visit new (99203)	110	110	$1,538	$10,123	$144,857,917	15.5%
BLS-emergency (A0429)	233	233	$11,080	$73,207	$144,852,981	18.9%
ALS1-emergency (A0427)	321	321	$10,984	$124,100	$144,776,487	8.7%
Office/outpatient visit est (99213)	419	421	$574	$27,850	$128,437,837	2.3%
Office/outpatient visit new (99205)	113	113	$4,633	$21,203	$110,609,146	22.8%
Psytx pt&/family 60 minutes (90837)	100	144	$3,542	$14,444	$104,635,012	24.7%
All Other Codes	11,241	31,393	$574,529	$3,862,080	$3,032,289,321	10.9%
Total (Part B)	**17,000**	**46,978**	**$797,965**	**$5,648,174**	**$9,523,776,597**	**9.8%**

Table L2: Top 20 Service-Specific Overpayment Rates: DMEPOS

DMEPOS (HCPCS)	Claims Reviewed	Lines Reviewed	Sample Dollars Overpaid	Total Sample Dollars Paid	Projected Dollars Overpaid	Overpayment Rate
All Codes With Less Than 30 Claims	2,486	3,633	$302,965	$658,764	$854,063,076	43.6%
Oxygen concentrator (E1390)	1,069	1,108	$59,430	$119,921	$448,895,490	49.6%
Press supp vent noninv int (E0464)	63	63	$69,925	$93,341	$119,916,333	74.5%
Blood glucose/reagent strips (A4253)	360	371	$4,705	$10,212	$108,273,633	45.6%
Cont airway pressure device (E0601)	144	148	$4,682	$7,736	$97,392,175	59.6%
Ko adj jnt pos r sup pre ots (L1833)	45	51	$31,661	$36,747	$96,451,925	86.5%
CPAP full face mask (A7030)	74	75	$5,739	$9,867	$88,447,251	62.2%
LSO sc r ant/pos pnl pre ots (L0650)	40	40	$20,716	$40,233	$62,437,212	51.4%
NDC 00004-1101-51 capecitabi (WW093)	506	508	$297,760	$662,193	$56,024,150	45.1%
Nasal application device (A7034)	57	57	$2,401	$4,434	$54,660,313	52.0%
Portable gaseous 02 (E0431)	435	455	$6,836	$8,915	$54,552,742	76.8%
Hosp bed semi-electr w/ matt (E0260)	167	175	$8,149	$10,469	$51,690,678	78.2%
Replacement facemask interfa (A7031)	88	90	$4,426	$7,892	$50,637,054	60.3%
Rad w/o backup non-inv intfc (E0470)	104	112	$8,821	$14,070	$44,675,224	62.5%
Replacement nasal cushion (A7032)	75	78	$3,774	$6,513	$42,438,388	55.0%
Inj milrinone lactate / 5 mg (J2260)	100	112	$105,229	$263,178	$40,378,615	40.4%
Diab shoe for density insert (A5500)	109	124	$8,282	$12,218	$37,296,471	66.2%
Home vent non-invasive inter (E0466)	61	62	$20,586	$55,687	$37,200,188	38.0%
Humidifier heated used w pap (E0562)	147	161	$3,936	$8,001	$36,595,936	63.3%
Straight tip urine catheter (A4351)	50	52	$4,476	$12,803	$36,020,688	35.8%
All Other Codes	7,547	11,783	$1,124,978	$5,572,798	$1,230,151,711	36.4%
Total (DMEPOS)	**11,001**	**19,258**	**$2,099,476**	**$7,615,995**	**$3,648,199,254**	**44.5%**

Table L3: Service-Specific Overpayment Rates: Part A Excluding Hospital IPPS

Part A Excluding Hospital IPPS Services (TOB)	Claims Reviewed	Sample Dollars Overpaid	Total Sample Dollars Paid	Projected Dollars Overpaid	Overpayment Rate
Home Health	1,158	$998,984	$3,107,707	$6,076,972,721	32.2%
SNF Inpatient	1,627	$941,425	$9,873,318	$3,069,163,820	9.6%
Hospital Inpatient (Part A)	906	$3,381,975	$12,353,730	$2,769,231,702	27.9%
Nonhospital based hospice	565	$305,467	$2,040,568	$2,256,496,896	15.0%
Hospital Outpatient	1,636	$26,991	$865,015	$1,877,483,870	3.1%
Hospital Swing Bed	5	$16,144	$64,819	$755,175,571	28.3%
Clinic ESRD	626	$83,891	$1,752,239	$521,628,366	4.8%
CAH	274	$7,593	$97,673	$347,045,787	7.9%
SNF Inpatient Part B	85	$4,210	$78,988	$166,674,628	6.0%
Hospital based hospice	51	$15,752	$154,109	$131,763,614	10.5%
Hospital Other Part B	113	$666	$4,563	$97,857,384	14.8%
Clinic OPT	45	$1,170	$13,743	$45,922,071	7.6%
Clinical Rural Health	212	$722	$25,052	$32,183,158	3.1%
Hospital Inpatient Part B	48	$827	$19,365	$12,480,098	3.7%
SNF Outpatient	48	$914	$22,368	$9,450,290	3.8%
Clinic CORF	47	$1,912	$9,163	$5,862,882	20.9%
All Other Codes	55	$0	$7,323	$0	0.0%
Total (Part A Excluding Hospital IPPS)	**7,501**	**$5,788,644**	**$30,489,744**	**$18,175,392,858**	**11.3%**

Table L4: Top 20 Service-Specific Overpayment Rates: Part A Hospital IPPS

Part A Inpatient Hospital PPS Services (MS-DRGs)	Claims Reviewed	Sample Dollars Overpaid	Total Sample Dollars Paid	Projected Dollars Overpaid	Overpayment Rate
All Codes With Less Than 30 Claims	2,925	$1,472,177	$40,100,288	$1,217,903,488	3.7%
Major Joint Replacement Or Reattachment Of Lower Extremity WO MCC (470)	617	$345,249	$8,219,410	$271,657,212	4.4%
Psychoses (885)	588	$249,866	$5,390,619	$162,993,700	4.3%
Infectious & Parasitic Diseases W O.R. Procedure W MCC (853)	52	$83,246	$1,845,724	$145,849,595	4.9%
Heart Failure & Shock WO CC/MCC (293)	54	$90,089	$320,247	$131,469,181	34.4%
Chest Pain (313)	207	$253,188	$844,283	$84,583,575	30.2%
Pulmonary Edema & Respiratory Failure (189)	151	$83,045	$1,593,858	$80,338,710	5.2%
G.I. Hemorrhage W CC (378)	52	$26,273	$367,201	$78,219,169	7.6%
Degenerative Nervous System Disorders WO MCC (057)	190	$271,714	$1,993,667	$75,832,897	12.5%
Septicemia Or Severe Sepsis WO MV >96 Hours W MCC (871)	50	$6,523	$590,128	$71,852,391	1.0%
Other Vascular Procedures W MCC (252)	42	$80,064	$987,995	$66,563,515	8.0%
Syncope & Collapse (312)	205	$146,026	$1,044,267	$60,129,555	14.1%
Esophagitis, Gastroent & Misc Digest Disorders WO MCC (392)	375	$129,246	$1,916,682	$58,391,214	6.6%
Heart Failure & Shock W MCC (291)	51	$16,350	$510,352	$57,739,054	2.6%
Major Joint/Limb Reattachment Procedure Of Upper Extremities (483)	51	$49,080	$821,117	$44,870,041	6.1%
Signs & Symptoms WO MCC (948)	51	$57,617	$259,302	$44,831,079	22.2%
Extensive O.R. Procedure Unrelated To Principal Diagnosis W MCC (981)	55	$33,541	$1,666,794	$43,611,637	3.7%
Organic Disturbances & Mental Retardation (884)	51	$43,404	$424,283	$41,916,412	9.4%
Chronic Obstructive Pulmonary Disease WO CC/MCC (192)	48	$39,438	$236,654	$41,795,103	15.8%
Medical Back Problems WO MCC (552)	181	$133,299	$1,048,562	$40,734,247	12.8%
All Other Codes	8,504	$8,985,270	$152,529,659	$1,423,856,047	2.8%
Total (Part A Hospital IPPS)	**14,500**	**$12,594,705**	**$222,711,092**	**$4,245,137,820**	**3.7%**

Table L5: Overpayment Rate: All Claim Types

All Services	Claims Reviewed	Sample Dollars Overpaid	Total Sample Dollars Paid	Projected Dollars Overpaid	Overpayment Rate
All	50,002	$21,280,790	$266,465,005	$35,592,506,529	9.3%

Appendix M: Underpayments

The following tables provide for each claim type the service-specific underpayment rates. The tables are sorted in descending order by projected dollars underpaid. All estimates in these tables are based on a minimum of 30 claims in the sample with at least one claim underpaid.

Table M1: Service-Specific Underpayment Rates: Part B

Part B Services (BETOS Codes)	Claims Reviewed	Lines Reviewed	Sample Dollars Underpaid	Total Sample Dollars Paid	Projected Dollars Underpaid	Underpayment Rate
Office/outpatient visit est (99213)	419	421	$607	$27,850	$114,011,540	2.0%
Office/outpatient visit est (99212)	115	118	$738	$4,215	$75,730,387	16.9%
All Codes With Less Than 30 Claims	4,554	7,946	$600	$822,572	$40,151,861	0.1%
Subsequent hospital care (99231)	155	243	$966	$8,194	$28,891,176	12.3%
Office/outpatient visit new (99203)	110	110	$245	$10,123	$23,005,107	2.5%
Subsequent hospital care (99232)	701	1,217	$257	$81,072	$10,918,739	0.4%
Office/outpatient visit est (99211)	116	116	$209	$1,773	$8,726,069	13.5%
Psytx pt&/family 45 minutes (90834)	102	124	$164	$8,822	$5,949,109	1.9%
Therapeutic exercises (97110)	305	322	$83	$14,278	$5,598,582	0.5%
Office/outpatient visit est (99215)	183	184	$104	$23,624	$5,474,055	0.5%
Rituximab injection (J9310)	100	105	$5,388	$554,299	$4,913,067	1.2%
Subsequent hospital care (99233)	609	889	$72	$86,107	$1,574,649	0.1%
Nursing fac care subseq (99308)	102	109	$19	$6,545	$1,510,007	0.3%
Initial hospital care (99222)	279	279	$56	$35,568	$1,014,992	0.1%
Hospital discharge day (99238)	148	148	$35	$9,826	$642,864	0.4%
Complete CBC w/auto diff WBC (85025)	827	828	$16	$7,985	$300,678	0.1%
Complete CBC automated (85027)	111	111	$9	$847	$296,586	1.3%
Assay of methadone (G6053)	509	524	$82	$9,988	$82,385	0.4%
Destroy lumb/sac facet jnt (64635)	139	147	$127	$56,978	$58,448	0.1%
Dexamethasone sodium phos (J1100)	101	101	$0	$163	$8,526	0.4%
All Other Codes	13,165	32,936	$111	$3,877,344	$12,260	0.0%
Total (Part B)	**17,000**	**46,978**	**$9,886**	**$5,648,174**	**$328,871,086**	**0.3%**

Table M2: Service-Specific Underpayment Rates: DMEPOS

DMEPOS (HCPCS)	Claims Reviewed	Lines Reviewed	Sample Dollars Underpaid	Total Sample Dollars Paid	Projected Dollars Underpaid	Underpayment Rate
Hizentra injection (J1559)	100	126	$4,022	$466,615	$1,381,621	1.0%
Parenteral sol 74-100 gm pro (B4197)	99	132	$2,223	$134,441	$1,160,595	1.5%
Nebulizer with compression (E0570)	54	55	$18	$629	$986,320	3.1%
Elec osteogen stim spinal (E0748)	100	100	$4,301	$327,669	$893,525	1.2%
Diab shoe for density insert (A5500)	109	124	$113	$12,218	$500,655	0.9%
Repl water chamber, pap dev (A7046)	104	104	$19	$1,437	$484,248	4.7%
Intermittent urinary cath (A4353)	100	100	$699	$75,690	$451,287	1.0%
Patient lift hydraulic (E0630)	82	83	$91	$6,034	$297,092	1.6%
Parenteral sol 10 gm lipids (B4185)	95	102	$447	$22,465	$233,186	0.9%
Parenteral administration ki (B4224)	119	156	$199	$15,869	$103,764	0.6%
Parenteral supply kit premix (B4220)	93	99	$64	$4,923	$33,224	0.6%
All Other Codes	10,537	18,077	$0	$6,548,006	$0	0.0%
Total (DMEPOS)	**11,001**	**19,258**	**$12,195**	**$7,615,995**	**$6,525,515**	**0.1%**

Table M3: Service-Specific Underpayment Rates: Part A Excluding Hospital IPPS

Part A Excluding Hospital IPPS Services (TOB)	Claims Reviewed	Lines Reviewed	Sample Dollars Underpaid	Total Sample Dollars Paid	Projected Dollars Underpaid	Underpayment Rate
Hospital Outpatient	1,636	1,636	$464	$865,015	$32,230,570	0.1%
SNF Inpatient	1,627	1,627	$3,771	$9,873,318	$12,027,259	0.0%
Home Health	1,158	1,158	$1,936	$3,107,707	$11,640,019	0.1%
CAH	274	274	$44	$97,673	$2,119,799	0.0%
SNF Inpatient Part B	85	85	$30	$78,988	$1,241,655	0.0%
SNF Outpatient	48	48	$47	$22,368	$661,480	0.3%
Nonhospital based hospice	565	565	$91	$2,040,568	$644,015	0.0%
Hospital Inpatient Part B	48	48	$15	$19,365	$170,832	0.1%
All Other Codes	2,060	2,060	$0	$14,384,742	$0	0.0%
Total (Part A Excluding Hospital IPPS)	**7,501**	**7,501**	**$6,397**	**$30,489,744**	**$60,735,630**	**0.0%**

Table M4: Service-Specific Underpayment Rates: Part A Hospital IPPS

Part A Hospital IPPS Services (MS-DRGs)	Claims Reviewed	Lines Reviewed	Sample Dollars Underpaid	Total Sample Dollars Paid	Projected Dollars Underpaid	Underpayment Rate
All Codes With Less Than 30 Claims	2,925	2,925	$363,443	$40,100,288	$299,033,955	0.9%
G.I. Hemorrhage W CC (378)	52	52	$13,718	$367,201	$39,738,466	3.9%
Septicemia Or Severe Sepsis WO MV >96 Hours WO MCC (872)	49	49	$9,712	$385,940	$31,339,047	2.5%
Heart Failure & Shock W CC (292)	207	207	$35,275	$1,324,773	$28,710,518	2.5%
Simple Pneumonia & Pleurisy W CC (194)	50	50	$5,321	$317,986	$19,081,820	2.3%
Circulatory Disorders Except AMI, W Card Cath WO MCC (287)	170	170	$41,013	$1,256,572	$18,497,085	3.3%
Renal Failure W MCC (682)	52	52	$7,233	$522,723	$15,506,452	1.2%
Pulmonary Edema & Respiratory Failure (189)	151	151	$12,569	$1,593,858	$14,599,618	0.9%
Major Joint Replacement Or Reattachment Of Lower Extremity WO MCC (470)	617	617	$19,133	$8,219,410	$14,381,993	0.2%
Misc Disorders Of Nutrition,metabolism,fluids/Electrolytes WO MCC (641)	52	52	$6,413	$224,293	$11,866,794	2.3%
Hip & Femur Procedures Except Major Joint W CC (481)	82	82	$14,779	$1,128,673	$11,795,844	1.3%
Kidney & Urinary Tract Infections WO MCC (690)	419	419	$27,224	$2,241,316	$10,108,884	1.2%
Permanent Cardiac Pacemaker Implant W CC (243)	55	55	$17,224	$889,560	$9,681,214	2.4%
Simple Pneumonia & Pleurisy W MCC (193)	53	53	$3,841	$462,522	$8,200,259	0.7%
Acute Myocardial Infarction, Discharged Alive W MCC (280)	50	50	$5,006	$559,347	$7,965,267	1.0%
Signs & Symptoms WO MCC (948)	51	51	$8,461	$259,302	$6,855,527	3.4%
Other Vascular Procedures WO CC/MCC (254)	103	103	$41,220	$1,101,476	$6,398,370	3.7%
Peripheral Vascular Disorders W CC (300)	52	52	$8,924	$372,529	$6,062,761	2.3%
Hypertension WO MCC (305)	49	49	$11,554	$233,440	$6,039,347	5.4%
Perc Cardiovasc Proc W Drug-Eluting Stent W MCC Or 4+ Vessels/Stents (246)	198	198	$25,063	$4,072,210	$5,276,489	0.7%
All Other Codes	9,063	9,063	$1,044,020	$157,077,674	$158,982,963	0.3%
Total (Part A Hospital IPPS)	**14,500**	**14,500**	**$1,721,146**	**$222,711,092**	**$730,122,674**	**0.6%**

Table M5: Underpayment Rate: All Claim Types

All Services	Claims Reviewed	Lines Reviewed	Sample Dollars Underpaid	Total Sample Dollars Paid	Projected Dollars Underpaid	Underpayment Rate
All	50,002	88,237	$1,749,624	$266,465,005	$1,126,254,905	0.3%

Appendix N: Statistics and Other Information for the CERT Sample

Summary of Sampling and Estimation Methodology for the CERT Program

The improper payment rate calculation complies with the requirements of Office of Management and Budget (OMB) Circular A-123, Appendix C.

The sampling process for CERT follows a service level stratification plan. This system allots approximately 100 service level strata per claim type, except for Part A Excluding Hospital IPPS, for which service level stratification is not possible. For this case, strata were designated by a two-digit type of bill, which results in fewer than 20 strata. This stratification system, by design, leads to greater sample sizes for the larger Medicare Administrative Contractors (MACs). Thus, the precision is greater for larger MAC jurisdictions. However, MAC jurisdictions are sufficiently large, therefore all jurisdictions should observe ample number of claims to obtain internal precision goals of plus or minus three percentage points with 95% confidence.

Improper Payment Rate Formula
Sampled claims are subject to reviews, and an improper payment rate is calculated based on those reviews. The improper payment rate is an estimate of the proportion of improper payments made in the Medicare program to the total payments made.

After the claims have been reviewed for improper payments, the sample is projected to the universe statistically using a combination of sampling weights and universe expenditure amounts. CERT utilizes a generalized estimator to handle national, contractor cluster, and service level estimation. National level estimation reduces to a better known estimator known as the separate ratio estimator. Using the separate ratio estimator, improper payment rates for contractor clusters are combined using their relative share of universe expenditures as weights.

Generalized ("Hybrid") Ratio Estimator
For CERT estimation, the Medicare universe can be partitioned by different groups. The groups relevant for developing the CERT estimator are defined as follows:

partition = group by which payment information is available (denoted by subscript 'i')
strata = sampling group (denoted by subscript 'k')
domain = area of interest within the universe (denoted by superscript 'd')

A partition is defined by the contractor cluster level payment amounts.[26] Strata are defined by service categorization and sampling quarter. Domains are areas that CERT focuses analysis on (e.g., motorized wheelchairs). Note for national level estimation, the domain, d, is the entire universe.

[26] An A/B MAC consists of two contractor clusters. Each cluster represents their respective Part A and Part B claims. Expenditures (payments) are reported to CERT by contractor cluster. DMEPOS MACs are composed of a single cluster.

The estimator for a domain, d, is expressed as

$$\hat{R}^{d}_{HybridEstimator} = \frac{\hat{t}^{*d}_{e}}{\hat{t}^{*d}_{p}} = \frac{\sum_{i}\hat{t}^{*di}_{e}}{\sum_{i}\hat{t}^{*di}_{p}} = \frac{\sum_{i}\frac{\hat{t}^{di}_{e}}{\hat{t}^{i}_{p}}t^{*i}_{p}}{\sum_{i}\frac{\hat{t}^{di}_{p}}{\hat{t}^{i}_{p}}t^{*i}_{p}} \quad (1)$$

where,

$\hat{t}^{*d}_{e}$ = projected improper payment for the domain, d.

$\hat{t}^{*d}_{p}$ = projected payment for the domain, d.

t^{*i}_{p} = known payment for partition ‘i’

$\hat{t}^{i}_{p}$ = projected payment for partition ‘i’.

$\hat{t}^{di}_{e}$ = projected error for domain ‘d’ in partition ‘i’.

$\hat{t}^{di}_{p}$ = projected payment for domain ‘d’ in partition ‘i’.

Now, the projected error and payment for domain ‘d’ within partition ‘i’ can be computed using the following formulas:

$$\hat{t}^{di}_{e} = \sum_{k=1}^{a}\frac{N_k}{n_k}\sum_{j=1}^{n_k^{di}}e_{kj} = \sum_{k=1}^{a}W_k\sum_{j=1}^{n_k^{di}}e_{kj} \quad (2)$$

$$\hat{t}^{di}_{p} = \sum_{k=1}^{a}\frac{N_k}{n_k}\sum_{j=1}^{n_k^{di}}p_{kj} = \sum_{k=1}^{a}W_k\sum_{j=1}^{n_k^{di}}p_{kj} \quad (3)$$

where

N_k = total number of claims in the universe for strata ‘k’

n_k = total number of sampled claims for strata ‘k’

The following tables provide information on the sample size for each category for which this report makes national estimates. These tables also show the number of claims containing errors and the percent of claims with payment errors. Data in these tables for Part B and DMEPOS data is expressed in terms of line items, and data in these tables for Part A data is expressed in terms of claims. Totals cannot be calculated for these categories since CMS uses different units for each type of service.

Table N1: Lines in Error: Part B

Variable	Lines Reviewed	Lines Containing Errors	Percent of Lines Containing Errors
HCPCS			
All Codes With Less Than 30 Claims	7,946	1,390	17.5%
Col chromotography qual/quan (82542)	749	450	60.1%
Complete CBC w/auto diff WBC (85025)	828	195	23.6%
Comprehen metabolic panel (80053)	1,033	146	14.1%
Glycosylated hemoglobin test (83036)	833	153	18.4%
Ground mileage (A0425)	739	107	14.5%
Lipid panel (80061)	857	154	18.0%
Routine venipuncture (36415)	1,172	182	15.5%
Subsequent hospital care (99232)	1,183	118	10.0%
Subsequent hospital care (99233)	870	440	50.6%
Other	30,696	9,753	31.8%
TOS Code			
Ambulance	1,590	226	14.2%
Hospital visit - subsequent	2,647	699	26.4%
Lab tests - automated general profiles	1,298	189	14.6%
Lab tests - other (non-Medicare fee schedule)	16,925	8,062	47.6%
Lab tests - routine venipuncture (non Medicare fee schedule)	1,204	182	15.1%
Minor procedures - other (Medicare fee schedule)	1,817	278	15.3%
Office visits - established	1,479	230	15.6%
Other drugs	1,629	208	12.8%
Specialist - other	1,242	37	3.0%
Specialist - psychiatry	1,269	88	6.9%
Other	15,806	2,889	18.3%
Resolution Type[27]			
Automated	12,926	638	4.9%
Complex	45	5	11.1%
None	33,869	12,435	36.7%
Routine	66	10	15.2%
Diagnosis Code			
All Codes With Less Than 30 Claims	1,013	198	19.5%
Arthropathies and related disorders	692	122	17.6%

[27] Indicates the type of review a line received by the MAC prior to CERT's review

Variable	Lines Reviewed	Lines Containing Errors	Percent of Lines Containing Errors
Diseases of other endocrine glands	839	112	13.3%
Disorders of the eye and adnexa	841	34	4.0%
Dorsopathies	1,607	672	41.8%
Hypertensive disease	491	109	22.2%
Neurotic disorders, personality disorders, and other nonpsychotic mental disorders	1,059	533	50.3%
No Matching Diagnosis Code Label	30,130	7,999	26.5%
Persons encountering health services for specific procedures and aftercare	3,400	1,987	58.4%
Symptoms	1,144	183	16.0%
Other	5,690	1,139	20.0%

Table N2: Lines in Error: DMEPOS

Variable	Lines Reviewed	Lines Containing Errors	Percent of Lines Containing Errors
Service			
All Codes With Less Than 30 Claims	3,633	1,509	41.5%
Blood glucose/reagent strips (A4253)	371	188	50.7%
Lancets per box (A4259)	614	367	59.8%
Maint drug infus cath per wk (A4221)	330	65	19.7%
NDC 00004-1101-51 capecitabi (WW093)	508	225	44.3%
Oxygen concentrator (E1390)	1,108	445	40.2%
Portable gaseous 02 (E0431)	455	278	61.1%
Pos airway pressure filter (A7038)	316	170	53.8%
Px sup fee anti-can sub pres (Q0512)	626	229	36.6%
Sup fee antiem,antica,immuno (Q0511)	674	255	37.8%
Other	10,623	4,250	40.0%
TOS Code			
CPAP	1,597	789	49.4%
Glucose Monitor	1,248	666	53.4%
Immunosuppressive Drugs	1,903	672	35.3%
Infusion Pumps & Related Drugs	1,368	331	24.2%
Nebulizers & Related Drugs	1,160	326	28.1%
Oral Anti-Cancer Drugs	789	339	43.0%
Ostomy Supplies	700	300	42.9%
Oxygen Supplies/Equipment	2,079	969	46.6%
Surgical Dressings	795	486	61.1%
Urological Supplies	675	244	36.1%
Other	6,944	2,859	41.2%
Resolution Type[27]			
Automated	3,373	29	0.9%
Complex	99	20	20.2%
None	15,691	7,903	50.4%
Routine	95	29	30.5%
Diagnosis Code			
All Codes With Less Than 30 Claims	762	258	33.9%
Arthropathies and related disorders	224	114	50.9%
Chronic obstructive pulmonary disease and allied conditions	746	290	38.9%
Diseases of other endocrine glands	600	282	47.0%
Diseases of pulmonary circulation	234	21	9.0%
Malignant neoplasm of digestive organs and peritoneum	284	120	42.3%
No Matching Diagnosis Code Label	13,427	5,740	42.7%
Other forms of heart disease	217	76	35.0%

Variable	Lines Reviewed	Lines Containing Errors	Percent of Lines Containing Errors
Persons with a condition influencing their health status	768	301	39.2%
Symptoms	440	145	33.0%
Other	1,556	634	40.7%

Table N3: Claims in Error: Part A Excluding Hospital IPPS

Variable	Claims Reviewed	Claims Containing Errors	Percent of Claims Containing Errors
Type Of Bill			
Clinic ESRD	626	41	6.5%
Clinical Rural Health	212	7	3.3%
CAH	274	55	20.1%
Home Health	1,158	481	41.5%
Hospital Inpatient (Part A)	906	212	23.4%
Hospital Other Part B	113	32	28.3%
Hospital Outpatient	1,636	171	10.5%
Nonhospital based hospice	565	97	17.2%
SNF Inpatient	1,627	182	11.2%
SNF Inpatient Part B	85	16	18.8%
Other	299	39	13.0%
TOS Code			
Clinic ESRD	626	41	6.5%
Clinical Rural Health	212	7	3.3%
CAH	274	55	20.1%
Home Health	1,158	481	41.5%
Hospital Inpatient (Part A)	906	212	23.4%
Hospital Other Part B	113	32	28.3%
Hospital Outpatient	1,636	171	10.5%
Nonhospital based hospice	565	97	17.2%
SNF Inpatient	1,627	182	11.2%
SNF Inpatient Part B	85	16	18.8%
Other	299	39	13.0%
Diagnosis Code			
All Codes With Less Than 30 Claims	201	24	11.9%
Cerebrovascular disease	77	9	11.7%
Diseases of other endocrine glands	81	25	30.9%
Hereditary and degenerative diseases of the central nervous system	89	11	12.4%
Hypertensive disease	82	21	25.6%
Nephritis, nephrotic syndrome, and nephrosis	247	22	8.9%
No Matching Diagnosis Code Label	4,816	842	17.5%

Variable	Claims Reviewed	Claims Containing Errors	Percent of Claims Containing Errors
Other forms of heart disease	140	30	21.4%
Persons encountering health services for specific procedures and aftercare	623	149	23.9%
Symptoms	147	27	18.4%
Other	998	173	17.3%

Table N4: Claims in Error: Part A Hospital IPPS

Variable	Claims Reviewed	Claims Containing Errors	Percent of Claims Containing Errors
DRG Label			
All Codes With Less Than 30 Claims	2,925	362	12.4%
Cardiac Defibrillator Implant WO Cardiac Cath WO MCC (227)	808	164	20.3%
Chest Pain (313)	207	53	25.6%
Esophagitis, Gastroent & Misc Digest Disorders WO MCC (392)	375	41	10.9%
Heart Failure & Shock W CC (292)	207	24	11.6%
Kidney & Urinary Tract Infections WO MCC (690)	419	54	12.9%
Major Joint Replacement Or Reattachment Of Lower Extremity WO MCC (470)	617	49	7.9%
Perc Cardiovasc Proc W Drug-Eluting Stent W MCC Or 4+ Vessels/Stents (246)	198	15	7.6%
Psychoses (885)	588	45	7.7%
Syncope & Collapse (312)	205	35	17.1%
Other	7,951	1,018	12.8%
TOS Code			
All Codes With Less Than 30 Claims	1,754	220	12.5%
Back & Neck Proc Exc Spinal Fusion (518, 519, 520)	294	94	32.0%
Cardiac Defibrillator Implant WO Cardiac Cath (226, 227)	906	181	20.0%
Circulatory Disorders Except AMI, W Card Cath (286, 287)	266	29	10.9%
Esophagitis, Gastroent & Misc Digest Disorders (391, 392)	425	46	10.8%
Heart Failure & Shock (291, 292, 293)	312	35	11.2%
Kidney & Urinary Tract Infections (689, 690)	592	72	12.2%
Major Joint Replacement Or Reattachment Of Lower Extremity (469, 470)	641	53	8.3%
Perc Cardiovasc Proc W Drug-Eluting Stent (246, 247)	394	20	5.1%
Psychoses (885)	588	45	7.7%
Other	8,328	1,065	12.8%
Diagnosis Code			
All Codes With Less Than 30 Claims	220	23	10.5%
Arthropathies and related disorders	195	14	7.2%
Cerebrovascular disease	179	19	10.6%
Complications of surgical and medical care, not elsewhere classified	272	34	12.5%

Variable	Claims Reviewed	Claims Containing Errors	Percent of Claims Containing Errors
Ischemic heart disease	277	21	7.6%
No Matching Diagnosis Code Label	10,127	1,395	13.8%
Other diseases of urinary system	206	21	10.2%
Other forms of heart disease	499	59	11.8%
Other psychoses	177	8	4.5%
Symptoms	206	24	11.7%
Other	2,142	242	11.3%

Table N5: "Included In" and "Excluded From" the Sample

Improper Payment Rate	Paid Line Items	Unpaid Line Items	Denied For Non-Medical Reasons	Automated Medical Review Denials	No Resolution	RTP	Late Resolution	Inpt, RAPs, Tech Errors
Paid Claim	Include	Include	Include	Include	Exclude	Exclude	Exclude	Exclude
No Resolution	Include	Include	Include	Include	Include	Exclude	Include	Exclude
Provider Compliance	Include	Include	Include	Include	Exclude	Exclude	Exclude	Exclude

The dollars in error for the improper payment rate are based on the final allowed charges. The dollars in error for the provide compliance improper payment rate are based on the initial allowed charges, which is before MAC reductions and denials. The provider compliance rate is what the improper payment rate would be without MAC activities. The No Resolution rate is based on the number of claims where the contractor cannot track the outcome of the claim divided by no resolution claims plus all claims included in the paid or provider compliance improper payment rate.

Table N6: Frequency of Claims "Included In" and "Excluded From" Each Improper Payment Rate: Part B

Error Type	Included	Excluded	Total	Percent Included
Paid	17,000	550	17,550	96.9%
No Resolution	17,000	550	17,550	96.9%
Provider Compliance	17,000	550	17,550	96.9%

Table N7: Frequency of Claims "Included In" and "Excluded From" Each Improper Payment Rate: DMEPOS

Error Type	Included	Excluded	Total	Percent Included
Paid	11,001	356	11,357	96.9%
No Resolution	11,002	355	11,357	96.9%
Provider Compliance	11,001	356	11,357	96.9%

Table N8: Frequency of Claims "Included In" and "Excluded From" Each Improper Payment Rate: Part A Including Hospital IPPS

Error Type	Included	Excluded	Total	Percent Included
Paid	22,001	7,755	29,756	73.9%
No Resolution	22,004	7,752	29,756	73.9%
Provider Compliance	22,001	7,755	29,756	73.9%

Appendix O: List of Acronyms

Acronym	Definition
ALS	Advance Life Support
AMI	Acute Myocardial Infarction
BETOS	Berenson-Eggers Type of Service
BLS	Basic Life Support
CAH	Critical Access Hospital
CAT/CT	Computer Tomography
CBC	Complete Blood Count
CC	Comorbidity or Complication
CERT	Comprehensive Error Rate Testing
CMS	Centers for Medicare & Medicaid Services
CORF	Comprehensive Outpatient Rehabilitation Facility
CPAP	Continuous Positive Airway Pressure
CRNA	Certified Registered Nurse Anesthetist
DMEPOS	Durable Medical Equipment, Prosthetics, Orthotics & Supplies
DRG	Diagnosis Related Group
E&M	Evaluation and Management
ESRD	End-Stage Renal Disease
FQHC	Federally Qualified Health Center
FY	Fiscal Year
HCPCS	Healthcare Common Procedure Coding System
HHA	Home Health Agency
IDTF	Independent Diagnostic Testing Facility
IPPS	Inpatient Prospective Payment System
LSO	Lumbar-Sacral Orthosis
MAC	Medicare Administrative Contractor
MCC	Major Complication or Comorbidity
MRA	Magnetic Resonance Angiogram
MRI	Magnetic Resonance Imaging
MS-DRG	Medicare Severity Diagnosis Related Group
MV	Mechanical Ventilation
NDC	National Drug Code
OPPS	Outpatient Prospective Payment System
OPT	Outpatient Physical Therapy
OR	Operating Room
ORF	Outpatient Rehabilitation Facility

Acronym	Definition
RAP	Request for Advanced Payment
RHC	Rural Health Clinic
RTP	Return to Provider
SNF	Skilled Nursing Facility
TENS	Transcutaneous Electrical Nerve Stimulation
TOB	Type of Bill
TOS	Type of Service
W	With
WBC	White Blood Cell
WO	Without