U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES

2021 Medicare Fee-for-Service Supplemental Improper Payment Data

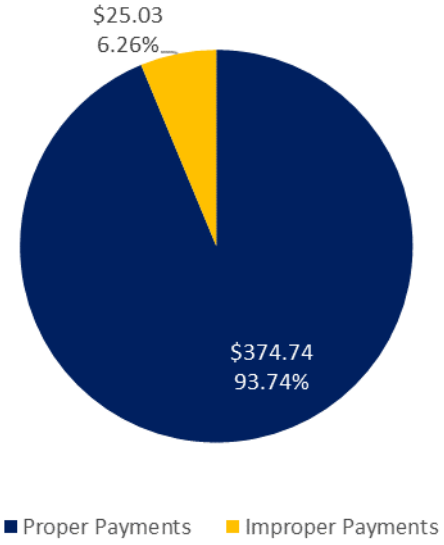
TABLE OF CONTENTS

SUMMARY OF HIGH LEVEL FINDINGS

This document supplements improper payment information in the annual Department of Health & Human Services Agency Financial Report (HHS AFR). The Payment Integrity Information Act of 2019 (PIIA) 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.

93.74 Percent Accuracy Rate and 6.26 Percent Improper Payment Rate[1,2,3]

Figure 1: Payment Accuracy (in Billions)



[1] HHS published the 2021 Medicare FFS improper payment rate in the Federal Fiscal Year (FY) 2021 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 2021 Medicare FFS improper payment rate included claims submitted during the 12-month period from July 1, 2019 through June 30, 2020.

[2] CMS adjusted the improper payment rate by 0.18 percentage points ($0.71 billion) from 6.44 percent to 6.26 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 2021.

[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 2021 National Improper Payments[4]

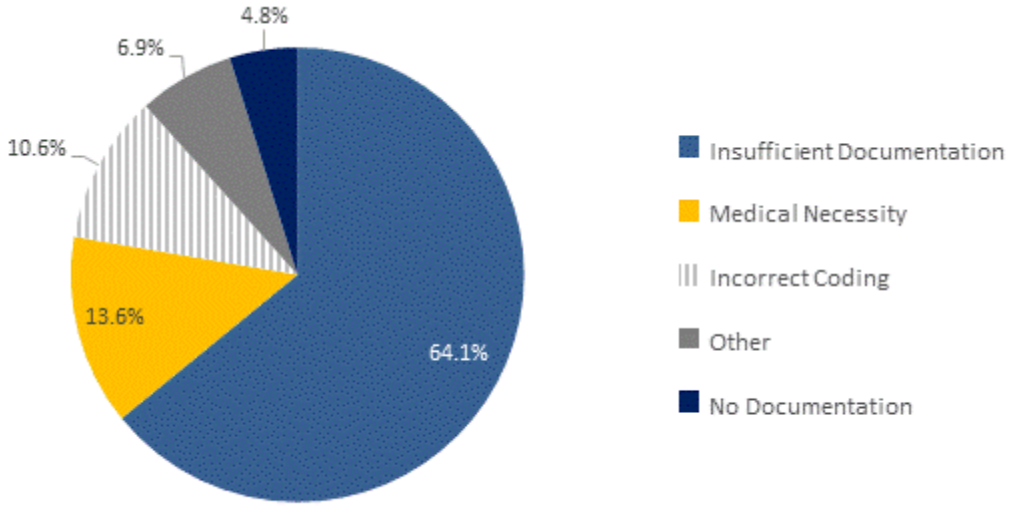
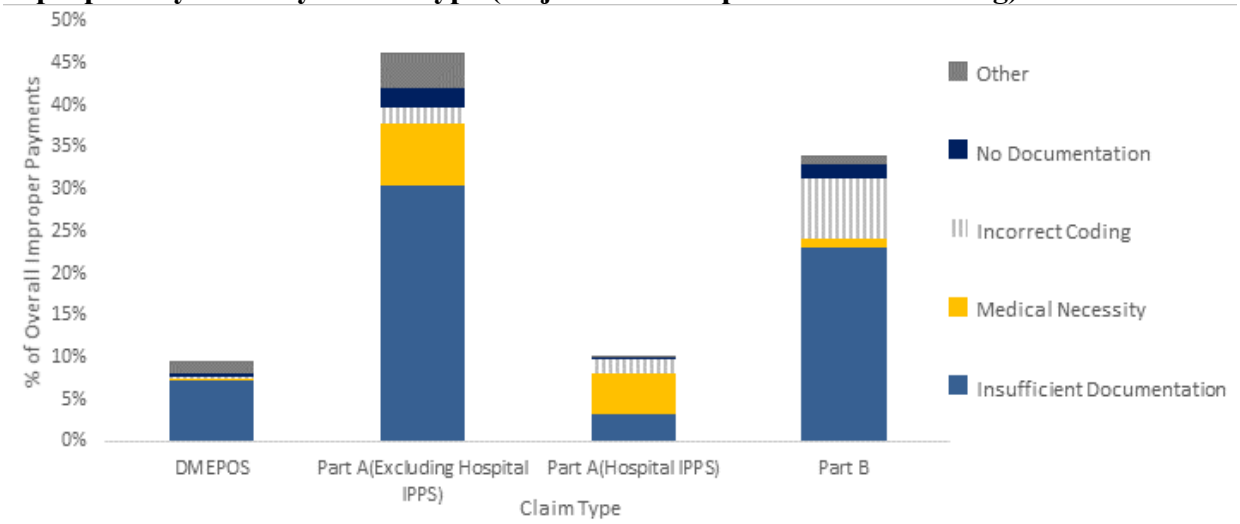


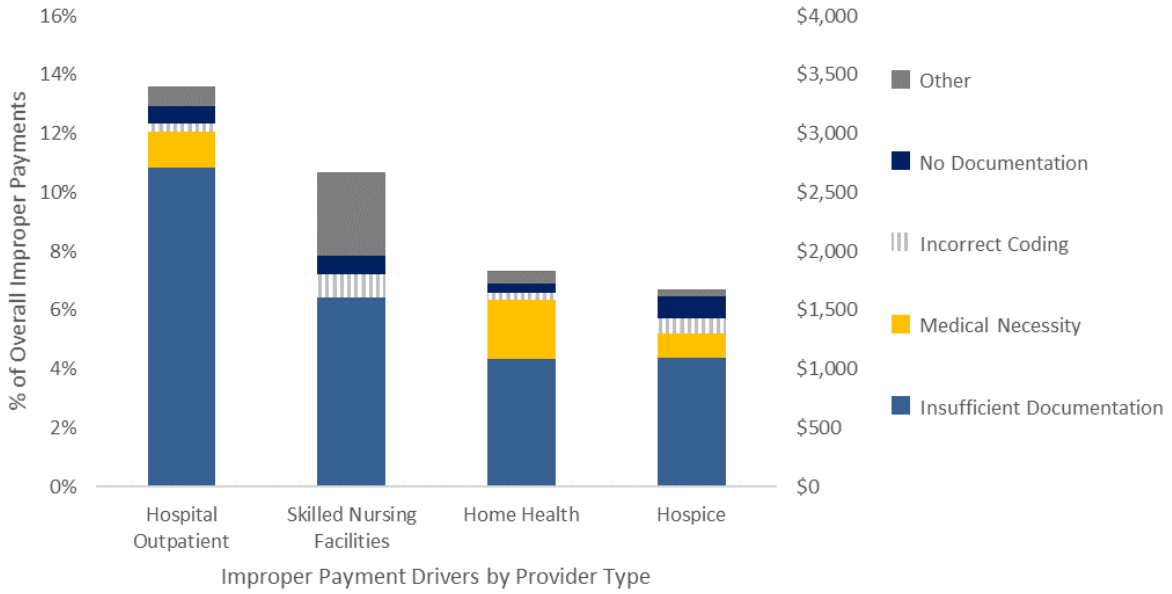
Figure 3: Improper Payment Rate Error Categories by Percentage of 2021 National Improper Payments by Claim Type (Adjusted for Impact of A/B Rebilling)[5]



[4] The percentages in this pie chart may not add up to 100 percent due to rounding.

[5] 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 2021 National Improper Payments and Improper Payments (in Millions) by Improper Payment Drivers



Hospital Outpatient

Hospital outpatient services is defined as all services billed with type of bill 12x through 19x (e.g., Hospital Outpatient Prospective Payment System (OPPS), Laboratory, and Others). The projected improper payment amount for Hospital Outpatient services during the 2021 report period was $3.4 billion, resulting in an improper payment rate of 4.6 percent.

Table 1: Root Causes for Hospital Outpatient

Root Cause Description	Error Category	Sample Claim Count[6]
Provider's intent to order (for certain services) - Missing	Insufficient Documentation	54
Order - Missing	Insufficient Documentation	47
Order - Inadequate	Insufficient Documentation	29
Documentation to support medical necessity - Missing	Insufficient Documentation	26
Lab panel billed is not the service ordered	Incorrect Coding	14
Documentation for the associated diagnostic lab test(s) - Inadequate	Insufficient Documentation	12
Documentation for the billed date of service- Missing	Insufficient Documentation	12
Physical/Occupational/Speech Therapy - Certification/Recertification - Missing	Insufficient Documentation	11
Documentation to support the services were provided or other documentation required for payment of the code - Missing	Insufficient Documentation	10
NCD requirement(s), other documentation required for payment - Missing	Insufficient Documentation	10

[6] The root cause and error category with the highest sample claim count in Tables 1 through 4 may not correspond with the top error category of improper payments for the drivers in Figure 4.

Skilled Nursing Facility

Skilled nursing facilities (SNF) is defined as all services with a provider type of SNF, including SNF inpatient, SNF outpatient, and SNF inpatient Part B. The projected improper payment amount for SNF services during the 2021 report period was $2.7 billion, resulting in an improper payment rate of 7.8 percent.

Table 2: Root Causes for Skilled Nursing Facility

Root Cause Description	Error Category	Sample Claim Count
Incorrect HIPPS/RUG level	Incorrect Coding	38
Physician's delayed certification statement - Missing	Insufficient Documentation	23
Nursing home records - Missing	Insufficient Documentation	21
Order - Missing	Insufficient Documentation	17
Physician's Certification/Recertification - Inadequate	Insufficient Documentation	16
Order - Inadequate	Insufficient Documentation	16
Estimated time the beneficiary will need to remain in the skilled nursing facility - Missing	Insufficient Documentation	11
Physician's Certification/Recertification - Missing	Insufficient Documentation	11
Assessment Reference Date (ARD) date does not match the ARD date listed on the Minimum Data Set (MDS) found in the repository	Other	11
Physical/Occupational/Speech Therapy - Therapy minutes in the treatment note/treatment log - Missing	Insufficient Documentation	10

Home Health

Home health services is defined as all services with a provider type of Home Health Agency. The projected improper payment amount for home health services during the 2021 report period was $1.8 billion, resulting in an improper payment rate of 10.2 percent.

Table 3: Root Causes for Home Health

Root Cause Description	Error Category	Sample Claim Count
Medical necessity for skilled services is not supported in the medical record	Medical Necessity	108
Physician's Certification/Recertification - Inadequate	Insufficient Documentation	40
HIPPS code incorrectly coded	Incorrect Coding	31
All required content of the certification/recertification - Inadequate	Insufficient Documentation	26
Face to face attestation - Missing	Insufficient Documentation	19
Face to face attestation - Inadequate	Insufficient Documentation	17
Face to face documentation - Missing	Insufficient Documentation	16
Certifying physician’s or acute/post-acute facility medical records - Missing	Insufficient Documentation	14
Plan of care - Inadequate	Insufficient Documentation	13
All required content of the plan of care - Inadequate	Insufficient Documentation	12

Hospice

Hospice services is defined as all services with a provider type of Hospice, including Hospital Based Hospice and Non-Hospital Based Hospice. The projected improper payment amount for Hospice during the 2021 report period was $1.7 billion, resulting in an improper payment rate of 7.8 percent.

Table 4: Root Causes for Hospice

Root Cause Description	Error Category	Sample Claim Count
Physician's Certification/Recertification - Inadequate	Insufficient Documentation	29
Physician narrative as part of the certification/recertification supporting terminal illness - Inadequate	Insufficient Documentation	19
Service intensity add-on (SIA) services documentation - Missing	Insufficient Documentation	11
Service intensity add-on (SIA) services documentation - Inadequate	Insufficient Documentation	10
Documentation does not support medical necessity for the service or item billed	Medical Necessity	9
Face to face documentation - Inadequate	Insufficient Documentation	6
Units of service (UOS) incorrectly coded - Upcode	Incorrect Coding	6
Physician narrative as part of the certification/recertification supporting terminal illness - Missing	Insufficient Documentation	5
Physician's Certification/Recertification - Missing	Insufficient Documentation	5
Units of service (UOS) incorrectly coded - Downcode	Incorrect Coding	4

COVID-19 Impact

In response to the COVID-19 public health emergency (PHE), CMS exercised its enforcement discretion to provide temporary administrative relief to all providers and suppliers. Effective March 27, 2020, the CERT program stopped sending documentation request letters to or conducting phone calls with providers or suppliers to request medical documentation or other data. Effective August 11, 2020, CMS resumed CERT program activities that were temporarily suspended in response to the COVID-19 PHE. CMS also reduced the claim sample size for FY 2021 (claims submitted July 1, 2019, through June 30, 2020). Claims with dates of service within the COVID-19 PHE were reviewed in accordance with all applicable CMS waivers and flexibilities.

SUPPLEMENTAL STATISTICAL REPORTING

Appendix A: Summary of Projected Improper Payments Adjusted for A/B Rebill[7]

Table A1: 2021 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 Payments	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
Part A (Total)	28,079	18,508	$291.4	$14.2	4.9%	4.3% - 5.5%	56.5%
Part A (Excluding Hospital IPPS)	8,309	7,180	$183.5	$11.6	6.3%	5.4% - 7.3%	46.3%
Part A (Hospital IPPS)	19,770	11,328	$107.9	$2.6	2.4%	2.1% - 2.7%	10.3%
Part B	14,678	14,267	$100.1	$8.5	8.5%	7.8% - 9.2%	33.9%
DMEPOS	9,646	9,235	$8.3	$2.4	28.6%	26.4% - 30.8%	9.5%
Total	**52,403**	**42,010**	**$399.8**	**$25.0**	**6.3%**	**5.8% - 6.7%**	**100.0%**

Table A2: Comparison of 2020 and 2021 Overall Improper Payment Rates by Error Category (Adjusted for Impact of A/B Rebilling)

Error Category	2020	2021				
	Overall	Overall	Part A Excluding Hospital IPPS	Part A Hospital IPPS	Part B	DMEPOS
No Documentation	0.3%	0.3%	0.1%	0.0%	0.1%	0.0%
Insufficient Documentation	4.0%	4.0%	1.9%	0.2%	1.4%	0.5%
Medical Necessity	1.0%	0.8%	0.5%	0.3%	0.1%	0.0%
Incorrect Coding	0.7%	0.7%	0.1%	0.1%	0.4%	0.0%
Other	0.3%	0.4%	0.3%	0.0%	0.1%	0.1%
Total	**6.3%**	**6.3%**	**2.9%**	**0.6%**	**2.1%**	**0.6%**

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

Table A3: Improper Payment Rate Categories by Percentage of 2021 Overall Improper Payments (Adjusted for Impact of A/B Rebilling)

Error Category	Percent of Overall Improper Payments
No Documentation	4.8%
Insufficient Documentation	64.1%
Medical Necessity	13.6%
Incorrect Coding	10.6%
Other	6.9%
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	Projected Improper Payments	Improper Payment Rate	Projected Improper Payments	Improper Payment Rate	Projected Improper Payments	Improper Payment Rate
Part A (Total)	$291.4	$14.2	4.9%	$13.9	4.8%	$0.3	0.1%
Part A (Excluding Hospital IPPS)	$183.5	$11.6	6.3%	$11.5	6.3%	$0.1	0.1%
Part A (Hospital IPPS)	$107.9	$2.6	2.4%	$2.4	2.2%	$0.2	0.2%
Part B	$100.1	$8.5	8.5%	$8.3	8.3%	$0.2	0.2%
DMEPOS	$8.3	$2.4	28.6%	$2.4	28.6%	$0.0	0.0%
Total	**$399.8**	**$25.0**	**6.3%**	**$24.6**	**6.1%**	**$0.4**	**0.1%**

Table A5: 2021 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	$0.1	$0.3	$0.1	$0.4	$0.2	$0.1	$1.2
Insufficient Documentation	$1.8	$1.1	$4.6	$1.1	$4.1	$1.6	$1.7	$16.1
Medical Necessity	$0.0	$0.5	$0.5	$2.1	$0.1	$0.0	$0.2	$3.4
Incorrect Coding	$0.0	$0.1	$0.2	$0.4	$1.5	$0.2	$0.2	$2.7
Other	$0.4	$0.1	$0.2	$0.1	$0.2	$0.7	$0.0	$1.7
Total	**$2.4**	**$1.8**	**$5.9**	**$3.8**	**$6.3**	**$2.7**	**$2.2**	**$25.0**

Table A6: Summary of National Improper Payment Rates by Year and by Error Category (Adjusted for Impact of A/B Rebilling)[8]

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[9]	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[10]	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[11]	Gross	0.2%	4.3%	3.0%	1.0%	0.1%	8.6%	91.4%
2012[12]	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%
2018	Gross	0.2%	4.7%	1.7%	1.0%	0.5%	8.1%	91.9%
2019	Gross	0.1%	4.3%	1.4%	1.0%	0.4%	7.3%	92.7%
2020	Gross	0.3%	4.0%	1.0%	0.7%	0.3%	6.3%	93.7%
2021	Gross	0.3%	4.0%	0.8%	0.7%	0.4%	6.3%	93.7%

[8] 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.
[9] FY 1996-2003 Improper payments were calculated as Overpayments - Underpayments
[10] FY 2004-2021 Improper payments were calculated as Overpayments + Underpayments
[11] The FY 2011 improper payment rate reported in this table is adjusted for the prospective impact of late appeals and documentation.
[12] The FY 2012-2021 improper payment rates reported in this table are adjusted for the impact of denied Part A inpatient claims under Part B.

Table A7: 2021 Improper Payment Rates and Projected Improper Payments by Claim Type (Dollars in Billions) (Adjusted for Impact of A/B Rebilling)

Claim Type	Claims Reviewed	Total Payments	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
DMEPOS	9,235	$8.3	$2.4	28.6%	26.4% - 30.8%	9.5%
Home Health & Hospice	1,884	$39.5	$3.5	8.9%	6.8% - 10.9%	14.0%
Parts A & B (Excluding Home Health & Hospice)	30,891	$351.9	$19.1	5.4%	4.9% - 5.9%	76.4%
Total	**42,010**	**$399.8**	**$25.0**	**6.3%**	**5.8% - 6.7%**	**100.0%**

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

Table B1: 2021 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 Payments	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
Part A (Total)	28,079	18,508	$291.4	$14.9	5.1%	4.5% - 5.7%	57.7%
Part A (Excluding Hospital IPPS)	8,309	7,180	$183.5	$11.6	6.3%	5.4% - 7.3%	45.0%
Part A (Hospital IPPS)	19,770	11,328	$107.9	$3.3	3.0%	2.7% - 3.4%	12.8%
Part B	14,678	14,267	$100.1	$8.5	8.5%	7.8% - 9.2%	33.0%
DMEPOS	9,646	9,235	$8.3	$2.4	28.6%	26.4% - 30.8%	9.3%
Total	**52,403**	**42,010**	**$399.8**	**$25.7**	**6.4%**	**6.0% - 6.9%**	**100.0%**

Table B2: Comparison of 2020 and 2021 Overall Improper Payment Rates by Error Category (Unadjusted for Impact of A/B Rebilling)

Error Category	2020	2021				
	Overall	Overall	Part A Excluding Hospital IPPS	Part A Hospital IPPS	Part B	DMEPOS
No Documentation	0.3%	0.3%	0.1%	0.0%	0.1%	0.0%
Insufficient Documentation	4.0%	4.0%	1.9%	0.2%	1.4%	0.5%
Medical Necessity	1.3%	1.0%	0.5%	0.5%	0.1%	0.0%
Incorrect Coding	0.7%	0.7%	0.1%	0.1%	0.4%	0.0%
Other	0.3%	0.4%	0.3%	0.0%	0.1%	0.1%
Total	**6.6%**	**6.4%**	**2.9%**	**0.8%**	**2.1%**	**0.6%**

Table B3: Improper Payment Rate Categories by Percentage of 2021 Overall Improper Payments (Unadjusted for Impact of A/B Rebilling)

Error Category	Percent of Overall Improper Payments
No Documentation	4.7%
Insufficient Documentation	62.4%
Medical Necessity	15.9%
Incorrect Coding	10.3%
Other	6.7%
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)	$291.4	$14.9	5.1%	$14.6	5.0%	$0.3	0.1%
Part A (Excluding Hospital IPPS)	$183.5	$11.6	6.3%	$11.5	6.3%	$0.1	0.1%
Part A (Hospital IPPS)	$107.9	$3.3	3.0%	$3.1	2.9%	$0.2	0.2%
Part B	$100.1	$8.5	8.5%	$8.3	8.3%	$0.2	0.2%
DMEPOS	$8.3	$2.4	28.6%	$2.4	28.6%	$0.0	0.0%
Total	**$399.8**	**$25.7**	**6.4%**	**$25.3**	**6.3%**	**$0.4**	**0.1%**

Table B5: 2021 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	$0.1	$0.4	$0.1	$0.4	$0.2	$0.1	$1.2
Insufficient Documentation	$1.8	$1.1	$4.6	$1.2	$4.1	$1.6	$1.7	$16.1
Medical Necessity	$0.1	$0.5	$0.5	$2.8	$0.1	$0.0	$0.2	$4.1
Incorrect Coding	$0.0	$0.1	$0.2	$0.4	$1.5	$0.2	$0.2	$2.7
Other	$0.4	$0.1	$0.2	$0.1	$0.2	$0.7	$0.0	$1.7
Total	**$2.4**	**$1.8**	**$5.9**	**$4.5**	**$6.3**	**$2.7**	**$2.2**	**$25.7**

Table B6: Summary of National Improper Payment Rates by Year and by Error Category (Unadjusted 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	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%
2018	Gross	0.2%	4.7%	1.9%	1.0%	0.5%	8.3%	91.7%
2019	Gross	0.1%	4.3%	1.6%	1.0%	0.4%	7.5%	92.5%
2020	Gross	0.3%	4.0%	1.3%	0.7%	0.3%	6.6%	93.4%
2021	Gross	0.3%	4.0%	1.0%	0.7%	0.4%	6.4%	93.6%

[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 2004-2021 Improper payments were calculated as Overpayments + absolute value of Underpayments

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

Part A (Hospital IPPS) Length of Stay	Claims Reviewed	Improper Payment Rate	Projected Improper Payments	Percent of Overall Improper Payments
Medicare FFS	42,010	6.4%	$25.7	100.0%
Overall Part A (Hospital IPPS)	11,328	3.0%	$3.3	12.8%
0 or 1 day	1,597	16.8%	$1.5	5.7%
2 days	1,903	4.7%	$0.6	2.4%
3 days	1,815	2.6%	$0.4	1.5%
4 days	1,371	1.4%	$0.2	0.6%
5 days	928	1.9%	$0.2	0.7%
More than 5 days	3,714	1.0%	$0.5	1.9%

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
CA	3,983	$3,067.8	7.6%	6.0% - 9.1%	11.9%
TX	3,107	$2,590.2	8.8%	7.0% - 10.7%	10.1%
FL	3,245	$1,727.0	6.1%	4.9% - 7.3%	6.7%
OH	1,497	$1,650.2	12.2%	6.1% - 18.3%	6.4%
PA	1,780	$1,158.9	6.4%	4.6% - 8.1%	4.5%
NY	2,346	$1,067.1	4.3%	3.1% - 5.5%	4.1%
NJ	1,268	$1,062.4	8.6%	4.6% - 12.7%	4.1%
GA	1,285	$905.5	8.8%	6.0% - 11.6%	3.5%
TN	1,095	$818.0	6.9%	3.8% - 10.0%	3.2%
MD	1,039	$763.7	7.1%	1.9% - 12.3%	3.0%
MI	1,298	$714.4	6.4%	4.4% - 8.3%	2.8%
OK	685	$712.7	12.3%	3.0% - 21.7%	2.8%
NC	1,407	$686.2	5.5%	3.2% - 7.8%	2.7%
VA	1,128	$664.6	7.1%	4.6% - 9.5%	2.6%
IL	1,764	$634.5	3.8%	2.5% - 5.1%	2.5%
LA	687	$608.4	8.9%	5.3% - 12.4%	2.4%
KY	705	$550.1	9.5%	3.7% - 15.2%	2.1%
MA	1,136	$533.6	4.1%	2.2% - 6.0%	2.1%
IN	940	$445.5	5.5%	2.8% - 8.1%	1.7%
AZ	786	$432.5	7.3%	4.7% - 9.8%	1.7%
AL	655	$430.5	7.1%	3.8% - 10.5%	1.7%
MS	555	$393.3	8.6%	4.6% - 12.7%	1.5%

State	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
MO	888	$384.6	4.8%	3.1% - 6.5%	1.5%
SC	703	$312.8	5.1%	2.6% - 7.6%	1.2%
WA	790	$301.6	3.6%	2.2% - 5.1%	1.2%
NV	355	$265.9	6.6%	2.9% - 10.3%	1.0%
WI	655	$239.6	3.1%	1.3% - 4.8%	0.9%
AR	501	$234.4	6.0%	2.7% - 9.3%	0.9%
CO	477	$219.3	5.2%	3.0% - 7.4%	0.9%
IA	472	$189.8	4.5%	1.6% - 7.5%	0.7%
KS	501	$184.9	5.0%	2.8% - 7.3%	0.7%
MN	678	$179.2	3.0%	1.6% - 4.4%	0.7%
NM	222	$178.4	8.3%	3.5% - 13.1%	0.7%
OR	359	$165.3	4.3%	2.4% - 6.2%	0.6%
CT	433	$125.8	3.1%	1.0% - 5.1%	0.5%
NE	302	$113.5	3.5%	1.2% - 5.9%	0.4%
NH	221	$105.6	2.8%	(0.0%) - 5.6%	0.4%
ID	188	$105.0	5.0%	0.6% - 9.3%	0.4%
WV	287	$87.6	4.1%	1.9% - 6.4%	0.3%
SD	168	$84.5	3.9%	0.3% - 7.4%	0.3%
DE	185	$74.7	5.6%	1.1% - 10.1%	0.3%
PR	58	$69.1	23.2%	8.2% - 38.2%	0.3%
UT	257	$65.9	2.6%	(0.0%) - 5.2%	0.3%
ME	173	$64.8	4.1%	0.2% - 7.9%	0.3%
HI	103	$46.8	3.9%	0.7% - 7.1%	0.2%
MT	122	$37.0	2.4%	(0.4%) - 5.1%	0.1%
RI	102	$34.8	4.1%	(0.4%) - 8.6%	0.1%
ND	111	$27.6	2.2%	0.3% - 4.2%	0.1%
VT	99	$25.5	2.2%	(1.0%) - 5.4%	0.1%
DC	57	$17.6	4.0%	0.2% - 7.8%	0.1%
WY	66	$5.0	1.2%	(0.3%) - 2.6%	0.0%
AK	63	$2.6	0.3%	(0.2%) - 0.8%	0.0%
All States	**42,010**	**$25,745.5**	**6.4%**	**6.0% - 6.9%**	**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	3,001	$2,249.9	6.5%	5.2% - 7.9%	8.7%
TX	2,185	$1,983.2	7.8%	5.8% - 9.8%	7.7%
OH	1,126	$1,399.4	12.1%	5.2% - 19.0%	5.4%
FL	2,485	$1,335.2	5.6%	4.4% - 6.9%	5.2%
NY	1,760	$914.7	3.9%	2.6% - 5.1%	3.6%
NJ	892	$910.2	8.2%	3.8% - 12.6%	3.5%
PA	1,324	$837.7	5.4%	3.7% - 7.1%	3.3%
GA	953	$782.4	8.6%	5.6% - 11.6%	3.0%
TN	848	$696.9	6.3%	3.0% - 9.5%	2.7%
MD	824	$674.2	6.7%	1.2% - 12.2%	2.6%
MI	930	$575.5	5.7%	3.6% - 7.8%	2.2%
NC	1,022	$523.9	4.8%	2.3% - 7.2%	2.0%
MA	897	$477.3	4.1%	2.0% - 6.2%	1.9%
KY	484	$464.9	8.9%	2.6% - 15.2%	1.8%
VA	810	$464.4	5.6%	3.1% - 8.0%	1.8%
IL	1,265	$463.0	3.2%	1.7% - 4.6%	1.8%
LA	472	$387.2	7.0%	4.2% - 9.8%	1.5%
AL	476	$374.8	7.5%	3.5% - 11.4%	1.5%
AZ	597	$372.7	7.0%	4.4% - 9.6%	1.5%
IN	688	$354.7	4.7%	1.9% - 7.4%	1.4%
OK	455	$330.3	7.0%	0.3% - 13.7%	1.3%
MS	366	$275.3	7.3%	3.0% - 11.5%	1.1%
MO	653	$267.8	3.7%	2.2% - 5.2%	1.0%
WA	571	$242.4	3.1%	1.7% - 4.6%	0.9%
SC	498	$236.9	4.5%	2.4% - 6.6%	0.9%
AR	361	$192.2	6.2%	2.2% - 10.2%	0.8%
CO	348	$189.1	5.2%	2.7% - 7.7%	0.7%
NV	281	$177.6	5.1%	2.1% - 8.1%	0.7%
WI	481	$153.0	2.2%	0.6% - 3.8%	0.6%
KS	381	$152.4	4.6%	2.2% - 6.9%	0.6%
NM	154	$122.7	6.7%	2.3% - 11.0%	0.5%
OR	264	$115.9	3.5%	1.8% - 5.2%	0.5%
MN	494	$110.0	2.1%	0.9% - 3.2%	0.4%
IA	339	$98.3	2.6%	1.2% - 3.9%	0.4%
NH	174	$97.8	2.8%	(0.3%) - 5.8%	0.4%

State	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
ID	141	$85.3	4.6%	(0.1%) - 9.3%	0.3%
NE	236	$79.7	2.6%	0.7% - 4.5%	0.3%
CT	303	$72.9	2.0%	0.8% - 3.1%	0.3%
WV	194	$68.0	3.7%	1.3% - 6.1%	0.3%
DE	129	$67.5	5.5%	0.6% - 10.4%	0.3%
UT	189	$53.2	2.6%	(0.6%) - 5.8%	0.2%
PR	44	$46.2	20.2%	3.8% - 36.5%	0.2%
HI	79	$39.0	3.8%	0.3% - 7.3%	0.2%
ME	128	$33.5	2.3%	(0.8%) - 5.4%	0.1%
SD	138	$24.9	1.2%	(0.3%) - 2.6%	0.1%
MT	79	$24.8	1.7%	(0.6%) - 3.9%	0.1%
ND	85	$23.7	2.0%	0.1% - 4.0%	0.1%
RI	78	$19.5	2.5%	(0.9%) - 5.9%	0.1%
DC	38	$14.8	5.0%	(0.4%) - 10.3%	0.1%
VT	64	$6.2	0.6%	(0.2%) - 1.4%	0.0%
WY	44	$3.6	0.9%	(0.5%) - 2.3%	0.0%
AK	43	$2.1	0.2%	(0.3%) - 0.7%	0.0%
All States	**30,891**	**$19,848.3**	**5.6%**	**5.1% - 6.1%**	**77.1%**

Table B10: Medicare FFS Projected Improper Payments by State – DMEPOS Only (Dollars in Millions) (Unadjusted for Impact of A/B Rebilling)[16]

State	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
FL	610	$234.2	42.9%	31.8% - 54.0%	0.9%
TX	587	$171.2	31.0%	23.5% - 38.6%	0.7%
CA	803	$152.3	21.9%	16.9% - 26.9%	0.6%
IL	415	$98.1	28.8%	19.9% - 37.7%	0.4%
NC	341	$97.7	30.6%	19.6% - 41.6%	0.4%
OH	300	$95.7	33.9%	15.9% - 52.0%	0.4%
TN	218	$94.1	36.3%	24.1% - 48.5%	0.4%
NY	536	$90.3	26.2%	19.2% - 33.1%	0.4%
MI	320	$89.9	29.6%	19.1% - 40.2%	0.4%
PA	388	$85.8	34.3%	23.9% - 44.6%	0.3%
GA	293	$77.1	31.7%	22.4% - 41.0%	0.3%
VA	273	$74.6	23.4%	9.0% - 37.8%	0.3%
NJ	336	$73.6	29.9%	13.9% - 46.0%	0.3%
MS	160	$64.2	38.6%	25.0% - 52.1%	0.3%
KY	203	$63.7	22.7%	6.9% - 38.4%	0.3%
WA	202	$58.8	25.8%	10.3% - 41.3%	0.2%
MO	206	$53.0	24.7%	13.3% - 36.2%	0.2%
LA	130	$47.8	41.0%	23.4% - 58.5%	0.2%
MD	192	$46.5	22.9%	6.7% - 39.0%	0.2%
MA	195	$46.1	21.8%	10.3% - 33.3%	0.2%
IN	228	$43.6	30.7%	20.0% - 41.3%	0.2%
OK	156	$42.8	32.3%	14.2% - 50.5%	0.2%
AR	122	$42.2	37.5%	23.3% - 51.8%	0.2%
MN	158	$39.9	28.7%	14.2% - 43.1%	0.2%
WI	142	$39.6	38.0%	23.1% - 52.9%	0.2%
AL	148	$33.9	28.1%	16.6% - 39.6%	0.1%
CO	112	$30.2	31.9%	15.7% - 48.2%	0.1%
OR	82	$23.3	30.9%	13.1% - 48.7%	0.1%
SC	179	$22.2	14.4%	8.0% - 20.9%	0.1%
IA	125	$21.5	16.3%	3.5% - 29.1%	0.1%
AZ	165	$21.0	16.3%	8.9% - 23.7%	0.1%
KS	109	$20.2	19.6%	8.7% - 30.5%	0.1%
WV	84	$19.6	20.9%	5.2% - 36.6%	0.1%
NV	53	$15.8	21.7%	5.3% - 38.2%	0.1%

[16] All estimates in this table are based on a minimum of 30 lines in the sample.

State	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
NM	52	$14.2	31.3%	14.1% - 48.5%	0.1%
UT	54	$12.6	18.8%	5.0% - 32.5%	0.1%
ID	38	$11.3	38.3%	2.8% - 73.8%	0.0%
NE	60	$10.9	19.0%	1.3% - 36.7%	0.0%
CT	111	$9.7	12.2%	3.3% - 21.2%	0.0%
ME	40	$9.4	30.1%	8.1% - 52.1%	0.0%
NH	37	$7.7	17.6%	(6.0%) - 41.1%	0.0%
DE	50	$7.2	23.1%	3.2% - 43.1%	0.0%
MT	39	$1.2	3.8%	(0.1%) - 7.8%	0.0%
All States (Incl. States Not Listed)	**9,235**	**$2,382.7**	**28.6%**	**26.4% - 30.8%**	**9.3%**

Table B11: Medicare FFS Projected Improper Payments by State – Home Health and Hospice Only (Dollars in Millions) (Unadjusted for Impact of A/B Rebilling)[17]

State	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
CA	179	$665.6	12.2%	4.8% - 19.5%	2.6%
TX	335	$435.7	12.8%	7.9% - 17.8%	1.7%
OK	74	$339.6	37.2%	1.5% - 72.8%	1.3%
PA	68	$235.4	9.3%	2.0% - 16.6%	0.9%
LA	85	$173.4	14.1%	0.2% - 28.0%	0.7%
FL	150	$157.6	3.8%	0.9% - 6.8%	0.6%
OH	71	$155.2	9.4%	(1.8%) - 20.6%	0.6%
VA	45	$125.5	16.8%	4.7% - 28.9%	0.5%
NJ	40	$78.6	8.2%	(2.5%) - 18.9%	0.3%
IL	84	$73.4	3.7%	0.8% - 6.7%	0.3%
NC	44	$64.6	5.6%	(2.6%) - 13.7%	0.3%
NY	50	$62.1	6.6%	(0.3%) - 13.5%	0.2%
MI	48	$49.0	5.7%	(0.4%) - 11.8%	0.2%
WI	32	$47.0	5.7%	(2.4%) - 13.8%	0.2%
GA	39	$46.0	5.2%	(2.9%) - 13.3%	0.2%
AL	31	$21.8	2.4%	(0.3%) - 5.2%	0.1%
MA	44	$10.1	1.0%	(0.3%) - 2.2%	0.0%
All States (Incl. States Not Listed)	**1,884**	**$3,514.5**	**8.9%**	**6.8% - 10.9%**	**13.7%**

[17] All estimates in this table are based on a minimum of 30 lines in the sample.

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)	$817,653,571	24.8%	19.6% - 30.1%	0.7%	88.8%	8.8%	0.0%	1.6%	3.2%
Minor procedures - other (Medicare fee schedule)	$760,818,528	15.0%	9.0% - 20.9%	2.6%	90.0%	0.4%	1.8%	5.3%	3.0%
Office visits - established	$722,802,851	4.9%	3.7% - 6.1%	11.0%	38.7%	0.0%	48.5%	1.8%	2.8%
Hospital visit - subsequent	$498,391,826	9.2%	6.9% - 11.4%	8.7%	45.8%	0.0%	44.5%	1.0%	1.9%
Hospital visit - initial	$463,933,943	17.2%	14.6% - 19.8%	3.8%	24.5%	0.0%	71.1%	0.7%	1.8%
Specialist - other	$442,270,133	25.5%	17.7% - 33.2%	3.4%	92.3%	0.0%	4.4%	0.0%	1.7%
Ambulance	$405,165,149	7.9%	4.6% - 11.2%	5.4%	56.6%	31.3%	6.7%	0.0%	1.6%
Nursing home visit	$341,892,648	14.1%	11.0% - 17.2%	4.6%	37.1%	0.0%	54.9%	3.3%	1.3%
Specialist - psychiatry	$271,060,913	19.4%	12.9% - 25.8%	6.2%	87.5%	0.0%	0.7%	5.7%	1.1%
Office visits - new	$256,145,880	9.7%	6.9% - 12.4%	4.2%	6.6%	0.0%	64.0%	25.3%	1.0%
Ambulatory procedures - other	$232,358,767	19.0%	7.9% - 30.1%	3.5%	82.9%	13.0%	0.0%	0.7%	0.9%
Eye procedure - cataract removal/lens insertion	$218,340,490	12.7%	4.6% - 20.8%	0.0%	87.2%	0.0%	12.8%	0.0%	0.8%
Emergency room visit	$198,537,513	9.9%	7.2% - 12.5%	9.5%	14.9%	0.0%	66.4%	9.1%	0.8%
Chiropractic	$176,774,349	33.7%	24.7% - 42.7%	1.9%	86.8%	8.6%	2.7%	0.0%	0.7%
Advanced imaging - CAT/CT/CTA: other	$176,761,544	11.5%	6.9% - 16.1%	19.2%	67.5%	0.0%	11.6%	1.6%	0.7%
Other drugs	$167,272,746	1.6%	0.8% - 2.3%	0.5%	78.3%	0.6%	19.7%	0.8%	0.6%
Other tests - other	$162,011,642	9.4%	4.6% - 14.2%	22.6%	74.2%	0.0%	3.2%	0.0%	0.6%
Oncology - radiation therapy	$145,676,387	11.8%	1.7% - 22.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.6%
Hospital visit - critical care	$134,897,754	11.5%	7.4% - 15.5%	4.4%	15.5%	0.0%	80.1%	0.0%	0.5%
Major procedure - Other	$123,924,928	5.5%	0.3% - 10.7%	2.3%	88.5%	0.0%	0.0%	9.2%	0.5%
All Type of Services (Incl. Codes Not Listed)	**$8,496,383,898**	**8.5%**	**7.8% - 9.2%**	**5.1%**	**68.2%**	**3.1%**	**20.7%**	**2.9%**	**33.0%**

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

DMEPOS (Policy Group)	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	
CPAP	$319,776,813	30.8%	24.9% - 36.7%	0.5%	88.6%	0.5%	0.1%	10.3%	1.2%
Surgical Dressings	$197,933,331	69.7%	59.7% - 79.7%	0.0%	81.1%	2.6%	1.4%	14.9%	0.8%
Lower Limb Orthoses	$178,189,914	50.6%	42.4% - 58.7%	31.4%	51.2%	3.6%	0.0%	13.9%	0.7%
Glucose Monitor	$132,330,086	32.0%	23.1% - 41.0%	2.0%	80.2%	0.7%	5.8%	11.3%	0.5%
Oxygen Supplies/Equipment	$129,165,361	22.3%	17.1% - 27.5%	0.2%	76.5%	0.0%	0.0%	23.2%	0.5%
Infusion Pumps & Related Drugs	$114,135,481	16.3%	10.2% - 22.5%	1.2%	85.4%	3.5%	3.1%	6.8%	0.4%
Nebulizers & Related Drugs	$111,637,609	13.5%	7.4% - 19.7%	3.1%	66.2%	12.9%	0.2%	17.7%	0.4%
Parenteral Nutrition	$110,664,812	46.5%	34.2% - 58.9%	4.8%	78.4%	0.0%	1.5%	15.2%	0.4%
All Policy Groups with Less than 30 Claims	$106,749,723	22.2%	13.7% - 30.7%	0.7%	77.4%	4.6%	0.6%	16.7%	0.4%
Lower Limb Prostheses	$104,828,319	24.5%	9.9% - 39.1%	0.0%	88.5%	0.0%	0.1%	11.4%	0.4%
Ventilators	$93,353,021	18.0%	12.4% - 23.6%	0.0%	81.9%	0.0%	0.0%	18.1%	0.4%
Wheelchairs Options/Accessories	$83,874,641	32.0%	14.8% - 49.1%	0.0%	87.0%	0.3%	0.0%	12.8%	0.3%
Urological Supplies	$81,643,656	23.3%	13.8% - 32.9%	0.0%	73.2%	3.4%	1.9%	21.4%	0.3%
LSO	$76,454,328	44.2%	36.8% - 51.6%	36.1%	48.3%	1.4%	0.0%	14.3%	0.3%
Enteral Nutrition	$70,642,557	40.8%	29.6% - 52.0%	2.2%	57.9%	2.0%	1.0%	36.9%	0.3%
Diabetic Shoes	$70,410,351	67.9%	52.0% - 83.8%	0.0%	79.8%	0.0%	0.0%	20.2%	0.3%
Immunosuppressive Drugs	$61,243,462	17.2%	10.0% - 24.4%	1.4%	69.1%	0.7%	0.0%	28.7%	0.2%
Wheelchairs Manual	$45,242,415	49.1%	40.0% - 58.3%	0.0%	90.1%	0.0%	0.0%	9.9%	0.2%
Upper Limb Orthoses	$43,944,276	44.2%	35.6% - 52.9%	32.8%	55.4%	3.2%	0.0%	8.6%	0.2%
Respiratory Assist Device	$36,319,642	35.1%	22.6% - 47.6%	0.0%	100.0%	0.0%	0.0%	0.0%	0.1%
All Type of Services (Incl. Codes Not Listed)	**$2,382,672,110**	**28.6%**	**26.4% - 30.8%**	**5.0%**	**76.9%**	**2.0%**	**0.9%**	**15.2%**	**9.3%**

Table D3: Top 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	
Hospital Outpatient	$3,209,637,416	4.5%	2.7% - 6.3%	4.8%	78.6%	9.7%	1.6%	5.2%	12.5%
SNF Inpatient	$2,472,914,704	8.2%	6.2% - 10.3%	6.3%	57.0%	0.0%	8.0%	28.6%	9.6%
Home Health	$1,839,125,385	10.3%	7.0% - 13.5%	4.1%	59.1%	27.1%	3.4%	6.3%	7.1%
Nonhospital based hospice	$1,281,977,208	6.5%	3.8% - 9.1%	14.5%	61.1%	13.2%	8.8%	2.5%	5.0%
Hospital Inpatient (Part A)	$1,180,891,736	12.5%	9.8% - 15.2%	0.0%	29.5%	70.3%	0.0%	0.2%	4.6%
CAH	$538,011,990	6.1%	1.1% - 11.1%	0.0%	98.3%	1.2%	0.3%	0.1%	2.1%
Hospital based hospice	$393,361,483	22.3%	12.2% - 32.4%	1.6%	80.2%	10.3%	2.4%	5.6%	1.5%
SNF Inpatient Part B	$168,850,720	4.3%	0.7% - 7.8%	0.0%	99.8%	0.2%	0.0%	0.0%	0.7%
Hospital Other Part B	$145,519,869	21.7%	8.1% - 35.4%	0.0%	99.9%	0.0%	0.1%	0.0%	0.6%
Clinic ESRD	$139,152,609	1.1%	0.3% - 1.8%	0.0%	99.7%	0.0%	0.0%	0.3%	0.5%
Clinic OPT	$74,461,041	10.5%	0.9% - 20.0%	4.4%	82.9%	0.0%	7.2%	5.5%	0.3%
Hospital Inpatient Part B	$54,204,195	2.3%	(1.2%) - 5.8%	0.0%	75.0%	0.0%	25.0%	0.0%	0.2%
SNF Outpatient	$33,055,487	9.2%	(3.9%) - 22.4%	0.0%	100.0%	0.0%	0.0%	0.0%	0.1%
Clinical Rural Health	$30,281,831	2.0%	0.1% - 3.9%	0.0%	99.8%	0.0%	0.2%	0.0%	0.1%
Clinic CORF	$10,983,214	29.1%	14.2% - 43.9%	0.0%	78.6%	0.0%	0.2%	21.2%	0.0%
FQHC	$6,718,333	0.5%	(0.5%) - 1.6%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
All Codes With Less Than 30 Claims	$0	0.0%	0.0% - 0.0%	N/A	N/A	N/A	N/A	N/A	0.0%
All Type of Services (Incl. Codes Not Listed)	**$11,579,147,221**	**6.3%**	**5.4% - 7.3%**	**5.0%**	**65.9%**	**16.0%**	**3.9%**	**9.1%**	**45.0%**

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 Hip And Knee Joint Replacement Or Reattachment Of Lower Extremity (469, 470)	$724,055,597	16.5%	13.6% - 19.4%	0.0%	19.5%	80.3%	0.1%	0.0%	2.8%
Endovascular Cardiac Valve Replacement & Supplement Procedures (266, 267)	$222,816,591	9.2%	5.7% - 12.7%	0.0%	98.0%	0.0%	2.0%	0.0%	0.9%
Percutaneous Intracardiac Procedures (273, 274)	$160,504,177	29.3%	17.9% - 40.7%	0.0%	83.0%	17.0%	0.0%	0.0%	0.6%
Septicemia Or Severe Sepsis W/O MV >96 Hours (871, 872)	$113,470,196	1.3%	0.1% - 2.4%	37.2%	0.0%	0.0%	62.8%	0.0%	0.4%
Cardiac Defibrillator Implant W/O Cardiac Cath (226, 227)	$88,790,870	22.7%	16.1% - 29.3%	0.0%	85.3%	14.7%	0.0%	0.0%	0.3%
Psychoses (885)	$72,258,999	2.4%	0.6% - 4.3%	12.8%	80.6%	1.2%	5.5%	0.0%	0.3%
Other Vascular Procedures (252, 253, 254)	$65,839,408	4.6%	0.3% - 8.8%	0.0%	14.4%	75.3%	10.3%	0.0%	0.3%
Cervical Spinal Fusion (471, 472, 473)	$63,025,284	18.1%	4.8% - 31.3%	0.0%	5.9%	93.0%	1.0%	0.0%	0.2%
Degenerative Nervous System Disorders (056, 057)	$58,554,112	8.2%	5.0% - 11.5%	0.0%	21.3%	73.3%	5.4%	0.0%	0.2%
Medical Back Problems (551, 552)	$46,375,602	9.8%	1.7% - 18.0%	0.0%	0.0%	83.7%	16.3%	0.0%	0.2%
Transient Ischemia W/O Thrombolytic (069)	$45,036,541	26.3%	(1.4%) - 54.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.2%
Other Disorders Of Nervous System (091, 092, 093)	$42,081,266	8.8%	1.7% - 16.0%	0.0%	0.0%	91.6%	8.4%	0.0%	0.2%
Percutaneous Cardiovascular Procedures W Drug-Eluting Stent (246)	$40,961,804	4.8%	(3.0%) - 12.6%	0.0%	85.3%	0.0%	14.7%	0.0%	0.2%
Syncope & Collapse (312)	$39,886,227	9.9%	(1.1%) - 20.9%	0.0%	0.0%	100.0%	0.0%	0.0%	0.2%
Other Major Cardiovascular Procedures (270, 271, 272)	$38,780,709	4.4%	(1.5%) - 10.3%	0.0%	0.0%	41.0%	59.0%	0.0%	0.2%
Spinal Fusion Except Cervical (459, 460)	$32,667,546	2.6%	0.3% - 5.0%	0.0%	36.9%	63.1%	0.0%	0.0%	0.1%
Esophagitis, Gastroent & Misc Digest Disorders (391, 392)	$32,284,669	3.4%	(0.1%) - 6.9%	0.0%	0.0%	88.1%	11.9%	0.0%	0.1%
Extensive OR Procedure Unrelated To Principal Diagnosis (981, 982, 983)	$30,031,117	2.4%	(0.8%) - 5.6%	0.0%	11.3%	66.3%	22.4%	0.0%	0.1%
Cardiac Arrhythmia & Conduction Disorders (308, 309, 310)	$28,817,150	2.3%	(0.2%) - 4.8%	0.0%	0.0%	100.0%	0.0%	0.0%	0.1%
Chest Pain (313)	$28,235,803	11.8%	1.5% - 22.1%	0.0%	0.0%	100.0%	0.0%	0.0%	0.1%
All Type of Services (Incl. Codes Not Listed)	**$3,287,274,168**	**3.0%**	**2.7% - 3.4%**	**2.3%**	**24.3%**	**58.9%**	**12.9%**	**1.5%**	**12.8%**

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	51.2%	29.1% - 73.2%	0.0%	100.0%	0.0%	0.0%	0.0%	0.1%
Chiropractic	33.7%	24.7% - 42.7%	1.9%	86.8%	8.6%	2.7%	0.0%	0.7%
Standard imaging - other	28.5%	18.2% - 38.8%	0.0%	100.0%	0.0%	0.0%	0.0%	0.3%
Other tests - EKG monitoring	26.9%	6.2% - 47.7%	0.0%	100.0%	0.0%	0.0%	0.0%	0.5%
Specialist - other	25.5%	17.7% - 33.2%	3.4%	92.3%	0.0%	4.4%	0.0%	1.7%
Lab tests - other (non-Medicare fee schedule)	24.8%	19.6% - 30.1%	0.7%	88.8%	8.8%	0.0%	1.6%	3.2%
Other - Medicare fee schedule	22.0%	11.3% - 32.7%	14.3%	51.0%	0.0%	0.0%	34.7%	0.2%
Specialist - psychiatry	19.4%	12.9% - 25.8%	6.2%	87.5%	0.0%	0.7%	5.7%	1.1%
Ambulatory procedures - other	19.0%	7.9% - 30.1%	3.5%	82.9%	13.0%	0.0%	0.7%	0.9%
Hospital visit - initial	17.2%	14.6% - 19.8%	3.8%	24.5%	0.0%	71.1%	0.7%	1.8%
Echography/ultrasonography - other	16.5%	5.1% - 27.8%	7.9%	86.0%	0.0%	0.2%	5.9%	0.4%
Lab tests - bacterial cultures	16.0%	4.5% - 27.5%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Standard imaging - chest	15.8%	8.2% - 23.3%	12.1%	87.0%	0.0%	0.9%	0.0%	0.2%
Minor procedures - other (Medicare fee schedule)	15.0%	9.0% - 20.9%	2.6%	90.0%	0.4%	1.8%	5.3%	3.0%
Lab tests - routine venipuncture (non- Medicare fee schedule)	14.9%	11.2% - 18.6%	4.4%	93.4%	0.0%	0.0%	2.2%	0.1%
Other tests - cardiovascular stress tests	14.2%	0.5% - 27.9%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Nursing home visit	14.1%	11.0% - 17.2%	4.6%	37.1%	0.0%	54.9%	3.3%	1.3%
Echography/ultrasonography - carotid arteries	13.3%	3.9% - 22.7%	5.1%	91.9%	2.9%	0.0%	0.0%	0.1%
Lab tests - blood counts	12.9%	8.3% - 17.6%	0.0%	90.0%	0.0%	10.0%	0.0%	0.1%
Eye procedure - cataract removal/lens insertion	12.7%	4.6% - 20.8%	0.0%	87.2%	0.0%	12.8%	0.0%	0.8%
Overall (incl. Service Types Not Listed)	**8.5%**	**7.8% - 9.2%**	**5.1%**	**68.2%**	**3.1%**	**20.7%**	**2.9%**	**33.0%**

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

DMEPOS (Policy Group)	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	
Lenses	74.8%	63.1% - 86.5%	1.1%	80.9%	0.0%	0.0%	18.0%	0.1%
Pneumatic Compression Device	70.1%	54.7% - 85.4%	0.0%	96.8%	0.0%	0.0%	3.2%	0.1%
Surgical Dressings	69.7%	59.7% - 79.7%	0.0%	81.1%	2.6%	1.4%	14.9%	0.8%
Diabetic Shoes	67.9%	52.0% - 83.8%	0.0%	79.8%	0.0%	0.0%	20.2%	0.3%
Suction Pump	51.1%	32.7% - 69.4%	0.0%	64.5%	0.0%	1.2%	34.3%	0.1%
Lower Limb Orthoses	50.6%	42.4% - 58.7%	31.4%	51.2%	3.6%	0.0%	13.9%	0.7%
Wheelchairs Manual	49.1%	40.0% - 58.3%	0.0%	90.1%	0.0%	0.0%	9.9%	0.2%
Tracheostomy Supplies	47.7%	31.4% - 64.0%	5.1%	83.1%	0.0%	4.3%	7.6%	0.1%
Parenteral Nutrition	46.5%	34.2% - 58.9%	4.8%	78.4%	0.0%	1.5%	15.2%	0.4%
Upper Limb Orthoses	44.2%	35.6% - 52.9%	32.8%	55.4%	3.2%	0.0%	8.6%	0.2%
LSO	44.2%	36.8% - 51.6%	36.1%	48.3%	1.4%	0.0%	14.3%	0.3%
Negative Pressure Wound Therapy	41.9%	22.7% - 61.0%	0.0%	75.8%	4.6%	2.9%	16.8%	0.1%
{N/A}[18]	40.9%	30.5% - 51.2%	0.5%	68.2%	0.3%	0.5%	30.4%	0.0%
Enteral Nutrition	40.8%	29.6% - 52.0%	2.2%	57.9%	2.0%	1.0%	36.9%	0.3%
Walkers	36.5%	21.6% - 51.4%	0.0%	62.3%	0.3%	0.0%	37.5%	0.0%
Respiratory Assist Device	35.1%	22.6% - 47.6%	0.0%	100.0%	0.0%	0.0%	0.0%	0.1%
Wheelchairs Seating	33.3%	13.7% - 52.8%	0.0%	82.8%	0.1%	0.0%	17.1%	0.0%
Glucose Monitor	32.0%	23.1% - 41.0%	2.0%	80.2%	0.7%	5.8%	11.3%	0.5%
Wheelchairs Options/Accessories	32.0%	14.8% - 49.1%	0.0%	87.0%	0.3%	0.0%	12.8%	0.3%
CPAP	30.8%	24.9% - 36.7%	0.5%	88.6%	0.5%	0.1%	10.3%	1.2%
Overall (incl. Service Types Not Listed)	**28.6%**	**26.4% - 30.8%**	**5.0%**	**76.9%**	**2.0%**	**0.9%**	**15.2%**	**9.3%**

[18] {N/A} is a policy group in the DMEPOS policy group mapping that is used to create the DMEPOS service type.

Table E3: Top 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	
Clinic CORF	29.1%	14.2% - 43.9%	0.0%	78.6%	0.0%	0.2%	21.2%	0.0%
Hospital based hospice	22.3%	12.2% - 32.4%	1.6%	80.2%	10.3%	2.4%	5.6%	1.5%
Hospital Other Part B	21.7%	8.1% - 35.4%	0.0%	99.9%	0.0%	0.1%	0.0%	0.6%
Hospital Inpatient (Part A)	12.5%	9.8% - 15.2%	0.0%	29.5%	70.3%	0.0%	0.2%	4.6%
Clinic OPT	10.5%	0.9% - 20.0%	4.4%	82.9%	0.0%	7.2%	5.5%	0.3%
Home Health	10.3%	7.0% - 13.5%	4.1%	59.1%	27.1%	3.4%	6.3%	7.1%
SNF Outpatient	9.2%	(3.9%) - 22.4%	0.0%	100.0%	0.0%	0.0%	0.0%	0.1%
SNF Inpatient	8.2%	6.2% - 10.3%	6.3%	57.0%	0.0%	8.0%	28.6%	9.6%
Nonhospital based hospice	6.5%	3.8% - 9.1%	14.5%	61.1%	13.2%	8.8%	2.5%	5.0%
CAH	6.1%	1.1% - 11.1%	0.0%	98.3%	1.2%	0.3%	0.1%	2.1%
Hospital Outpatient	4.5%	2.7% - 6.3%	4.8%	78.6%	9.7%	1.6%	5.2%	12.5%
SNF Inpatient Part B	4.3%	0.7% - 7.8%	0.0%	99.8%	0.2%	0.0%	0.0%	0.7%
Hospital Inpatient Part B	2.3%	(1.2%) - 5.8%	0.0%	75.0%	0.0%	25.0%	0.0%	0.2%
Clinical Rural Health	2.0%	0.1% - 3.9%	0.0%	99.8%	0.0%	0.2%	0.0%	0.1%
Clinic ESRD	1.1%	0.3% - 1.8%	0.0%	99.7%	0.0%	0.0%	0.3%	0.5%
FQHC	0.5%	(0.5%) - 1.6%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
All Codes With Less Than 30 Claims	0.0%	0.0% - 0.0%	N/A	N/A	N/A	N/A	N/A	0.0%
Overall (incl. Service Types Not Listed)	**6.3%**	**5.4% - 7.3%**	**5.0%**	**65.9%**	**16.0%**	**3.9%**	**9.1%**	**45.0%**

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	
Female Reproductive System Reconstructive Procedures (748)	37.3%	24.0% - 50.6%	0.0%	2.8%	86.5%	10.7%	0.0%	0.0%
Percutaneous Intracardiac Procedures (273, 274)	29.3%	17.9% - 40.7%	0.0%	83.0%	17.0%	0.0%	0.0%	0.6%
Transient Ischemia W/O Thrombolytic (069)	26.3%	(1.4%) - 54.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.2%
Cardiac Defibrillator Implant W/O Cardiac Cath (226, 227)	22.7%	16.1% - 29.3%	0.0%	85.3%	14.7%	0.0%	0.0%	0.3%
Cervical Spinal Fusion (471, 472, 473)	18.1%	4.8% - 31.3%	0.0%	5.9%	93.0%	1.0%	0.0%	0.2%
Signs & Symptoms Of Musculoskeletal System & Conn Tissue (555, 556)	18.0%	5.4% - 30.5%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Bilateral Or Multiple Major Joint Procs Of Lower Extremity (461, 462)	17.6%	9.2% - 25.9%	0.0%	25.5%	74.5%	0.0%	0.0%	0.1%
Major Hip And Knee Joint Replacement Or Reattachment Of Lower Extremity (469, 470)	16.5%	13.6% - 19.4%	0.0%	19.5%	80.3%	0.1%	0.0%	2.8%
Dysequilibrium (149)	14.7%	2.0% - 27.5%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Uterine & Adnexa Proc For Non-Malignancy (742, 743)	13.3%	4.7% - 21.9%	0.0%	1.2%	98.8%	0.0%	0.0%	0.0%
Back & Neck Proc Exc Spinal Fusion (518, 519, 520)	12.8%	2.2% - 23.4%	0.0%	9.8%	83.3%	6.9%	0.0%	0.1%
Chest Pain (313)	11.8%	1.5% - 22.1%	0.0%	0.0%	100.0%	0.0%	0.0%	0.1%
Signs & Symptoms (947, 948)	11.8%	4.0% - 19.5%	0.0%	3.7%	91.4%	5.0%	0.0%	0.1%
Aftercare, Musculoskeletal System & Connective Tissue (559, 560, 561)	11.3%	7.0% - 15.5%	0.0%	19.4%	72.7%	8.0%	0.0%	0.1%
Syncope & Collapse (312)	9.9%	(1.1%) - 20.9%	0.0%	0.0%	100.0%	0.0%	0.0%	0.2%
Medical Back Problems (551, 552)	9.8%	1.7% - 18.0%	0.0%	0.0%	83.7%	16.3%	0.0%	0.2%
Aftercare (949, 950)	9.7%	(1.2%) - 20.5%	0.0%	57.0%	23.9%	19.1%	0.0%	0.0%
Endovascular Cardiac Valve Replacement & Supplement Procedures (266, 267)	9.2%	5.7% - 12.7%	0.0%	98.0%	0.0%	2.0%	0.0%	0.9%
Other Skin, Subcut Tiss & Breast Proc (579, 580, 581)	8.9%	(2.3%) - 20.1%	0.0%	0.0%	93.4%	6.6%	0.0%	0.1%
Other Disorders Of Nervous System (091, 092, 093)	8.8%	1.7% - 16.0%	0.0%	0.0%	91.6%	8.4%	0.0%	0.2%
Overall (incl. Service Types Not Listed)	**3.0%**	**2.7% - 3.4%**	**2.3%**	**24.3%**	**58.9%**	**12.9%**	**1.5%**	**12.8%**

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	$185,635,156	0.9%	(0.4%) - 2.3%	0.7%
SNF Inpatient	$156,959,808	0.5%	(0.1%) - 1.1%	0.6%
Hospital Outpatient	$154,044,845	0.2%	(0.1%) - 0.5%	0.6%
Office visits - established	$79,603,291	0.5%	0.1% - 1.0%	0.3%
Home Health	$76,165,277	0.4%	(0.0%) - 0.9%	0.3%
Lower Limb Orthoses	$55,876,720	15.9%	7.0% - 24.7%	0.2%
Hospital visit - subsequent	$43,270,417	0.8%	0.1% - 1.5%	0.2%
Septicemia Or Severe Sepsis W/O MV >96 Hours (871, 872)	$42,175,238	0.5%	(0.5%) - 1.4%	0.2%
Other tests - other	$36,609,751	2.1%	(0.7%) - 4.9%	0.1%
Advanced imaging - CAT/CT/CTA: other	$33,923,176	2.2%	0.5% - 3.9%	0.1%
LSO	$27,618,738	16.0%	8.3% - 23.6%	0.1%
Ambulance	$21,718,905	0.4%	(0.4%) - 1.3%	0.1%
Minor procedures - other (Medicare fee schedule)	$19,707,121	0.4%	(0.1%) - 0.8%	0.1%
Emergency room visit	$18,923,903	0.9%	0.0% - 1.9%	0.1%
Hospital visit - initial	$17,780,776	0.7%	0.1% - 1.2%	0.1%
Specialist - psychiatry	$16,814,027	1.2%	(0.6%) - 3.0%	0.1%
Nursing home visit	$15,756,773	0.6%	(0.0%) - 1.3%	0.1%
Minor procedures - musculoskeletal	$15,669,316	1.5%	(0.7%) - 3.6%	0.1%
Specialist - other	$14,825,082	0.9%	(0.8%) - 2.5%	0.1%
Upper Limb Orthoses	$14,422,029	14.5%	9.6% - 19.5%	0.1%
Overall (Incl. Codes Not Listed)	**$1,209,726,511**	**0.3%**	**0.2% - 0.4%**	**4.7%**

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
Hospital Outpatient	$2,523,654,509	3.5%	2.0% - 5.1%	9.8%
SNF Inpatient	$1,408,609,221	4.7%	3.0% - 6.4%	5.5%
Home Health	$1,087,330,235	6.1%	3.0% - 9.1%	4.2%
Nonhospital based hospice	$783,792,299	4.0%	1.8% - 6.1%	3.0%
Lab tests - other (non-Medicare fee schedule)	$726,064,026	22.1%	17.5% - 26.6%	2.8%
Minor procedures - other (Medicare fee schedule)	$684,396,606	13.5%	7.6% - 19.4%	2.7%
CAH	$529,099,032	6.0%	1.0% - 11.0%	2.1%
Specialist - other	$408,108,873	23.5%	15.8% - 31.2%	1.6%
Hospital Inpatient (Part A)	$348,193,083	3.7%	2.1% - 5.3%	1.4%
Hospital based hospice	$315,336,716	17.9%	8.0% - 27.7%	1.2%
CPAP	$283,368,134	27.3%	21.5% - 33.1%	1.1%
Office visits - established	$279,585,568	1.9%	1.0% - 2.8%	1.1%
Specialist - psychiatry	$237,085,630	16.9%	10.9% - 23.0%	0.9%
Ambulance	$229,525,018	4.5%	2.0% - 7.0%	0.9%
Hospital visit - subsequent	$228,299,090	4.2%	2.4% - 6.0%	0.9%
Endovascular Cardiac Valve Replacement & Supplement Procedures (266, 267)	$218,365,745	9.0%	5.5% - 12.5%	0.8%
Ambulatory procedures - other	$192,616,357	15.8%	6.6% - 25.0%	0.7%
Eye procedure - cataract removal/lens insertion	$190,495,888	11.1%	3.3% - 18.9%	0.7%
SNF Inpatient Part B	$168,585,151	4.2%	0.7% - 7.8%	0.7%
Surgical Dressings	$160,437,693	56.5%	43.5% - 69.5%	0.6%
Overall (Incl. Codes Not Listed)	**$16,052,415,512**	**4.0%**	**3.6% - 4.4%**	**62.4%**

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)	$830,379,924	8.8%	6.5% - 11.0%	3.2%
Major Hip And Knee Joint Replacement Or Reattachment Of Lower Extremity (469, 470)	$581,719,648	13.2%	10.6% - 15.9%	2.3%
Home Health	$498,613,280	2.8%	1.8% - 3.7%	1.9%
Hospital Outpatient	$310,717,306	0.4%	(0.3%) - 1.2%	1.2%
Nonhospital based hospice	$168,623,525	0.9%	0.2% - 1.6%	0.7%
Ambulance	$126,755,824	2.5%	0.9% - 4.0%	0.5%
Lab tests - other (non-Medicare fee schedule)	$72,254,965	2.2%	(0.7%) - 5.0%	0.3%
Cervical Spinal Fusion (471, 472, 473)	$58,631,489	16.8%	3.6% - 30.0%	0.2%
Other Vascular Procedures (252, 253, 254)	$49,578,951	3.4%	(0.6%) - 7.4%	0.2%
Transient Ischemia W/O Thrombolytic (069)	$45,036,541	26.3%	(1.4%) - 54.0%	0.2%
Degenerative Nervous System Disorders (056, 057)	$42,918,808	6.0%	3.2% - 8.9%	0.2%
Hospital based hospice	$40,383,840	2.3%	(0.3%) - 4.9%	0.2%
Syncope & Collapse (312)	$39,886,227	9.9%	(1.1%) - 20.9%	0.2%
Medical Back Problems (551, 552)	$38,823,914	8.2%	0.6% - 15.8%	0.2%
Other Disorders Of Nervous System (091, 092, 093)	$38,563,254	8.1%	1.0% - 15.2%	0.1%
Ambulatory procedures - other	$30,112,454	2.5%	(2.4%) - 7.3%	0.1%
Cardiac Arrhythmia & Conduction Disorders (308, 309, 310)	$28,817,150	2.3%	(0.2%) - 4.8%	0.1%
Esophagitis, Gastroent & Misc Digest Disorders (391, 392)	$28,442,200	3.0%	(0.4%) - 6.4%	0.1%
Chest Pain (313)	$28,235,803	11.8%	1.5% - 22.1%	0.1%
Percutaneous Intracardiac Procedures (273, 274)	$27,221,736	5.0%	(1.6%) - 11.5%	0.1%
Overall (Incl. Codes Not Listed)	**$4,105,257,045**	**1.0%**	**0.9% - 1.2%**	**15.9%**

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
Office visits - established	$350,626,772	2.4%	1.7% - 3.0%	1.4%
Hospital visit - initial	$329,636,719	12.2%	10.1% - 14.3%	1.3%
Hospital visit - subsequent	$221,741,655	4.1%	3.1% - 5.0%	0.9%
SNF Inpatient	$198,888,807	0.7%	0.4% - 1.0%	0.8%
Nursing home visit	$187,869,030	7.7%	5.7% - 9.8%	0.7%
Office visits - new	$163,909,934	6.2%	4.6% - 7.8%	0.6%
Emergency room visit	$131,826,088	6.5%	4.8% - 8.3%	0.5%
Nonhospital based hospice	$112,297,775	0.6%	0.0% - 1.1%	0.4%
Hospital visit - critical care	$108,015,654	9.2%	5.5% - 12.9%	0.4%
Septicemia Or Severe Sepsis W/O MV >96 Hours (871, 872)	$71,294,958	0.8%	0.1% - 1.5%	0.3%
Home Health	$61,698,317	0.3%	0.2% - 0.5%	0.2%
Hospital Outpatient	$52,878,271	0.1%	0.0% - 0.1%	0.2%
Other drugs	$33,014,304	0.3%	(0.1%) - 0.7%	0.1%
Dialysis services (Medicare Fee Schedule)	$32,413,989	3.6%	1.1% - 6.1%	0.1%
Eye procedure - cataract removal/lens insertion	$27,844,602	1.6%	(1.5%) - 4.7%	0.1%
Ambulance	$27,165,402	0.5%	0.1% - 1.0%	0.1%
Other Major Cardiovascular Procedures (270, 271, 272)	$22,875,817	2.6%	(2.4%) - 7.6%	0.1%
Advanced imaging - CAT/CT/CTA: other	$20,578,589	1.3%	(1.1%) - 3.8%	0.1%
Specialist - other	$19,336,178	1.1%	0.1% - 2.1%	0.1%
Septicemia Or Severe Sepsis W MV >96 Hours (870)	$17,557,424	0.8%	(0.2%) - 1.8%	0.1%
Overall (Incl. Codes Not Listed)	**$2,662,712,096**	**0.7%**	**0.6% - 0.7%**	**10.3%**

Table F5: Top 20 Types of Services with Downcoding[19] Errors

Medicare FFS Services	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
Office visits - established	$45,775,815	0.3%	0.1% - 0.5%	0.2%
Home Health	$31,355,929	0.2%	0.1% - 0.3%	0.1%
Nursing home visit	$19,945,611	0.8%	0.1% - 1.6%	0.1%
Hospital visit - initial	$18,696,351	0.7%	(0.6%) - 2.0%	0.1%
Septicemia Or Severe Sepsis W/O MV >96 Hours (871, 872)	$12,375,458	0.1%	(0.1%) - 0.3%	0.0%
Kidney & Urinary Tract Infections (689, 690)	$10,611,538	0.9%	(0.4%) - 2.1%	0.0%
Other drugs	$10,593,199	0.1%	(0.1%) - 0.3%	0.0%
Red Blood Cell Disorders (811, 812)	$8,720,505	1.3%	(1.3%) - 4.0%	0.0%
Medical Back Problems (551, 552)	$7,551,688	1.6%	(1.5%) - 4.7%	0.0%
Other Digestive System Diagnoses (393, 394, 395)	$7,355,274	1.3%	(1.3%) - 3.9%	0.0%
Other Vascular Procedures (252, 253, 254)	$6,787,102	0.5%	(0.1%) - 1.0%	0.0%
Hospital visit - subsequent	$6,725,582	0.1%	0.0% - 0.2%	0.0%
Major Small & Large Bowel Procedures (329, 330, 331)	$5,972,109	0.3%	(0.3%) - 0.9%	0.0%
Other Kidney & Urinary Tract Procedures (673, 674, 675)	$5,890,129	1.3%	(1.2%) - 3.7%	0.0%
Major Gastrointestinal Disorders & Peritoneal Infections (371, 372, 373)	$5,228,571	1.8%	(1.6%) - 5.2%	0.0%
Complications Of Treatment (919, 920, 921)	$5,153,968	1.5%	(0.4%) - 3.4%	0.0%
Other tests - other	$5,104,927	0.3%	(0.3%) - 0.9%	0.0%
Heart Failure & Shock (291, 292, 293)	$4,770,046	0.1%	(0.1%) - 0.3%	0.0%
Ambulatory procedures - skin	$4,697,113	0.2%	(0.2%) - 0.6%	0.0%
Respiratory Infections & Inflammations (177, 178, 179)	$4,685,634	0.4%	(0.1%) - 0.8%	0.0%
Overall (Incl. Codes Not Listed)	**$376,548,806**	**0.1%**	**0.1% - 0.1%**	**1.5%**

[19] Downcoding refers to billing a lower level service or a service with a lower payment than is supported by the medical record documentation.

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
SNF Inpatient	$708,456,868	2.4%	1.2% - 3.5%	2.8%
Hospital Outpatient	$168,342,485	0.2%	(0.2%) - 0.7%	0.7%
Home Health	$115,318,277	0.6%	0.1% - 1.2%	0.4%
Office visits - new	$64,762,902	2.4%	0.3% - 4.6%	0.3%
Minor procedures - other (Medicare fee schedule)	$40,621,131	0.8%	(0.0%) - 1.6%	0.2%
CPAP	$32,906,829	3.2%	1.7% - 4.6%	0.1%
Nonhospital based hospice	$31,628,452	0.2%	(0.1%) - 0.5%	0.1%
Oxygen Supplies/Equipment	$29,999,428	5.2%	2.4% - 8.0%	0.1%
Surgical Dressings	$29,430,812	10.4%	2.9% - 17.8%	0.1%
Enteral Nutrition	$26,071,929	15.1%	7.0% - 23.1%	0.1%
Lower Limb Orthoses	$24,795,569	7.0%	2.8% - 11.2%	0.1%
Hospital based hospice	$21,900,854	1.2%	(0.5%) - 3.0%	0.1%
Other - Medicare fee schedule	$21,532,760	7.6%	(0.4%) - 15.6%	0.1%
Nebulizers & Related Drugs	$19,706,385	2.4%	0.7% - 4.1%	0.1%
Emergency room visit	$18,124,031	0.9%	(0.2%) - 2.0%	0.1%
All Policy Groups with Less than 30 Claims	$17,872,845	3.7%	1.2% - 6.3%	0.1%
Immunosuppressive Drugs	$17,585,719	4.9%	0.7% - 9.2%	0.1%
Urological Supplies	$17,510,408	5.0%	1.5% - 8.5%	0.1%
Ventilators	$16,899,305	3.3%	1.4% - 5.2%	0.1%
Parenteral Nutrition	$16,820,751	7.1%	0.3% - 13.9%	0.1%
Overall (Incl. Codes Not Listed)	**$1,715,366,232**	**0.4%**	**0.3% - 0.6%**	**6.7%**

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	95% Confidence Interval	Percent of Overall Improper Payments
Lab tests - other (non-Medicare fee schedule)	1,847	$817,653,571	24.8%	19.6% - 30.1%	3.2%
Minor procedures - other (Medicare fee schedule)	1,466	$760,818,528	15.0%	9.0% - 20.9%	3.0%
Office visits - established	1,073	$722,802,851	4.9%	3.7% - 6.1%	2.8%
Hospital visit - subsequent	967	$498,391,826	9.2%	6.9% - 11.4%	1.9%
Hospital visit - initial	679	$463,933,943	17.2%	14.6% - 19.8%	1.8%
Specialist - other	621	$442,270,133	25.5%	17.7% - 33.2%	1.7%
Ambulance	456	$405,165,149	7.9%	4.6% - 11.2%	1.6%
Nursing home visit	525	$341,892,648	14.1%	11.0% - 17.2%	1.3%
Specialist - psychiatry	637	$271,060,913	19.4%	12.9% - 25.8%	1.1%
Office visits - new	423	$256,145,880	9.7%	6.9% - 12.4%	1.0%
Ambulatory procedures - other	322	$232,358,767	19.0%	7.9% - 30.1%	0.9%
Eye procedure - cataract removal/lens insertion	84	$218,340,490	12.7%	4.6% - 20.8%	0.8%
Emergency room visit	342	$198,537,513	9.9%	7.2% - 12.5%	0.8%
Chiropractic	190	$176,774,349	33.7%	24.7% - 42.7%	0.7%
Advanced imaging - CAT/CT/CTA: other	322	$176,761,544	11.5%	6.9% - 16.1%	0.7%
Other drugs	1,438	$167,272,746	1.6%	0.8% - 2.3%	0.6%
Other tests - other	595	$162,011,642	9.4%	4.6% - 14.2%	0.6%
Oncology - radiation therapy	35	$145,676,387	11.8%	1.7% - 22.0%	0.6%
Hospital visit - critical care	263	$134,897,754	11.5%	7.4% - 15.5%	0.5%
All Codes With Less Than 30 Claims	739	$128,875,197	1.9%	0.8% - 2.9%	0.5%
Major procedure - Other	235	$123,924,928	5.5%	0.3% - 10.7%	0.5%
Anesthesia	403	$122,600,766	5.9%	0.8% - 11.1%	0.5%
Minor procedures - musculoskeletal	207	$121,000,577	11.3%	4.8% - 17.8%	0.5%
Ambulatory procedures - skin	231	$118,331,758	4.7%	1.6% - 7.9%	0.5%
Other tests - EKG monitoring	124	$116,265,044	26.9%	6.2% - 47.7%	0.5%
Echography/ultrasonography - other	285	$106,256,014	16.5%	5.1% - 27.8%	0.4%
Dialysis services (Medicare Fee Schedule)	115	$89,083,406	9.9%	4.7% - 15.1%	0.3%

Part B Services (BETOS Codes)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
Specialist - ophthalmology	538	$78,457,875	3.9%	1.3% - 6.4%	0.3%
Standard imaging - other	122	$77,546,568	28.5%	18.2% - 38.8%	0.3%
Minor procedures - skin	168	$77,380,527	8.7%	4.1% - 13.4%	0.3%
Lab tests - other (Medicare fee schedule)	147	$65,573,948	3.9%	(0.3%) - 8.1%	0.3%
Standard imaging - nuclear medicine	271	$62,365,024	9.0%	4.0% - 14.0%	0.2%
Other - Medicare fee schedule	381	$62,068,357	22.0%	11.3% - 32.7%	0.2%
Advanced imaging - MRI/MRA: other	52	$50,309,039	11.0%	0.6% - 21.5%	0.2%
Major procedure, cardiovascular-Other	281	$43,442,790	3.1%	(0.1%) - 6.2%	0.2%
Standard imaging - chest	234	$41,891,777	15.8%	8.2% - 23.3%	0.2%
Standard imaging - musculoskeletal	241	$40,828,325	8.2%	4.0% - 12.5%	0.2%
Other - non-Medicare fee schedule	125	$36,685,847	51.2%	29.1% - 73.2%	0.1%
Echography/ultrasonography - heart	184	$34,121,041	3.8%	0.7% - 6.8%	0.1%
Standard imaging - breast	100	$28,219,258	5.1%	0.2% - 9.9%	0.1%
Lab tests - automated general profiles	352	$27,399,172	9.4%	5.9% - 13.0%	0.1%
Echography/ultrasonography - carotid arteries	83	$26,533,827	13.3%	3.9% - 22.7%	0.1%
Home visit	67	$25,679,860	10.7%	1.4% - 20.0%	0.1%
Lab tests - blood counts	377	$24,537,106	12.9%	8.3% - 17.6%	0.1%
Oncology - other	565	$20,385,458	6.7%	(0.9%) - 14.2%	0.1%
Other tests - electrocardiograms	390	$17,249,761	7.1%	2.8% - 11.4%	0.1%
Endoscopy - upper gastrointestinal	66	$16,891,886	4.1%	(3.4%) - 11.5%	0.1%
Lab tests - routine venipuncture (non- Medicare fee schedule	525	$15,508,861	14.9%	11.2% - 18.6%	0.1%
Echography/ultrasonography - abdomen/pelvis	63	$14,421,740	5.1%	0.3% - 9.9%	0.1%
Advanced imaging - CAT/CT/CTA: brain/head/neck	109	$13,910,876	4.7%	1.3% - 8.1%	0.1%
Eye procedure - other	208	$12,954,107	1.3%	(1.3%) - 4.0%	0.1%
Major procedure, orthopedic - Knee replacement	85	$12,810,020	3.1%	(1.2%) - 7.5%	0.0%
Other tests - cardiovascular stress tests	138	$12,098,070	14.2%	0.5% - 27.9%	0.0%
Undefined codes	581	$9,607,319	5.9%	(1.4%) - 13.2%	0.0%
Lab tests - bacterial cultures	56	$8,632,908	16.0%	4.5% - 27.5%	0.0%
Major procedure, orthopedic - Hip replacement	84	$6,653,569	3.0%	(0.9%) - 7.0%	0.0%
Imaging/procedure - other	234	$4,688,981	1.7%	(0.3%) - 3.7%	0.0%
Lab tests - urinalysis	162	$3,583,741	8.3%	1.7% - 14.8%	0.0%
Endoscopy - colonoscopy	170	$3,370,288	0.5%	(0.4%) - 1.4%	0.0%
Immunizations/Vaccinations	244	$1,471,650	0.1%	(0.1%) - 0.3%	0.0%
All Type of Services (Incl. Codes Not Listed)	**14,267**	**$8,496,383,898**	**8.5%**	**7.8% - 9.2%**	**33.0%**

Table G2: Improper Payment Rates by Service Type: DMEPOS

DMEPOS (Policy Group)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
CPAP	814	$319,776,813	30.8%	24.9% - 36.7%	1.2%
Surgical Dressings	314	$197,933,331	69.7%	59.7% - 79.7%	0.8%
Lower Limb Orthoses	1,152	$178,189,914	50.6%	42.4% - 58.7%	0.7%
Glucose Monitor	617	$132,330,086	32.0%	23.1% - 41.0%	0.5%
Oxygen Supplies/Equipment	485	$129,165,361	22.3%	17.1% - 27.5%	0.5%
Infusion Pumps & Related Drugs	570	$114,135,481	16.3%	10.2% - 22.5%	0.4%
Nebulizers & Related Drugs	854	$111,637,609	13.5%	7.4% - 19.7%	0.4%
Parenteral Nutrition	174	$110,664,812	46.5%	34.2% - 58.9%	0.4%
All Policy Groups with Less than 30 Claims	853	$106,749,723	22.2%	13.7% - 30.7%	0.4%
Lower Limb Prostheses	214	$104,828,319	24.5%	9.9% - 39.1%	0.4%
Ventilators	271	$93,353,021	18.0%	12.4% - 23.6%	0.4%
Wheelchairs Options/Accessories	291	$83,874,641	32.0%	14.8% - 49.1%	0.3%
Urological Supplies	256	$81,643,656	23.3%	13.8% - 32.9%	0.3%
LSO	465	$76,454,328	44.2%	36.8% - 51.6%	0.3%
Enteral Nutrition	211	$70,642,557	40.8%	29.6% - 52.0%	0.3%
Diabetic Shoes	129	$70,410,351	67.9%	52.0% - 83.8%	0.3%
Immunosuppressive Drugs	346	$61,243,462	17.2%	10.0% - 24.4%	0.2%
Wheelchairs Manual	241	$45,242,415	49.1%	40.0% - 58.3%	0.2%
Upper Limb Orthoses	329	$43,944,276	44.2%	35.6% - 52.9%	0.2%
Respiratory Assist Device	92	$36,319,642	35.1%	22.6% - 47.6%	0.1%
Negative Pressure Wound Therapy	83	$36,064,979	41.9%	22.7% - 61.0%	0.1%
Pneumatic Compression Device	55	$29,605,954	70.1%	54.7% - 85.4%	0.1%
Ostomy Supplies	190	$23,370,848	13.6%	7.8% - 19.5%	0.1%
Lenses	74	$22,387,597	74.8%	63.1% - 86.5%	0.1%
Tracheostomy Supplies	62	$18,092,133	47.7%	31.4% - 64.0%	0.1%
Suction Pump	118	$13,583,902	51.1%	32.7% - 69.4%	0.1%
Walkers	82	$11,684,286	36.5%	21.6% - 51.4%	0.0%
Hospital Beds/Accessories	101	$11,222,433	24.8%	10.5% - 39.0%	0.0%
Wheelchairs Seating	155	$10,827,516	33.3%	13.7% - 52.8%	0.0%
HFCWO Device	41	$9,814,794	16.3%	4.9% - 27.6%	0.0%
Breast Prostheses	44	$9,474,592	25.5%	9.9% - 41.1%	0.0%
Wheelchairs Motorized	137	$9,275,549	8.9%	2.6% - 15.3%	0.0%
Oral Anti-Cancer Drugs	48	$7,287,630	17.7%	3.2% - 32.1%	0.0%

DMEPOS (Policy Group)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
{N/A}[20]	310	$1,440,099	40.9%	30.5% - 51.2%	0.0%
Routinely Denied Items	154	$0	0.0%	N/A	0.0%
All Type of Services (Incl. Codes Not Listed)	**9,235**	**$2,382,672,110**	**28.6%**	**26.4% - 30.8%**	**9.3%**

[20] {N/A} is a policy group in the DMEPOS policy group mapping that is used to create the DMEPOS service type.

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	95% Confidence Interval	Percent of Overall Improper Payments
Hospital Outpatient	1,828	$3,209,637,416	4.5%	2.7% - 6.3%	12.5%
SNF Inpatient	1,335	$2,472,914,704	8.2%	6.2% - 10.3%	9.6%
Home Health	1,124	$1,839,125,385	10.3%	7.0% - 13.5%	7.1%
Nonhospital based hospice	632	$1,281,977,208	6.5%	3.8% - 9.1%	5.0%
Hospital Inpatient (Part A)	791	$1,180,891,736	12.5%	9.8% - 15.2%	4.6%
CAH	224	$538,011,990	6.1%	1.1% - 11.1%	2.1%
Hospital based hospice	122	$393,361,483	22.3%	12.2% - 32.4%	1.5%
SNF Inpatient Part B	72	$168,850,720	4.3%	0.7% - 7.8%	0.7%
Hospital Other Part B	80	$145,519,869	21.7%	8.1% - 35.4%	0.6%
Clinic ESRD	522	$139,152,609	1.1%	0.3% - 1.8%	0.5%
Clinic OPT	53	$74,461,041	10.5%	0.9% - 20.0%	0.3%
Hospital Inpatient Part B	40	$54,204,195	2.3%	(1.2%) - 5.8%	0.2%
SNF Outpatient	40	$33,055,487	9.2%	(3.9%) - 22.4%	0.1%
Clinical Rural Health	191	$30,281,831	2.0%	0.1% - 3.9%	0.1%
Clinic CORF	60	$10,983,214	29.1%	14.2% - 43.9%	0.0%
FQHC	59	$6,718,333	0.5%	(0.5%) - 1.6%	0.0%
All Codes With Less Than 30 Claims	7	$0	0.0%	N/A	0.0%
All Type of Services (Incl. Codes Not Listed)	**7,180**	**$11,579,147,221**	**6.3%**	**5.4% - 7.3%**	**45.0%**

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	95% Confidence Interval	Percent of Overall Improper Payments
Major Hip And Knee Joint Replacement Or Reattachment Of Lower Extremity (469, 470)	643	$724,055,597	16.5%	13.6% - 19.4%	2.8%
All Codes With Less Than 30 Claims	1,768	$597,671,860	3.3%	2.3% - 4.3%	2.3%
Endovascular Cardiac Valve Replacement & Supplement Procedures (266, 267)	270	$222,816,591	9.2%	5.7% - 12.7%	0.9%
Percutaneous Intracardiac Procedures (273, 274)	79	$160,504,177	29.3%	17.9% - 40.7%	0.6%
Septicemia Or Severe Sepsis W/O MV >96 Hours (871, 872)	302	$113,470,196	1.3%	0.1% - 2.4%	0.4%
Cardiac Defibrillator Implant W/O Cardiac Cath (226, 227)	130	$88,790,870	22.7%	16.1% - 29.3%	0.3%
Psychoses (885)	317	$72,258,999	2.4%	0.6% - 4.3%	0.3%
Other Vascular Procedures (252, 253, 254)	134	$65,839,408	4.6%	0.3% - 8.8%	0.3%
Cervical Spinal Fusion (471, 472, 473)	90	$63,025,284	18.1%	4.8% - 31.3%	0.2%
Degenerative Nervous System Disorders (056, 057)	386	$58,554,112	8.2%	5.0% - 11.5%	0.2%
Medical Back Problems (551, 552)	60	$46,375,602	9.8%	1.7% - 18.0%	0.2%
Transient Ischemia W/O Thrombolytic (069)	42	$45,036,541	26.3%	(1.4%) - 54.0%	0.2%
Other Disorders Of Nervous System (091, 092, 093)	96	$42,081,266	8.8%	1.7% - 16.0%	0.2%
Percutaneous Cardiovascular Procedures W Drug-Eluting Stent (246)	44	$40,961,804	4.8%	(3.0%) - 12.6%	0.2%
Syncope & Collapse (312)	44	$39,886,227	9.9%	(1.1%) - 20.9%	0.2%
Other Major Cardiovascular Procedures (270, 271, 272)	39	$38,780,709	4.4%	(1.5%) - 10.3%	0.2%
Spinal Fusion Except Cervical (459, 460)	129	$32,667,546	2.6%	0.3% - 5.0%	0.1%
Esophagitis, Gastroent & Misc Digest Disorders (391, 392)	99	$32,284,669	3.4%	(0.1%) - 6.9%	0.1%
Extensive OR Procedure Unrelated To Principal Diagnosis (981, 982, 983)	90	$30,031,117	2.4%	(0.8%) - 5.6%	0.1%
Cardiac Arrhythmia & Conduction Disorders (308, 309, 310)	129	$28,817,150	2.3%	(0.2%) - 4.8%	0.1%
Chest Pain (313)	44	$28,235,803	11.8%	1.5% - 22.1%	0.1%
Back & Neck Proc Exc Spinal Fusion (518, 519, 520)	174	$27,676,563	12.8%	2.2% - 23.4%	0.1%
Signs & Symptoms (947, 948)	115	$27,457,496	11.8%	4.0% - 19.5%	0.1%
Other Kidney & Urinary Tract Diagnoses (698, 699, 700)	110	$26,013,128	3.0%	(0.9%) - 6.9%	0.1%
Kidney & Urinary Tract Infections (689, 690)	89	$25,779,297	2.1%	(0.6%) - 4.7%	0.1%
Major Small & Large Bowel Procedures (329, 330, 331)	115	$24,536,384	1.2%	(0.2%) - 2.6%	0.1%
Other Musculoskelet Sys & Conn Tiss OR Proc (515, 516, 517)	102	$24,320,880	7.3%	0.8% - 13.9%	0.1%
Other Digestive System Diagnoses (393, 394, 395)	70	$23,993,462	4.3%	(0.6%) - 9.1%	0.1%
Lower Extrem & Humer Proc Except Hip, Foot, Femur (492, 493, 494)	176	$23,840,264	3.5%	1.1% - 5.9%	0.1%

Part A Hospital IPPS Services (MS-DRGs)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
Organic Disturbances & Intellectual Disability (884)	106	$23,402,012	4.6%	0.9% - 8.4%	0.1%
Major Joint/Limb Reattachment Procedure Of Upper Extremities (483)	44	$23,365,545	2.1%	(2.0%) - 6.3%	0.1%
Other Kidney & Urinary Tract Procedures (673, 674, 675)	57	$22,090,983	4.7%	(2.2%) - 11.7%	0.1%
Heart Failure & Shock (291, 292, 293)	148	$20,419,936	0.5%	(0.3%) - 1.4%	0.1%
Misc Disorders Of Nutrition, Metabolism, Fluids/Electrolytes (640, 641)	114	$19,559,335	2.0%	(0.3%) - 4.2%	0.1%
Renal Failure (682, 683, 684)	154	$19,183,230	1.1%	0.2% - 2.1%	0.1%
Bilateral Or Multiple Major Joint Procs Of Lower Extremity (461, 462)	85	$18,947,911	17.6%	9.2% - 25.9%	0.1%
Aftercare, Musculoskeletal System & Connective Tissue (559, 560, 561)	424	$18,135,890	11.3%	7.0% - 15.5%	0.1%
Septicemia Or Severe Sepsis W MV >96 Hours (870)	51	$17,557,424	0.8%	(0.2%) - 1.8%	0.1%
Simple Pneumonia & Pleurisy (193, 194, 195)	241	$17,423,938	1.1%	(0.0%) - 2.2%	0.1%
Peripheral Vascular Disorders (299, 300, 301)	64	$16,146,391	4.4%	(0.6%) - 9.3%	0.1%
Other Skin, Subcut Tiss & Breast Proc (579, 580, 581)	93	$15,160,554	8.9%	(2.3%) - 20.1%	0.1%
Combined Anterior/Posterior Spinal Fusion (453, 454, 455)	122	$14,680,097	0.9%	(0.5%) - 2.3%	0.1%
Disorders Of Liver Except Malig, Cirr, Alc Hepa (441, 442, 443)	37	$14,669,072	4.7%	(0.4%) - 9.8%	0.1%
Perc Cardiovasc Proc W Drug-Eluting Stent (247)	85	$13,070,575	1.3%	(1.3%) - 3.9%	0.1%
Intracranial Hemorrhage Or Cerebral Infarction (064, 065, 066)	209	$12,712,861	0.7%	(0.3%) - 1.8%	0.0%
Other Circulatory System Diagnoses (314, 315, 316)	68	$12,520,964	1.7%	(0.7%) - 4.2%	0.0%
Fx, Sprn, Strn & Disl Except Femur, Hip, Pelvis & Thigh (562, 563)	50	$12,174,139	7.1%	(0.2%) - 14.4%	0.0%
Chemotherapy W/O Acute Leukemia As Secondary Diagnosis (846, 847, 848)	90	$11,667,771	5.0%	1.0% - 8.9%	0.0%
GI Hemorrhage (377, 378, 379)	195	$11,202,645	0.8%	(0.1%) - 1.7%	0.0%
Dysequilibrium (149)	41	$10,266,087	14.7%	2.0% - 27.5%	0.0%
Signs & Symptoms Of Musculoskeletal System & Conn Tissue (555, 556)	46	$9,817,276	18.0%	5.4% - 30.5%	0.0%
Kidney & Ureter Procedures For Non-Neoplasm (659, 660, 661)	41	$9,776,822	3.4%	(3.0%) - 9.7%	0.0%
Complications Of Treatment (919, 920, 921)	35	$9,449,462	2.8%	(0.2%) - 5.8%	0.0%
Aortic And Heart Assist Procedures Except Pulsation Balloon (268, 269)	46	$9,287,877	1.9%	(1.8%) - 5.7%	0.0%
Circulatory Disorders Except AMI, W Card Cath (286, 287)	86	$8,921,090	0.9%	(0.8%) - 2.6%	0.0%
AMI, Discharged Alive (280, 281, 282)	107	$8,912,311	0.6%	(0.5%) - 1.6%	0.0%
Chronic Obstructive Pulmonary Disease (190, 191, 192)	124	$8,876,014	0.7%	(0.2%) - 1.7%	0.0%
Red Blood Cell Disorders (811, 812)	92	$8,720,505	1.3%	(1.3%) - 4.0%	0.0%
Fractures Of Hip & Pelvis (535, 536)	39	$7,658,557	3.8%	(1.4%) - 9.0%	0.0%

Part A Hospital IPPS Services (MS-DRGs)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
Seizures (100, 101)	89	$7,229,464	1.2%	(1.0%) - 3.4%	0.0%
Uterine & Adnexa Proc For Non-Malignancy (742, 743)	85	$6,953,894	13.3%	4.7% - 21.9%	0.0%
Nonspecific Cerebrovascular Disorders (070, 071, 072)	43	$6,749,803	2.2%	(1.7%) - 6.1%	0.0%
Respiratory Infections & Inflammations (177, 178, 179)	103	$6,152,291	0.5%	(0.0%) - 0.9%	0.0%
Hypertension (304, 305)	63	$5,827,202	2.1%	(0.9%) - 5.1%	0.0%
Bone Diseases & Arthropathies (553, 554)	45	$5,583,897	6.5%	(1.2%) - 14.1%	0.0%
Major Gastrointestinal Disorders & Peritoneal Infections (371, 372, 373)	40	$5,228,571	1.8%	(1.6%) - 5.2%	0.0%
Aftercare (949, 950)	82	$5,037,843	9.7%	(1.2%) - 20.5%	0.0%
Revision Of Hip Or Knee Replacement (466, 467, 468)	56	$4,894,485	0.7%	(0.7%) - 2.1%	0.0%
Diabetes (637, 638, 639)	73	$4,558,304	0.8%	(0.8%) - 2.5%	0.0%
Female Reproductive System Reconstructive Procedures (748)	77	$4,520,556	37.3%	24.0% - 50.6%	0.0%
Cranial & Peripheral Nerve Disorders (073, 074)	79	$4,286,419	3.6%	(0.5%) - 7.8%	0.0%
AICD Generator Procedures (245)	84	$4,165,413	8.7%	1.8% - 15.7%	0.0%
GI Obstruction (388, 389, 390)	90	$3,644,167	0.8%	(0.7%) - 2.3%	0.0%
Pulmonary Embolism (175, 176)	66	$3,309,924	1.0%	(0.6%) - 2.6%	0.0%
Cardiac Valve & Oth Maj Cardiothoracic Proc W/O Card Cath (219, 220, 221)	64	$2,706,678	0.2%	(0.2%) - 0.5%	0.0%
Disorders Of The Biliary Tract (444, 445, 446)	37	$2,477,328	0.9%	(0.8%) - 2.7%	0.0%
Infectious & Parasitic Diseases W OR Procedure (853, 854, 855)	95	$1,797,941	0.1%	(0.1%) - 0.2%	0.0%
Cellulitis (602, 603)	71	$460,688	0.1%	(0.0%) - 0.2%	0.0%
Craniotomy W Major Device Implant Or Acute Complex Cns PDX (023)	44	$149,021	0.0%	(0.0%) - 0.1%	0.0%
Alcohol/Drug Abuse Or Dependence W/O Rehabilitation Therapy (896, 897)	60	$0	0.0%	N/A	0.0%
Bronchitis & Asthma (202, 203)	48	$0	0.0%	N/A	0.0%
Cardiac Valve & Oth Maj Cardiothoracic Proc W Card Cath (216, 217, 218)	44	$0	0.0%	N/A	0.0%
Cirrhosis & Alcoholic Hepatitis (432, 433, 434)	33	$0	0.0%	N/A	0.0%
Coronary Bypass W/O Cardiac Cath (235, 236)	50	$0	0.0%	N/A	0.0%
Craniotomy & Endovascular Intracranial Procedures (025, 026, 027)	37	$0	0.0%	N/A	0.0%
Disorders Of Pancreas Except Malignancy (438, 439, 440)	40	$0	0.0%	N/A	0.0%
ECMO Or Trach W MV >96 Hrs Or PDX Exc Face, Mouth & Neck (003)	43	$0	0.0%	N/A	0.0%
Extracranial Procedures (037, 038, 039)	37	$0	0.0%	N/A	0.0%
Hip & Femur Procedures Except Major Joint (480, 481, 482)	105	$0	0.0%	N/A	0.0%

Part A Hospital IPPS Services (MS-DRGs)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Overall Improper Payments
Kidney Transplant (652)	51	$0	0.0%	N/A	0.0%
Laparoscopic Cholecystectomy W/O C.D.E. (417, 418, 419)	33	$0	0.0%	N/A	0.0%
Major Chest Procedures (163, 164, 165)	44	$0	0.0%	N/A	0.0%
Other Heart Assist System Implant (215)	52	$0	0.0%	N/A	0.0%
Permanent Cardiac Pacemaker Implant (242, 243, 244)	52	$0	0.0%	N/A	0.0%
Poisoning & Toxic Effects Of Drugs (917, 918)	44	$0	0.0%	N/A	0.0%
Pulmonary Edema & Respiratory Failure (189)	46	$0	0.0%	N/A	0.0%
Respiratory System Diagnosis W Ventilator Support <=96 Hours (208)	45	$0	0.0%	N/A	0.0%
Respiratory System Diagnosis W Ventilator Support >96 Hours (207)	53	$0	0.0%	N/A	0.0%
Trach W MV >96 Hrs Or PDX Exc Face, Mouth & Neck (004)	45	$0	0.0%	N/A	0.0%
All Type of Services (Incl. Codes Not Listed)	**11,328**	**$3,287,274,168**	**3.0%**	**2.7% - 3.4%**	**12.8%**

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	95% Confidence Interval	Percent of Type of Service Improper Payments
Internal Medicine	634	$292,617,265	22.7%	16.2% - 29.3%	35.8%
Nurse Practitioner	201	$111,369,912	28.2%	14.5% - 41.9%	13.6%
Family Practice	266	$110,764,009	22.0%	7.4% - 36.7%	13.5%
No Referring Provider Type	89	$60,834,752	42.0%	2.7% - 81.3%	7.4%
Physician Assistant	73	$36,531,163	37.1%	11.2% - 63.0%	4.5%
General Surgery	54	$26,492,372	29.3%	1.8% - 56.7%	3.2%
Anesthesiology	81	$17,197,168	31.3%	17.0% - 45.6%	2.1%
Physical Medicine and Rehabilitation	62	$12,972,529	24.2%	4.2% - 44.2%	1.6%
Interventional Pain Management	50	$9,393,827	17.2%	5.2% - 29.2%	1.1%
Cardiology	69	$5,313,150	13.0%	4.2% - 21.7%	0.6%
Pathology	59	$5,131,716	6.3%	(7.7%) - 20.2%	0.6%
All Referring Providers	**1,847**	**$817,653,571**	**24.8%**	**19.6% - 30.1%**	**100.0%**

Table H2: Improper Payment Rates for Minor procedures - other (Medicare fee schedule) by Referring Provider

Minor procedures - other (Medicare fee schedule)	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Type of Service Improper Payments
Internal Medicine	555	$151,977,472	10.7%	4.4% - 17.0%	20.0%
General Surgery	161	$121,409,625	13.6%	6.7% - 20.5%	16.0%
Family Practice	219	$83,830,790	12.0%	5.7% - 18.3%	11.0%
Neurology	56	$75,776,222	33.9%	14.4% - 53.4%	10.0%
No Referring Provider Type	153	$46,915,480	9.9%	0.6% - 19.3%	6.2%
Physician Assistant	50	$25,403,030	17.2%	0.3% - 34.1%	3.3%
Nurse Practitioner	67	$20,236,758	9.1%	1.1% - 17.0%	2.7%
Urology	30	$2,614,586	2.3%	(2.6%) - 7.2%	0.3%
All Referring Providers	**1,466**	**$760,818,528**	**15.0%**	**9.0% - 20.9%**	**100.0%**

Table H3: Improper Payment Rates for Office visits - established by Provider Type

Office visits - established	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Type of Service Improper Payments
Family Practice	139	$110,436,627	5.4%	2.1% - 8.6%	15.3%
Internal Medicine	174	$106,890,221	3.9%	1.3% - 6.5%	14.8%
Nurse Practitioner	126	$86,203,296	5.2%	1.2% - 9.3%	11.9%
Dermatology	50	$65,369,804	10.7%	1.8% - 19.6%	9.0%
Cardiology	64	$35,896,273	3.4%	0.9% - 5.8%	5.0%
Orthopedic Surgery	37	$30,656,337	6.2%	(2.1%) - 14.5%	4.2%
Urology	34	$29,549,643	7.2%	(0.4%) - 14.7%	4.1%
All Provider Types With Less Than 30 Claims	49	$27,001,292	4.0%	(2.3%) - 10.3%	3.7%
Hematology/Oncology	40	$6,796,163	1.3%	(0.5%) - 3.1%	0.9%
Podiatry	39	$3,027,118	0.7%	(0.7%) - 2.0%	0.4%
Physician Assistant	46	$0	0.0%	0.0% - 0.0%	0.0%
All Provider Types	**1,073**	**$722,802,851**	**4.9%**	**3.7% - 6.1%**	**100.0%**

Table H4: Improper Payment Rates for CPAP by Referring Provider

CPAP	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Type of Service Improper Payments
Internal Medicine	419	$161,053,637	28.1%	19.3% - 37.0%	50.4%
Family Practice	124	$55,244,466	34.6%	22.5% - 46.7%	17.3%
Nurse Practitioner	94	$45,445,510	42.9%	26.2% - 59.6%	14.2%
Neurology	54	$15,978,987	21.8%	5.2% - 38.3%	5.0%
Physician Assistant	39	$11,762,215	25.9%	7.6% - 44.3%	3.7%
All Referring Providers	**814**	**$319,776,813**	**30.8%**	**24.9% - 36.7%**	**100.0%**

Table H5: Improper Payment Rates for Surgical Dressings by Referring Provider

Surgical Dressings	Claims Reviewed	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percent of Type of Service Improper Payments
Family Practice	84	$64,354,548	71.7%	58.0% - 85.4%	32.5%
Internal Medicine	78	$41,682,503	55.1%	38.6% - 71.5%	21.1%
Nurse Practitioner	41	$15,534,523	69.2%	53.5% - 84.9%	7.8%
General Surgery	35	$14,288,106	66.0%	42.6% - 89.5%	7.2%
Podiatry	37	$12,542,182	63.8%	39.1% - 88.6%	6.3%
All Referring Providers	**314**	**$197,933,331**	**69.7%**	**59.7% - 79.7%**	**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[21]

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
Clinical Laboratory (Billing Independently)	1,621	$907,854,203	23.7%	18.7% - 28.6%	26.9%	3.5%
Internal Medicine	1,192	$902,426,620	10.7%	8.8% - 12.5%	18.7%	3.5%
Family Practice	627	$550,137,692	12.2%	8.6% - 15.7%	18.1%	2.1%
Physical Therapist in Private Practice	442	$423,618,148	15.5%	11.6% - 19.5%	20.8%	1.6%
Ambulance Service Supplier (e.g., private ambulance companies)	456	$405,165,149	7.9%	4.6% - 11.2%	14.1%	1.6%
Ambulatory Surgical Center	166	$374,328,095	9.9%	1.3% - 18.5%	21.8%	1.5%
Diagnostic Radiology	997	$332,400,860	8.0%	5.5% - 10.6%	11.6%	1.3%
Nurse Practitioner	772	$330,514,305	6.4%	4.1% - 8.8%	8.5%	1.3%
All Provider Types With Less Than 30 Claims	533	$305,000,885	6.7%	3.5% - 9.9%	13.1%	1.2%
Cardiology	665	$297,634,523	8.0%	5.6% - 10.4%	12.9%	1.2%
Radiation Oncology	60	$195,041,162	12.7%	3.5% - 21.8%	15.0%	0.8%
Emergency Medicine	376	$190,887,953	8.7%	6.3% - 11.2%	12.9%	0.7%
Dermatology	144	$185,875,447	6.6%	2.1% - 11.1%	9.3%	0.7%
Chiropractic	196	$176,774,349	33.7%	24.7% - 42.7%	46.5%	0.7%
Orthopedic Surgery	243	$165,135,937	6.9%	3.4% - 10.5%	12.1%	0.6%
Podiatry	221	$162,308,133	10.8%	6.6% - 15.0%	20.7%	0.6%
Gastroenterology	207	$146,468,067	8.9%	3.3% - 14.5%	7.7%	0.6%
Nephrology	192	$139,534,017	9.2%	5.5% - 12.8%	15.9%	0.5%
IDTF	370	$139,459,822	22.1%	6.3% - 37.9%	31.1%	0.5%
Anesthesiology	184	$134,620,107	9.7%	2.3% - 17.0%	14.9%	0.5%
Ophthalmology	578	$131,547,831	1.9%	0.6% - 3.1%	5.4%	0.5%
Clinical Psychologist	130	$125,720,404	16.8%	6.8% - 26.8%	20.9%	0.5%
Neurology	176	$116,174,010	8.2%	3.1% - 13.3%	15.0%	0.5%
Interventional Cardiology	153	$112,291,929	13.1%	1.5% - 24.7%	14.6%	0.4%

[21] 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
Hematology/Oncology	532	$112,065,659	2.5%	1.0% - 4.0%	14.4%	0.4%
Hospitalist	199	$110,758,308	13.1%	7.9% - 18.3%	17.8%	0.4%
Psychiatry	97	$110,084,714	16.3%	6.2% - 26.5%	19.7%	0.4%
Pulmonary Disease	157	$105,402,440	9.0%	4.3% - 13.6%	18.6%	0.4%
Physical Medicine and Rehabilitation	132	$104,637,962	13.1%	3.9% - 22.4%	16.5%	0.4%
Physician Assistant	339	$96,107,396	5.2%	2.4% - 8.0%	32.7%	0.4%
Portable X-Ray Supplier (Billing Independently)	99	$89,290,366	35.5%	23.6% - 47.3%	40.2%	0.3%
Otolaryngology	59	$79,793,590	9.8%	2.8% - 16.9%	13.3%	0.3%
Urology	129	$69,940,599	3.4%	1.1% - 5.7%	6.7%	0.3%
Vascular Surgery	164	$66,174,302	5.9%	(0.6%) - 12.3%	20.8%	0.3%
Endocrinology	65	$64,673,719	13.6%	5.4% - 21.8%	17.0%	0.3%
Clinical Social Worker	145	$62,619,608	13.5%	7.3% - 19.7%	19.6%	0.2%
Infectious Disease	85	$61,402,858	13.5%	5.0% - 22.0%	22.4%	0.2%
Interventional Radiology	65	$58,612,919	7.5%	(0.8%) - 15.8%	38.9%	0.2%
General Surgery	103	$52,518,127	4.1%	0.4% - 7.8%	4.6%	0.2%
CRNA	126	$47,108,533	4.5%	(2.0%) - 11.1%	7.3%	0.2%
Optometry	191	$46,101,404	6.4%	0.6% - 12.2%	14.0%	0.2%
Occupational Therapist in Private Practice	48	$43,054,739	9.8%	(0.2%) - 19.9%	10.6%	0.2%
Critical Care (Intensivists)	46	$40,130,577	12.1%	(2.9%) - 27.2%	12.9%	0.2%
Cardiac Electrophysiology	85	$27,884,937	3.9%	0.3% - 7.5%	7.9%	0.1%
Pathology	157	$27,703,458	1.9%	(0.3%) - 4.2%	11.5%	0.1%
Obstetrics/Gynecology	50	$23,711,771	5.5%	(0.9%) - 11.9%	18.2%	0.1%
Medical Oncology	175	$17,458,528	1.2%	(0.2%) - 2.6%	1.7%	0.1%
Rheumatology	158	$14,836,557	0.7%	0.0% - 1.3%	1.0%	0.1%
Allergy/Immunology	34	$13,391,179	1.9%	(1.2%) - 5.1%	2.9%	0.1%
Centralized Flu	49	$0	0.0%	0.0% - 0.0%	1.8%	0.0%
Mass Immunization Roster Billers (Mass Immunizers have to roster bill assigned claims and can only bill for immunizations)	84	$0	0.0%	0.0% - 0.0%	0.5%	0.0%
Overall (Incl. Codes Not Listed)	**14,267**	**$8,496,383,898**	**8.5%**	**7.8% - 9.2%**	**15.0%**	**33.0%**

Table I2: Improper Payment Rates and Amounts by Provider Type[22]: DMEPOS[23]

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	4,082	$1,219,989,222	32.0%	28.7% - 35.3%	35.8%	4.7%
Pharmacy	2,907	$552,495,612	20.4%	17.0% - 23.8%	24.9%	2.1%
Medical Supply Company with Respiratory Therapist	773	$211,100,578	29.3%	23.9% - 34.8%	32.7%	0.8%
All Provider Types With Less Than 30 Claims	461	$79,901,172	36.5%	26.3% - 46.7%	43.1%	0.3%
Individual prosthetic personnel certified by an accrediting organization	141	$78,294,106	27.6%	8.3% - 47.0%	29.2%	0.3%
Podiatry	128	$60,892,064	62.6%	44.9% - 80.3%	72.2%	0.2%
Individual orthotic personnel certified by an accrediting organization	144	$42,637,513	31.9%	10.7% - 53.1%	35.6%	0.2%
Orthopedic Surgery	247	$40,974,635	41.4%	28.4% - 54.3%	44.8%	0.2%
Medical supply company with prosthetic/orthotic personnel certified by an accrediting organization	102	$35,872,853	32.9%	11.7% - 54.0%	34.8%	0.1%
Optometry	40	$19,875,651	89.5%	78.8% -100.2%	88.8%	0.1%
General Practice	124	$15,274,876	45.7%	33.6% - 57.7%	55.5%	0.1%
Supplier of oxygen and/or oxygen related equipment	55	$13,159,866	26.1%	6.4% - 45.7%	27.0%	0.1%
Medical supply company with prosthetic personnel certified by an accrediting organization	31	$12,203,961	41.9%	(2.2%) - 85.9%	47.8%	0.0%
Overall (Incl. Codes Not Listed)	**9,235**	**$2,382,672,110**	**28.6%**	**26.4% - 30.8%**	**32.9%**	**9.3%**

[22] Herein, "provider" will be used to refer to both providers and suppliers in DMEPOS provider type reporting.

[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.

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
OPPS, Laboratory, Ambulatory	1,949	$3,409,361,480	4.6%	2.8% - 6.3%	13.2%
SNF	1,447	$2,674,820,911	7.8%	5.9% - 9.7%	10.4%
HHA	1,130	$1,839,125,385	10.2%	7.0% - 13.5%	7.1%
Hospice	754	$1,675,338,691	7.8%	5.2% - 10.4%	6.5%
Inpatient Rehabilitation Hospitals	242	$669,966,305	18.5%	13.4% - 23.6%	2.6%
CAH Outpatient Services	224	$538,011,990	6.1%	1.1% - 11.1%	2.1%
Inpatient Rehab Unit	201	$456,105,773	16.0%	10.5% - 21.5%	1.8%
ESRD	522	$139,152,609	1.1%	0.3% - 1.8%	0.5%
ORF	53	$74,461,041	10.5%	0.9% - 20.0%	0.3%
Inpatient CAH	283	$47,311,350	2.5%	0.1% - 4.9%	0.2%
RHC	191	$30,281,831	2.0%	0.1% - 3.9%	0.1%
CORF	60	$10,983,214	29.1%	14.2% - 43.9%	0.0%
FQHC	59	$6,718,333	0.5%	(0.5%) - 1.6%	0.0%
All Codes With Less Than 30 Claims	8	$5,447,479	4.9%	(5.3%) - 15.2%	0.0%
Non PPS Short Term Hospital Inpatient	57	$2,060,829	0.2%	(0.2%) - 0.7%	0.0%
Overall (Incl. Codes Not Listed)	**7,180**	**$11,579,147,221**	**6.3%**	**5.4% - 7.3%**	**45.0%**

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

Providers 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	10,655	$3,174,693,387	3.1%	2.8% - 3.5%	12.3%
Other MAC Service Type	502	$109,298,467	3.3%	1.5% - 5.1%	0.4%
DRG Long Term	171	$3,282,314	0.1%	0.0% - 0.2%	0.0%
Overall (Incl. Codes Not Listed)	**11,328**	**$3,287,274,168**	**3.0%**	**2.7% - 3.4%**	**12.8%**

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 Type Improper Payments by Type of Error				
			No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other
Portable X-Ray Supplier (Billing Independently)	35.5%	99	0.0%	100.0%	0.0%	0.0%	0.0%
Chiropractic	33.7%	196	1.9%	86.8%	8.6%	2.7%	0.0%
Clinical Laboratory (Billing Independently)	23.7%	1,621	0.5%	90.0%	8.0%	0.2%	1.3%
IDTF	22.1%	370	0.1%	97.3%	0.0%	0.0%	2.6%
Clinical Psychologist	16.8%	130	0.0%	99.9%	0.0%	0.1%	0.0%
Psychiatry	16.3%	97	1.9%	39.0%	0.0%	35.7%	23.4%
Physical Therapist in Private Practice	15.5%	442	2.4%	89.5%	0.0%	2.0%	6.0%
Endocrinology	13.6%	65	0.0%	64.5%	0.0%	24.8%	10.7%
Clinical Social Worker	13.5%	145	6.5%	90.0%	0.0%	0.0%	3.5%
Infectious Disease	13.5%	85	9.3%	32.4%	0.0%	47.6%	10.7%
Physical Medicine and Rehabilitation	13.1%	132	14.2%	61.4%	0.0%	24.4%	0.0%
Hospitalist	13.1%	199	4.5%	51.9%	0.0%	43.6%	0.0%
Interventional Cardiology	13.1%	153	0.0%	93.4%	0.0%	5.7%	0.9%
Radiation Oncology	12.7%	60	0.0%	99.4%	0.0%	0.6%	0.0%
Family Practice	12.2%	627	9.6%	58.6%	0.0%	22.5%	9.3%
Critical Care (Intensivists)	12.1%	46	69.1%	4.1%	0.0%	26.8%	0.0%
Podiatry	10.8%	221	3.1%	90.0%	0.0%	5.3%	1.6%
Internal Medicine	10.7%	1,192	6.9%	54.4%	0.0%	37.6%	1.1%
Ambulatory Surgical Center	9.9%	166	1.4%	95.5%	0.0%	0.0%	3.0%
Otolaryngology	9.8%	59	0.0%	57.0%	0.0%	43.0%	0.0%
Occupational Therapist in Private Practice	9.8%	48	0.0%	86.0%	0.0%	2.7%	11.3%
Anesthesiology	9.7%	184	3.0%	94.7%	0.0%	2.3%	0.0%
Nephrology	9.2%	192	9.3%	44.1%	0.0%	46.7%	0.0%
Pulmonary Disease	9.0%	157	0.0%	22.0%	0.0%	69.4%	8.7%
Gastroenterology	8.9%	207	3.8%	75.7%	0.0%	20.5%	0.0%
Emergency Medicine	8.7%	376	5.9%	20.3%	0.5%	62.0%	11.3%
Neurology	8.2%	176	33.5%	35.6%	1.3%	29.6%	0.0%

Provider Types Billing to Part B	Improper Payment Rate	Claims Reviewed	Percentage of Provider Type Improper Payments by Type of Error				
			No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other
Diagnostic Radiology	8.0%	997	15.1%	79.1%	2.1%	1.0%	2.8%
Cardiology	8.0%	665	5.9%	56.1%	0.0%	36.3%	1.7%
Ambulance Service Supplier (e.g., private ambulance companies)	7.9%	456	5.4%	56.6%	31.3%	6.7%	0.0%
Interventional Radiology	7.5%	65	14.4%	79.4%	0.0%	0.0%	6.2%
Orthopedic Surgery	6.9%	243	0.0%	67.9%	0.0%	24.9%	7.2%
All Provider Types With Less Than 30 Claims	6.7%	533	6.2%	61.7%	0.3%	28.3%	3.5%
Dermatology	6.6%	144	0.0%	62.4%	2.5%	35.1%	0.0%
Nurse Practitioner	6.4%	772	1.4%	55.1%	0.4%	42.6%	0.5%
Optometry	6.4%	191	0.0%	79.1%	0.0%	20.8%	0.1%
Vascular Surgery	5.9%	164	5.9%	7.1%	45.5%	41.3%	0.2%
Obstetrics/Gynecology	5.5%	50	0.0%	57.9%	0.0%	42.1%	0.0%
Physician Assistant	5.2%	339	0.5%	68.3%	0.0%	30.5%	0.7%
CRNA	4.5%	126	11.3%	88.7%	0.0%	0.0%	0.0%
General Surgery	4.1%	103	0.0%	44.6%	0.0%	55.4%	0.0%
Cardiac Electrophysiology	3.9%	85	9.5%	77.8%	0.0%	12.7%	0.0%
Urology	3.4%	129	21.7%	34.1%	0.0%	44.3%	0.0%
Hematology/Oncology	2.5%	532	0.0%	35.8%	0.0%	55.5%	8.7%
Pathology	1.9%	157	0.0%	100.0%	0.0%	0.0%	0.0%
Allergy/Immunology	1.9%	34	0.0%	63.5%	0.0%	36.5%	0.0%
Ophthalmology	1.9%	578	0.0%	55.5%	3.8%	40.7%	0.0%
Medical Oncology	1.2%	175	32.5%	59.8%	0.0%	7.7%	0.0%
Rheumatology	0.7%	158	0.0%	78.5%	0.0%	20.0%	1.5%
Centralized Flu	0.0%	49	N/A	N/A	N/A	N/A	N/A
Mass Immunization Roster Billers (Mass Immunizers have to roster bill assigned claims and can only bill for immunizations)	0.0%	84	N/A	N/A	N/A	N/A	N/A
All Provider Types	**8.5%**	**14,267**	**5.1%**	**68.2%**	**3.1%**	**20.7%**	**2.9%**

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 Type Improper Payments by Type of Error				
			No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other
Optometry	89.5%	40	0.0%	83.7%	0.0%	0.0%	16.3%
Podiatry	62.6%	128	0.0%	61.5%	0.0%	0.0%	38.5%
General Practice	45.7%	124	0.6%	82.2%	1.5%	0.0%	15.7%
Medical supply company with prosthetic personnel certified by an accrediting organization	41.9%	31	0.0%	90.0%	0.0%	0.0%	10.0%
Orthopedic Surgery	41.4%	247	0.4%	74.1%	7.3%	0.0%	18.3%
All Provider Types With Less Than 30 Claims	36.5%	461	1.0%	86.6%	1.8%	0.0%	10.6%
Medical supply company with prosthetic/orthotic personnel certified by an accrediting organization	32.9%	102	0.8%	67.5%	1.4%	0.0%	30.3%
Medical supply company not included in 51, 52, or 53	32.0%	4,082	8.3%	74.7%	1.6%	0.9%	14.4%
Individual orthotic personnel certified by an accrediting organization	31.9%	144	2.4%	88.1%	1.2%	0.0%	8.2%
Medical Supply Company with Respiratory Therapist	29.3%	773	0.1%	84.0%	0.0%	0.1%	15.8%
Individual prosthetic personnel certified by an accrediting organization	27.6%	141	0.0%	96.3%	0.2%	0.1%	3.4%
Supplier of oxygen and/or oxygen related equipment	26.1%	55	0.0%	89.1%	0.0%	0.0%	10.9%
Pharmacy	20.4%	2,907	2.7%	75.5%	3.8%	2.0%	16.1%
All Provider Types	**28.6%**	**9,235**	**5.0%**	**76.9%**	**2.0%**	**0.9%**	**15.2%**

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 Type Improper Payments by Type of Error				
			No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other
CORF	29.1%	60	0.0%	78.6%	0.0%	0.2%	21.2%
Inpatient Rehabilitation Hospitals	18.5%	242	0.0%	14.0%	86.0%	0.0%	0.0%
Inpatient Rehab Unit	16.0%	201	0.0%	54.1%	45.9%	0.0%	0.0%
ORF	10.5%	53	4.4%	82.9%	0.0%	7.2%	5.5%
HHA	10.2%	1,130	4.1%	59.1%	27.1%	3.4%	6.3%
SNF	7.8%	1,447	5.9%	60.2%	0.0%	7.4%	26.5%
Hospice	7.8%	754	11.5%	65.6%	12.5%	7.3%	3.2%
CAH Outpatient Services	6.1%	224	0.0%	98.3%	1.2%	0.3%	0.1%
All Codes With Less Than 30 Claims	4.9%	8	0.0%	100.0%	0.0%	0.0%	0.0%
OPPS, Laboratory, Ambulatory	4.6%	1,949	4.5%	79.5%	9.1%	2.0%	4.9%
Inpatient CAH	2.5%	283	0.0%	0.0%	95.1%	0.0%	4.9%
RHC	2.0%	191	0.0%	99.8%	0.0%	0.2%	0.0%
ESRD	1.1%	522	0.0%	99.7%	0.0%	0.0%	0.3%
FQHC	0.5%	59	0.0%	100.0%	0.0%	0.0%	0.0%
Non PPS Short Term Hospital Inpatient	0.2%	57	0.0%	100.0%	0.0%	0.0%	0.0%
All Provider Types	**6.3%**	**7,180**	**5.0%**	**65.9%**	**16.0%**	**3.9%**	**9.1%**

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 Type Improper Payments by Type of Error				
			No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other
Other MAC Service Types	3.3%	502	14.3%	68.3%	13.2%	4.2%	0.0%
DRG Short Term	3.1%	10,655	1.9%	22.8%	60.5%	13.2%	1.6%
DRG Long Term	0.1%	171	0.0%	6.0%	63.0%	31.0%	0.0%
All Provider Types	**3.0%**	**11,328**	**2.3%**	**24.3%**	**58.9%**	**12.9%**	**1.5%**

Appendix K: Coding Information

Table K1: E&M Service Types by Improper Payments

E & M Codes	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval	Percentage of Service Improper Payments by Type of Error					Percent of Overall Improper Payments
				No Doc	Insufficient Doc	Medical Necessity	Incorrect Coding	Other	
All Codes With Less Than 30 Claims	$528,764,136	22.6%	16.6% - 28.5%	4.4%	81.3%	3.6%	7.7%	3.0%	2.1%
Office o/p est mod 30-39 min (99214)	$340,272,667	4.1%	2.6% - 5.7%	11.3%	32.6%	0.0%	56.0%	0.0%	1.3%
Initial hospital care (99223)	$330,609,457	19.8%	17.0% - 22.6%	3.9%	16.1%	0.0%	79.1%	0.9%	1.3%
Subsequent hospital care (99233)	$289,443,394	14.6%	11.8% - 17.3%	7.1%	28.5%	0.0%	63.5%	1.0%	1.1%
Emergency dept visit (99285)	$157,675,594	10.1%	7.1% - 13.1%	8.0%	8.7%	0.0%	78.4%	4.8%	0.6%
Office o/p est low 20-29 min (99213)	$136,493,457	2.8%	1.1% - 4.5%	21.4%	44.7%	0.0%	24.4%	9.5%	0.5%
Office o/p new mod 45-59 min (99204)	$131,267,448	10.9%	7.1% - 14.7%	4.3%	8.4%	0.0%	58.9%	28.5%	0.5%
Critical care first hour (99291)	$128,847,245	11.4%	7.4% - 15.5%	4.6%	11.5%	0.0%	83.8%	0.0%	0.5%
Subsequent hospital care (99232)	$127,176,918	5.1%	1.4% - 8.7%	15.0%	67.7%	0.0%	17.3%	0.0%	0.5%
Office o/p est hi 40-54 min (99215)	$115,665,400	10.5%	6.0% - 14.9%	10.2%	0.0%	0.0%	89.8%	0.0%	0.4%
Chrnc care mgmt svc 1st 20 (99490)	$102,640,801	64.6%	53.1% - 76.1%	6.2%	92.3%	0.0%	0.0%	1.5%	0.4%
Nursing fac care subseq (99308)	$68,325,002	10.6%	5.1% - 16.1%	0.0%	70.4%	0.0%	29.6%	0.0%	0.3%
Nursing facility care init (99306)	$65,959,187	37.9%	30.4% - 45.3%	5.9%	12.7%	0.0%	78.1%	3.3%	0.3%
Initial hospital care (99222)	$64,242,891	11.0%	5.8% - 16.1%	0.0%	50.2%	0.0%	49.8%	0.0%	0.2%
Nursing fac care subseq (99309)	$58,389,303	8.5%	3.2% - 13.7%	13.2%	25.2%	0.0%	46.0%	15.7%	0.2%
Office o/p new hi 60-74 min (99205)	$54,582,595	13.5%	8.2% - 18.8%	9.3%	10.6%	0.0%	80.0%	0.0%	0.2%
Office o/p new low 30-44 min (99203)	$50,249,941	5.8%	2.1% - 9.6%	0.0%	0.0%	0.0%	80.6%	19.4%	0.2%
Office o/p est sf 10-19 min (99212)	$49,818,646	13.8%	5.9% - 21.6%	0.0%	57.5%	0.0%	42.5%	0.0%	0.2%
Initial observation care (99220)	$36,256,096	16.2%	8.8% - 23.6%	13.7%	36.6%	0.0%	49.7%	0.0%	0.1%
Nursing fac care subseq (99310)	$35,748,489	20.3%	13.9% - 26.7%	11.3%	15.0%	0.0%	73.8%	0.0%	0.1%
Hospital discharge day (99239)	$23,309,383	5.0%	2.1% - 7.9%	0.0%	46.3%	0.0%	46.7%	7.0%	0.1%
Emergency dept visit (99283)	$22,767,935	18.7%	10.6% - 26.8%	27.4%	28.2%	0.0%	36.0%	8.4%	0.1%
Emergency dept visit (99284)	$18,093,984	5.7%	(2.0%) - 13.3%	0.0%	52.2%	0.0%	0.0%	47.8%	0.1%
Subsequent hospital care (99231)	$17,504,298	11.9%	5.6% - 18.1%	14.5%	64.7%	0.0%	20.8%	0.0%	0.1%
Observation care discharge (99217)	$7,967,588	9.9%	4.0% - 15.8%	0.0%	84.0%	0.0%	7.8%	8.2%	0.0%
Overall (E&M Codes)	**$2,962,071,854**	**9.2%**	**8.3% - 10.1%**	**7.0%**	**38.3%**	**0.0%**	**51.1%**	**3.6%**	**11.5%**

Table K2: Impact of 1-Level E&M (Top 20)[24]

Final E & M Codes	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval
Subsequent hospital care (99233)	$177,391,617	8.9%	7.2% - 10.7%
Office o/p est mod 30-39 min (99214)	$136,879,740	1.7%	1.0% - 2.3%
Emergency dept visit (99285)	$101,054,602	6.5%	4.6% - 8.3%
Initial hospital care (99223)	$99,845,768	6.0%	4.5% - 7.4%
Office o/p est hi 40-54 min (99215)	$59,660,005	5.4%	3.0% - 7.8%
Office o/p new mod 45-59 min (99204)	$59,647,695	4.9%	3.1% - 6.7%
Office o/p est low 20-29 min (99213)	$33,261,222	0.7%	0.1% - 1.2%
Office o/p new low 30-44 min (99203)	$24,790,464	2.9%	0.8% - 4.9%
Office o/p new hi 60-74 min (99205)	$22,083,298	5.5%	3.3% - 7.7%
Subsequent hospital care (99232)	$22,038,636	0.9%	(0.1%) - 1.9%
Initial hospital care (99222)	$20,667,116	3.5%	1.7% - 5.4%
Nursing fac care subseq (99309)	$18,244,483	2.6%	0.1% - 5.2%
Office o/p est sf 10-19 min (99212)	$16,172,089	4.5%	1.0% - 8.0%
Nursing fac care subseq (99310)	$15,742,502	8.9%	5.6% - 12.3%
Nursing facility care init (99306)	$14,380,821	8.3%	5.8% - 10.7%
Initial observation care (99220)	$13,678,226	6.1%	3.2% - 9.1%
Nursing fac care subseq (99308)	$11,335,442	1.8%	(0.6%) - 4.1%
Hospital discharge day (99239)	$10,819,424	2.3%	0.7% - 4.0%
Emergency dept visit (99283)	$8,193,562	6.7%	2.3% - 11.2%
Subsequent hospital care (99231)	$3,642,114	2.5%	0.1% - 4.9%
All Other Codes	$64,454,082	0.1%	0.0% - 0.1%
Overall (1-Level E&M Codes)	**$933,982,909**	**0.9%**	**0.8% - 1.1%**

[24] Table K2 shows the improper payment rate estimate for claims that were found in error due to 1-Level E&M coding difference.

Table K3: Type of Services with Upcoding[25] Errors: Part B

Part B Services (BETOS Codes)	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval
Hospital visit - initial	$310,940,368	11.5%	9.8% - 13.3%
Office visits - established	$304,850,957	2.1%	1.4% - 2.7%
Hospital visit - subsequent	$215,016,073	4.0%	3.0% - 4.9%
Nursing home visit	$167,923,419	6.9%	5.0% - 8.8%
Office visits - new	$163,543,351	6.2%	4.6% - 7.7%
Emergency room visit	$127,708,875	6.3%	4.6% - 8.1%
Hospital visit - critical care	$108,015,654	9.2%	5.5% - 12.9%
Dialysis services (Medicare Fee Schedule)	$32,413,989	3.6%	1.1% - 6.1%
Eye procedure - cataract removal/lens insertion	$27,844,602	1.6%	(1.5%) - 4.7%
Ambulance	$24,815,125	0.5%	0.0% - 0.9%
Other drugs	$22,421,105	0.2%	(0.1%) - 0.6%
Advanced imaging - CAT/CT/CTA: other	$19,480,431	1.3%	(1.2%) - 3.7%
Specialist - other	$17,259,472	1.0%	0.0% - 1.9%
Oncology - other	$17,230,823	5.6%	(1.8%) - 13.1%
Specialist - ophthalmology	$15,165,675	0.7%	0.2% - 1.3%
Ambulatory procedures - skin	$11,950,390	0.5%	(0.3%) - 1.3%
Minor procedures - other (Medicare fee schedule)	$9,859,696	0.2%	0.0% - 0.4%
Chiropractic	$4,753,203	0.9%	(0.2%) - 2.0%
Standard imaging - musculoskeletal	$3,196,836	0.6%	(0.2%) - 1.5%
Minor procedures - musculoskeletal	$2,763,006	0.3%	(0.2%) - 0.8%
All Other Codes	$11,116,455	0.0%	0.0% - 0.1%
Overall (Part B)	**$1,618,269,507**	**1.6%**	**1.4% - 1.8%**

[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 K4: Type of Services with Upcoding Errors: DMEPOS

DMEPOS (Policy Group)	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval
Glucose Monitor	$7,661,157	1.9%	0.5% - 3.2%
Infusion Pumps & Related Drugs	$3,503,784	0.5%	(0.0%) - 1.0%
Surgical Dressings	$2,859,825	1.0%	0.0% - 2.0%
Parenteral Nutrition	$1,669,850	0.7%	(0.0%) - 1.4%
Urological Supplies	$1,539,353	0.4%	(0.3%) - 1.1%
Negative Pressure Wound Therapy	$1,034,184	1.2%	(0.3%) - 2.7%
Tracheostomy Supplies	$768,935	2.0%	(1.7%) - 5.8%
Enteral Nutrition	$710,286	0.4%	(0.0%) - 0.9%
Hospital Beds/Accessories	$682,565	1.5%	(1.4%) - 4.5%
All Policy Groups with Less than 30 Claims	$533,503	0.1%	(0.0%) - 0.3%
Ostomy Supplies	$276,767	0.2%	(0.1%) - 0.4%
CPAP	$167,291	0.0%	(0.0%) - 0.0%
Suction Pump	$158,210	0.6%	(0.2%) - 1.4%
Lower Limb Prostheses	$76,310	0.0%	(0.0%) - 0.1%
Ventilators	$21,970	0.0%	(0.0%) - 0.0%
{N/A}[26]	$6,638	0.2%	(0.1%) - 0.4%
Nebulizers & Related Drugs	$5,703	0.0%	(0.0%) - 0.0%
Immunosuppressive Drugs	$4,189	0.0%	(0.0%) - 0.0%
Overall (DMEPOS)	**$21,680,518**	**0.3%**	**0.2% - 0.4%**

[26] {N/A} is a policy group in the DMEPOS policy group mapping that is used to create the DMEPOS service type.

Table K5: Type of Services with Upcoding Errors: Part A Excluding Hospital IPPS

Part A Excluding Hospital IPPS Services (TOB)	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval
SNF Inpatient	$198,088,800	0.7%	0.4% - 1.0%
Nonhospital based hospice	$111,249,284	0.6%	0.0% - 1.1%
Hospital Outpatient	$48,209,299	0.1%	0.0% - 0.1%
Home Health	$30,342,387	0.2%	0.1% - 0.3%
Hospital Inpatient Part B	$13,534,710	0.6%	(0.5%) - 1.6%
Hospital based hospice	$6,674,179	0.4%	(0.3%) - 1.1%
Clinic OPT	$5,334,640	0.7%	(0.5%) - 2.0%
CAH	$1,729,150	0.0%	(0.0%) - 0.1%
Hospital Other Part B	$150,751	0.0%	(0.0%) - 0.1%
Overall (Part A Excluding Hospital IPPS)	**$415,313,201**	**0.2%**	**0.1% - 0.3%**

Table K6: Type of Services with Upcoding Errors: Part A Hospital IPPS

Part A Hospital IPPS Services (MS-DRGs)	Projected Improper Payments	Improper Payment Rate	95% Confidence Interval
Septicemia Or Severe Sepsis W/O MV >96 Hours (871, 872)	$58,919,500	0.7%	(0.0%) - 1.3%
Other Major Cardiovascular Procedures (270, 271, 272)	$22,875,817	2.6%	(2.4%) - 7.6%
Septicemia Or Severe Sepsis W MV >96 Hours (870)	$17,557,424	0.8%	(0.2%) - 1.8%
Renal Failure (682, 683, 684)	$12,668,454	0.8%	(0.1%) - 1.6%
Major Small & Large Bowel Procedures (329, 330, 331)	$10,034,814	0.5%	(0.4%) - 1.4%
Percutaneous Cardiovascular Procedures W Drug-Eluting Stent (246)	$6,010,355	0.7%	(0.7%) - 2.1%
Revision Of Hip Or Knee Replacement (466, 467, 468)	$4,894,485	0.7%	(0.7%) - 2.1%
Complications Of Treatment (919, 920, 921)	$4,295,494	1.3%	(1.2%) - 3.7%
Disorders Of Liver Except Malig, Cirr, Alc Hepa (441, 442, 443)	$4,276,251	1.4%	(0.7%) - 3.5%
Extensive OR Procedure Unrelated To Principal Diagnosis (981, 982, 983)	$4,053,107	0.3%	(0.3%) - 1.0%
Esophagitis, Gastroent & Misc Digest Disorders (391, 392)	$3,842,469	0.4%	(0.4%) - 1.2%
GI Obstruction (388, 389, 390)	$3,644,167	0.8%	(0.7%) - 2.3%
Combined Anterior/Posterior Spinal Fusion (453, 454, 455)	$3,548,356	0.2%	(0.2%) - 0.6%
Cardiac Valve & Oth Maj Cardiothoracic Proc W/O Card Cath (219, 220, 221)	$2,706,678	0.2%	(0.2%) - 0.5%
Disorders Of The Biliary Tract (444, 445, 446)	$2,477,328	0.9%	(0.8%) - 2.7%
Infectious & Parasitic Diseases W OR Procedure (853, 854, 855)	$1,797,941	0.1%	(0.1%) - 0.2%
Endovascular Cardiac Valve Replacement & Supplement Procedures (266, 267)	$1,592,976	0.1%	(0.1%) - 0.2%
Organic Disturbances & Intellectual Disability (884)	$1,592,796	0.3%	(0.3%) - 0.9%
Respiratory Infections & Inflammations (177, 178, 179)	$1,466,657	0.1%	(0.1%) - 0.3%
Lower Extrem & Humer Proc Except Hip, Foot, Femur (492, 493, 494)	$1,012,745	0.1%	(0.1%) - 0.4%
All Other Codes	$61,632,251	0.1%	0.0% - 0.2%
Overall (Part A Hospital IPPS)	**$230,900,065**	**0.2%**	**0.1% - 0.3%**

Appendix L: Overpayments

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

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

Part B Services (HCPCS Codes)	Claims Reviewed	Lines Reviewed	Sample Dollars Overpaid	Total Sample Dollars Paid	Projected Dollars Overpaid	Overpayment Rate	95% Confidence Interval
All Codes With Less Than 30 Claims	5,879	12,343	$161,482	$1,685,948	$3,063,874,857	7.5%	6.1% - 8.9%
Office o/p est mod 30-39 min (99214)	440	440	$1,815	$43,801	$340,272,667	4.1%	2.6% - 5.7%
Initial hospital care (99223)	474	474	$17,999	$91,977	$330,609,457	19.8%	17.0% - 22.6%
Subsequent hospital care (99233)	493	649	$8,800	$64,652	$286,640,259	14.4%	11.7% - 17.2%
Therapeutic exercises (97110)	271	280	$2,146	$11,797	$199,345,363	17.8%	12.6% - 23.0%
Xcapsl ctrc rmvl w/o ecp (66984)	80	81	$6,287	$50,157	$190,495,888	12.5%	3.8% - 21.1%
Emergency dept visit (99285)	219	219	$3,545	$36,453	$157,675,594	10.1%	7.1% - 13.1%
Ppps, subseq visit (G0439)	100	100	$2,530	$10,283	$157,331,204	22.6%	12.5% - 32.7%
BLS (A0428)	83	88	$2,805	$15,909	$153,096,405	19.3%	8.7% - 29.8%
Chiropract manj 3-4 regions (98941)	94	108	$1,284	$3,646	$137,295,886	36.1%	24.7% - 47.5%
Office o/p new mod 45-59 min (99204)	206	206	$3,009	$29,126	$131,267,448	10.9%	7.1% - 14.7%
Critical care first hour (99291)	261	313	$8,294	$66,484	$128,847,245	11.4%	7.4% - 15.5%
Subsequent hospital care (99232)	193	393	$1,949	$27,631	$124,712,146	5.0%	1.4% - 8.6%
Office o/p est hi 40-54 min (99215)	94	94	$1,396	$12,969	$115,665,400	10.5%	6.0% - 14.9%
Drug test def 22+ classes (G0483)	288	288	$31,112	$64,609	$108,841,563	43.1%	31.4% - 54.9%
Office o/p est low 20-29 min (99213)	363	364	$527	$24,613	$108,502,524	2.2%	0.6% - 3.8%
ALS1-emergency (A0427)	202	202	$4,601	$82,108	$105,696,646	6.4%	2.4% - 10.4%
Chrnc care mgmt svc 1st 20 (99490)	83	84	$2,088	$3,446	$102,640,801	64.6%	53.1% - 76.1%
Psytx w pt 60 minutes (90837)	173	232	$4,295	$25,771	$92,651,452	15.1%	9.0% - 21.2%
Lipid panel (80061)	96	96	$510	$1,180	$87,557,211	45.3%	33.6% - 57.0%
All Other Codes	9,128	13,110	$737,115	$11,616,501	$2,218,442,926	8.1%	7.3% - 8.8%
Total (Part B)	**14,267**	**30,164**	**$1,003,591**	**$13,969,059**	**$8,341,462,943**	**8.3%**	**7.6% - 9.1%**

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	95% Confidence Interval
All Codes With Less Than 30 Claims	3,334	6,786	$510,651	$2,761,125	$727,282,928	28.2%	23.0% - 33.4%
Oxygen concentrator (E1390)	313	327	$5,190	$23,221	$97,523,103	20.9%	15.3% - 26.6%
Home vent non-invasive inter (E0466)	224	225	$37,517	$224,681	$78,096,634	16.6%	10.8% - 22.4%
Ko single upright prefab ots (L1851)	597	735	$356,359	$560,316	$62,700,648	66.5%	61.1% - 72.0%
Ther cgm supply allowance (K0553)	167	167	$7,636	$35,877	$60,432,209	24.1%	14.1% - 34.1%
Parenteral sol 74-100 gm pro (B4197)	42	59	$36,880	$73,383	$48,185,399	48.9%	27.8% - 70.0%
CPAP full face mask (A7030)	112	112	$2,996	$10,650	$47,783,909	32.1%	20.2% - 44.0%
Blood glucose/reagent strips (A4253)	110	115	$921	$2,236	$45,228,712	42.3%	32.1% - 52.6%
Replacement facemask interfa (A7031)	170	174	$4,213	$14,087	$45,092,035	31.0%	19.5% - 42.4%
Replacement nasal cushion (A7032)	97	99	$4,239	$9,622	$43,305,876	40.2%	27.8% - 52.6%
Nasal application device (A7034)	161	161	$3,390	$9,505	$41,144,353	32.6%	23.3% - 41.9%
Collagen based wound filler (A6010)	42	42	$30,295	$47,658	$37,804,603	66.4%	50.4% - 82.5%
Cont airway pressure device (E0601)	103	103	$1,144	$4,234	$35,890,390	23.3%	15.2% - 31.5%
LSO sc r ant/pos pnl pre ots (L0650)	296	296	$113,361	$293,853	$35,857,937	38.1%	31.3% - 44.9%
Insulin for insulin pump use (J1817)	42	42	$11,260	$44,559	$30,609,592	24.9%	6.9% - 42.8%
Diab shoe for density insert (A5500)	39	76	$3,452	$5,065	$29,664,879	68.2%	52.1% - 84.3%
Straight tip urine catheter (A4351)	40	41	$3,182	$12,353	$27,509,001	25.3%	7.3% - 43.3%
Neg press wound therapy pump (E2402)	42	42	$10,399	$27,010	$25,966,118	42.7%	22.7% - 62.8%
Alginate dressing <=16 sq in (A6196)	54	57	$9,159	$13,706	$25,960,040	70.8%	56.8% - 84.8%
Tubing with heating element (A4604)	162	163	$2,084	$6,485	$24,712,477	34.7%	24.2% - 45.1%
All Other Codes	6,198	9,527	$1,089,259	$5,580,816	$809,756,745	27.2%	24.9% - 29.5%
Total (DMEPOS)	**9,235**	**19,349**	**$2,243,587**	**$9,760,444**	**$2,380,507,588**	**28.6%**	**26.4% - 30.8%**

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	95% Confidence Interval
Hospital Outpatient	1,828	$86,074	$2,467,595	$3,204,968,444	4.5%	2.7% - 6.3%
SNF Inpatient	1,335	$682,047	$8,829,556	$2,445,323,319	8.2%	6.1% - 10.2%
Home Health	1,124	$406,736	$2,749,677	$1,807,769,456	10.1%	6.8% - 13.4%
Nonhospital based hospice	632	$132,080	$2,391,551	$1,250,158,666	6.3%	3.7% - 9.0%
Hospital Inpatient (Part A)	791	$1,599,756	$13,067,029	$1,180,891,736	12.5%	9.8% - 15.2%
CAH	224	$8,751	$152,802	$538,011,990	6.1%	1.1% - 11.1%
Hospital based hospice	122	$89,996	$465,816	$390,524,875	22.1%	12.0% - 32.3%
SNF Inpatient Part B	72	$4,222	$72,482	$168,850,720	4.3%	0.7% - 7.8%
Hospital Other Part B	80	$696	$3,340	$145,519,869	21.7%	8.1% - 35.4%
Clinic ESRD	522	$20,171	$1,562,727	$139,152,609	1.1%	0.3% - 1.8%
Clinic OPT	53	$1,087	$16,443	$74,461,041	10.5%	0.9% - 20.0%
Hospital Inpatient Part B	40	$2,789	$85,562	$54,204,195	2.3%	(1.2%) - 5.8%
SNF Outpatient	40	$2,681	$23,626	$33,055,487	9.2%	(3.9%) - 22.4%
Clinical Rural Health	191	$442	$30,180	$30,228,863	2.0%	0.1% - 3.9%
Clinic CORF	60	$4,797	$16,385	$10,959,655	29.0%	14.1% - 43.9%
FQHC	59	$61	$9,496	$6,718,333	0.5%	(0.5%) - 1.6%
All Other Codes	7	$0	$4,795	$0	0.0%	0.0% - 0.0%
Total (Part A Excluding Hospital IPPS)	**7,180**	**$3,042,388**	**$31,949,063**	**$11,480,799,257**	**6.3%**	**5.3% - 7.2%**

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

Part A Inpatient Hospital PPS Services (DRG)	Claims Reviewed	Sample Dollars Overpaid	Total Sample Dollars Paid	Projected Dollars Overpaid	Overpayment Rate	95% Confidence Interval
All Codes With Less Than 30 Claims	2,659	$987,556	$37,732,998	$803,677,990	2.6%	2.0% - 3.2%
Major Hip And Knee Joint Replacement Or Reattachment Of Lower Extremity W/O MCC (470)	597	$1,398,065	$7,469,835	$723,040,276	18.6%	15.3% - 21.8%
Percutaneous Intracardiac Procedures W/O MCC (274)	76	$454,664	$1,415,502	$160,504,177	32.5%	20.4% - 44.5%
Endovascular Cardiac Valve Replacement & Supplement Procedures W/O MCC (267)	128	$608,642	$5,721,969	$156,312,978	11.0%	5.5% - 16.4%
Septicemia Or Severe Sepsis W/O MV >96 Hours W MCC (871)	255	$40,970	$3,413,787	$101,094,738	1.3%	(0.0%) - 2.6%
Psychoses (885)	317	$63,417	$2,890,525	$68,315,079	2.3%	0.5% - 4.1%
Endovascular Cardiac Valve Replacement & Supplement Procedures W MCC (266)	142	$495,787	$7,222,436	$63,645,744	6.3%	3.0% - 9.6%
Cardiac Defibrillator Implant W/O Cardiac Cath W MCC (226)	48	$514,636	$2,193,291	$58,407,687	23.6%	14.5% - 32.7%
Degenerative Nervous System Disorders W/O MCC (057)	342	$342,318	$3,703,451	$48,268,919	9.4%	5.6% - 13.3%
Transient Ischemia W/O Thrombolytic (069)	42	$53,834	$233,384	$45,036,541	26.3%	(1.4%) - 54.0%
Percutaneous Cardiovascular Procedures W Drug-Eluting Stent W MCC Or 4+ Arteries Or Stents (246)	44	$55,222	$1,054,961	$40,961,804	4.8%	(3.0%) - 12.6%
Syncope & Collapse (312)	44	$21,504	$274,788	$39,886,227	9.9%	(1.1%) - 20.9%
Medical Back Problems W/O MCC (552)	42	$35,105	$297,656	$38,823,914	12.7%	1.2% - 24.3%
Spinal Fusion Except Cervical W/O MCC (460)	126	$100,670	$3,553,832	$32,667,546	2.8%	0.3% - 5.4%
Cardiac Defibrillator Implant W/O Cardiac Cath W/O MCC (227)	82	$551,749	$2,570,991	$30,383,183	21.2%	12.2% - 30.2%
Chest Pain (313)	44	$26,831	$243,700	$28,235,803	11.8%	1.5% - 22.1%
Other Vascular Procedures W CC (253)	45	$56,345	$802,840	$28,197,897	6.4%	(0.7%) - 13.5%
Cervical Spinal Fusion W/O CC/MCC (473)	77	$231,358	$1,075,091	$27,909,104	22.3%	11.6% - 33.0%
Extensive OR Procedure Unrelated To Principal Diagnosis W CC (982)	44	$86,644	$991,272	$27,349,126	8.0%	(3.2%) - 19.3%
Signs & Symptoms W/O MCC (948)	105	$104,297	$645,437	$26,091,995	15.6%	5.5% - 25.7%
All Other Codes	6,069	$3,292,063	$102,726,038	$544,589,334	1.0%	0.8% - 1.2%
Total (Part A Hospital IPPS)	**11,328**	**$9,521,677**	**$186,233,785**	**$3,093,400,063**	**2.9%**	**2.5% - 3.2%**

Table L5: Overpayment Rate: All Claim Types

All Services	Claims Reviewed	Sample Dollars Overpaid	Total Sample Dollars Paid	Projected Dollars Overpaid	Overpayment Rate	95% Confidence Interval
All	42,010	$15,811,243	$241,912,350	$25,296,169,852	6.3%	5.8% - 6.8%

Appendix M: Underpayments

The following tables provide the service-specific underpayment rates for each claim type. 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 (HCPCS Codes)	Claims Reviewed	Lines Reviewed	Sample Dollars Underpaid	Total Sample Dollars Paid	Projected Dollars Underpaid	Underpayment Rate	95% Confidence Interval
All Codes With Less Than 30 Claims	5,879	12,343	$1,925	$1,685,948	$73,227,998	0.2%	0.1% - 0.3%
Office o/p est low 20-29 min (99213)	363	364	$153	$24,613	$27,990,933	0.6%	0.1% - 1.1%
Office o/p est sf 10-19 min (99212)	95	95	$183	$4,075	$16,172,089	4.5%	1.0% - 8.0%
Inj pembrolizumab (J9271)	86	88	$10,053	$790,303	$8,583,363	1.2%	(1.2%) - 3.6%
Emergency dept visit (99283)	80	80	$166	$4,476	$4,117,213	3.4%	(0.4%) - 7.1%
Subsequent hospital care (99231)	101	126	$159	$4,662	$3,642,114	2.5%	0.1% - 4.9%
Injection, nivolumab (J9299)	82	86	$6,759	$615,889	$3,424,919	0.8%	(0.8%) - 2.4%
Therapeutic activities (97530)	194	200	$117	$12,030	$3,256,205	0.5%	(0.2%) - 1.2%
Subsequent hospital care (99233)	493	649	$106	$64,652	$2,803,135	0.1%	(0.1%) - 0.4%
Subsequent hospital care (99232)	193	393	$33	$27,631	$2,464,772	0.1%	(0.1%) - 0.3%
Ground mileage (A0425)	451	458	$106	$39,246	$2,350,277	0.3%	(0.1%) - 0.8%
Nursing fac care subseq (99308)	124	137	$18	$8,444	$1,849,526	0.3%	(0.3%) - 0.8%
Psytx w pt 45 minutes (90834)	80	93	$45	$7,001	$1,640,833	0.6%	(0.5%) - 1.7%
Injection,onabotulinumtoxina (J0585)	84	114	$606	$87,258	$998,804	0.6%	(0.5%) - 1.7%
Observation care discharge (99217)	97	97	$106	$6,608	$618,697	0.8%	(0.7%) - 2.3%
Initial observation care (99220)	83	83	$38	$14,212	$513,830	0.2%	(0.2%) - 0.7%
Epifix 1 sq cm (Q4186)	40	44	$642	$68,990	$274,335	0.7%	(0.7%) - 2.0%
Factor viii recombinant nos (J7192)	81	201	$5,915	$1,963,740	$244,484	0.3%	(0.3%) - 0.8%
Oncology thyroid (81545)	84	84	$3,600	$266,400	$228,935	1.3%	(1.3%) - 3.9%
X-ray exam chest 1 view (71045)	116	124	$2	$1,282	$223,548	0.2%	(0.2%) - 0.5%
All Other Codes	10,045	14,305	$318	$8,271,600	$294,946	0.0%	0.0% - 0.0%
Total (Part B)	**14,267**	**30,164**	**$31,051**	**$13,969,059**	**$154,920,954**	**0.2%**	**0.1% - 0.2%**

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	95% Confidence Interval
All Codes With Less Than 30 Claims	3,334	6,786	$1,082	$2,761,125	$1,850,971	0.1%	(0.1%) - 0.2%
Albuterol non-comp unit (J7613)	76	77	$58	$590	$249,611	3.6%	(3.5%) - 10.6%
Lancets per box (A4259)	311	320	$10	$556	$41,507	1.1%	(0.8%) - 3.0%
Nebulizer with compression (E0570)	415	432	$6	$2,448	$22,434	0.2%	(0.2%) - 0.6%
All Other Codes	6,877	11,734	$0	$6,995,725	$0	0.0%	0.0% - 0.0%
Total (DMEPOS)	**9,235**	**19,349**	**$1,155**	**$9,760,444**	**$2,164,522**	**0.0%**	**(0.0%) - 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	95% Confidence Interval
Nonhospital based hospice	632	632	$4,328	$2,391,551	$31,818,541	0.2%	(0.1%) - 0.5%
Home Health	1,124	1,124	$4,728	$2,749,677	$31,355,929	0.2%	0.1% - 0.3%
SNF Inpatient	1,335	1,335	$11,334	$8,829,556	$27,591,385	0.1%	(0.1%) - 0.3%
Hospital Outpatient	1,828	1,828	$46	$2,467,595	$4,668,972	0.0%	(0.0%) - 0.0%
Hospital based hospice	122	122	$1,033	$465,816	$2,836,608	0.2%	(0.1%) - 0.4%
Clinical Rural Health	191	191	$1	$30,180	$52,968	0.0%	(0.0%) - 0.0%
Clinic CORF	60	60	$11	$16,385	$23,559	0.1%	(0.1%) - 0.2%
All Other Codes	1,888	1,888	$0	$14,998,302	$0	0.0%	0.0% - 0.0%
Total (Part A Excluding Hospital IPPS)	**7,180**	**7,180**	**$21,481**	**$31,949,063**	**$98,347,963**	**0.1%**	**0.0% - 0.1%**

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

Part A Hospital IPPS Services (DRG)	Claims Reviewed	Lines Reviewed	Sample Dollars Underpaid	Total Sample Dollars Paid	Projected Dollars Underpaid	Underpayment Rate	95% Confidence Interval
All Codes With Less Than 30 Claims	2,659	2,659	$124,659	$37,732,998	$103,914,736	0.3%	0.1% - 0.5%
Septicemia Or Severe Sepsis W/O MV >96 Hours W MCC (871)	255	255	$4,772	$3,413,787	$12,375,458	0.2%	(0.1%) - 0.4%
Red Blood Cell Disorders W MCC (811)	46	46	$10,965	$491,383	$8,720,505	2.8%	(2.6%) - 8.1%
Other Digestive System Diagnoses W CC (394)	42	42	$16,981	$288,711	$7,355,274	2.7%	(2.6%) - 8.0%
Kidney & Urinary Tract Infections W/O MCC (690)	43	43	$1,777	$236,502	$6,712,395	1.1%	(1.0%) - 3.1%
Psychoses (885)	317	317	$3,903	$2,890,525	$3,943,919	0.1%	(0.1%) - 0.4%
Kidney & Urinary Tract Infections W MCC (689)	46	46	$2,132	$345,979	$3,899,143	0.6%	(0.6%) - 1.9%
Other Vascular Procedures W/O CC/MCC (254)	46	46	$13,834	$523,319	$3,531,523	2.9%	(1.2%) - 7.0%
Heart Failure & Shock W CC (292)	42	42	$2,027	$300,970	$3,467,023	0.7%	(0.7%) - 2.1%
Respiratory Infections & Inflammations W CC (178)	49	49	$7,058	$412,439	$3,401,850	1.4%	(0.5%) - 3.3%
Degenerative Nervous System Disorders W/O MCC (057)	342	342	$23,230	$3,703,451	$3,170,846	0.6%	(0.2%) - 1.5%
Other Vascular Procedures W CC (253)	45	45	$4,908	$802,840	$2,862,883	0.6%	(0.6%) - 1.9%
Endovascular Cardiac Valve Replacement & Supplement Procedures W MCC (266)	142	142	$16,371	$7,222,436	$2,857,870	0.3%	(0.1%) - 0.7%
Extensive OR Procedure Unrelated To Principal Diagnosis W CC (982)	44	44	$7,255	$991,272	$2,681,991	0.8%	(0.4%) - 2.0%
Other Disorders Of Nervous System W CC (092)	44	44	$4,243	$349,500	$2,675,984	1.4%	(1.3%) - 4.0%
Chronic Obstructive Pulmonary Disease W MCC (190)	42	42	$1,184	$315,578	$2,673,747	0.3%	(0.3%) - 1.0%
Renal Failure W MCC (682)	95	95	$3,015	$928,912	$2,602,715	0.3%	(0.1%) - 0.8%
Misc Disorders Of Nutrition, Metabolism, Fluids/Electrolytes W/O MCC (641)	45	45	$1,170	$227,378	$2,300,816	0.5%	(0.5%) - 1.5%
Peripheral Vascular Disorders W CC (300)	43	43	$3,390	$338,193	$2,129,505	1.1%	(1.0%) - 3.1%
Signs & Symptoms W/O MCC (948)	105	105	$5,780	$645,437	$1,365,501	0.8%	(0.8%) - 2.4%
All Other Codes	6,836	6,836	$193,923	$124,072,174	$11,230,422	0.0%	0.0% - 0.0%
Total (Part A Hospital IPPS)	**11,328**	**11,328**	**$452,578**	**$186,233,785**	**$193,874,105**	**0.2%**	**0.1% - 0.2%**

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	95% Confidence Interval
All	42,010	68,021	$506,264	$241,912,350	$449,307,544	0.1%	0.1% - 0.1%

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.

Enhanced Stratification
In addition, CERT uses sub-strata for strata that represent high total payments as well as exhibit heterogeneity in improper payment rate by provider. Sub-strata consist of two or more strata contained within a service level stratum and are defined by provider profile scores. Additionally, the CERT Hospital Outpatient stratum has been divided into high and low payment strata to sample the larger payment claims more effectively, while ensuring a specific level of lower payment hospital outpatient claims. These sub-strata have been developed with CMS collaboration to increase CERT's ability to adequately sample not just services, but also providers who are more likely to have improper billing.

For RY2021, the following strata contain sub-strata:

- Home Health
- Hospital Outpatient

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.[27] 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.

The estimator for a domain, d, is expressed as

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

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:

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

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

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.

[27] 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.

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	12,342	1,360	11.0%
	Complete cbc w/auto diff wbc (85025)	331	56	16.9%
	Ground mileage (A0425)	458	39	8.5%
	Initial hospital care (99223)	474	181	38.2%
	Office o/p est low 20-29 min (99213)	364	13	3.6%
	Office o/p est mod 30-39 min (99214)	440	36	8.2%
	Routine venipuncture (36415)	513	78	15.2%
	Subsequent hospital care (99232)	345	23	6.7%
	Subsequent hospital care (99233)	642	208	32.4%
	Ther/proph/diag inj sc/im (96372)	363	43	11.8%
	Other	13,836	1,903	13.8%
TOS Code	All Codes With Less Than 30 Claims	1,022	45	4.4%
	Ambulance	943	83	8.8%
	Hospital visit - subsequent	1,413	291	20.6%
	Lab tests - other (non-Medicare fee schedule)	3,348	704	21.0%
	Minor procedures - other (Medicare fee schedule)	2,327	298	12.8%
	Office visits - established	1,084	120	11.1%
	Other drugs	2,381	238	10.0%
	Specialist - other	857	78	9.1%
	Specialist - psychiatry	886	118	13.3%
	Undefined codes	1,045	25	2.4%
	Other	14,802	1,940	13.1%
Resolution Type[28]	Automated	6,594	284	4.3%
	Complex	5	0	0.0%
	None	23,505	3,656	15.6%
	Routine	4	0	0.0%

[28] Created using the type of review a line received based upon the resolution code that the contractor used to resolve the line.

Variable		Lines Reviewed	Lines Containing Errors	Percent of Lines Containing Errors
Diagnosis Code	All Codes With Less Than 30 Claims	1,567	205	13.1%
	Diabetes mellitus	842	113	13.4%
	Diseases of arteries, arterioles and capillaries	1,430	104	7.3%
	Encounters for other specific health care	868	75	8.6%
	Malignant neoplasms of lymphoid, hematopoietic and related tissue	1,210	55	4.5%
	Other dorsopathies	815	108	13.3%
	Other forms of heart disease	971	130	13.4%
	Persons encountering health services for examinations	953	93	9.8%
	Persons with potential health hazards related to family and personal history and certain conditions	1,351	326	24.1%
	Symptoms and signs involving the circulatory and respiratory systems	1,006	136	13.5%
	Other	19,095	2,595	13.6%

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	6,786	1,771	26.1%
	Infusion supplies with pump (A4222)	259	43	16.6%
	Ko single upright prefab ots (L1851)	735	410	55.8%
	Lancets per box (A4259)	320	128	40.0%
	LSO sc r ant/pos pnl pre ots (L0650)	296	94	31.8%
	Nebulizer with compression (E0570)	432	69	16.0%
	Oxygen concentrator (E1390)	327	55	16.8%
	Pos airway pressure filter (A7038)	328	113	34.5%
	Supp non-insulin inf cath/wk (A4221)	310	39	12.6%
	Suspension sleeve lower ext (L2397)	749	449	59.9%
	Other	8,807	2,685	30.5%
TOS Code	All Policy Groups with Less than 30 Claims	1,135	250	22.0%
	CPAP	1,959	619	31.6%
	Immunosuppressive Drugs	698	145	20.8%
	Infusion Pumps & Related Drugs	1,259	196	15.6%
	Lower Limb Orthoses	2,184	1,178	53.9%
	Lower Limb Prostheses	1,585	252	15.9%
	Nebulizers & Related Drugs	1,296	251	19.4%
	Parenteral Nutrition	730	238	32.6%
	Surgical Dressings	746	398	53.4%
	Wheelchairs Options/Accessories	1,108	265	23.9%
	Other	6,649	2,064	31.0%
Resolution Type[29]	Automated	3,359	42	1.3%
	Complex	31	13	41.9%
	None	15,872	5,777	36.4%
	Routine	87	24	27.6%
Diagnosis Code	All Codes With Less Than 30 Claims	1,201	322	26.8%
	Cerebral palsy and other paralytic syndromes	549	96	17.5%
	Chronic lower respiratory diseases	1,761	378	21.5%
	Diabetes mellitus	1,299	533	41.0%
	Episodic and paroxysmal disorders	2,089	642	30.7%
	In situ neoplasms	900	152	16.9%
	Osteoarthritis	1,833	1,019	55.6%
	Other disorders of the skin and subcutaneous tissue	537	256	47.7%
	Other forms of heart disease	412	114	27.7%
	Persons with potential health hazards related to family and personal history and certain conditions	2,979	621	20.8%
	Other	5,789	1,723	29.8%

[29] Created using the type of review a line received based upon the resolution code that the contractor used to resolve the line.

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	522	18	3.4%
	Clinical Rural Health	191	8	4.2%
	CAH	224	49	21.9%
	Home Health	1,124	234	20.8%
	Hospital Inpatient (Part A)	791	97	12.3%
	Hospital Other Part B	80	16	20.0%
	Hospital Outpatient	1,828	158	8.6%
	Hospital based hospice	122	31	25.4%
	Nonhospital based hospice	632	61	9.7%
	SNF Inpatient	1,335	118	8.8%
	Other	331	51	15.4%
TOS Code	Clinic ESRD	522	18	3.4%
	Clinical Rural Health	191	8	4.2%
	CAH	224	49	21.9%
	Home Health	1,124	234	20.8%
	Hospital Inpatient (Part A)	791	97	12.3%
	Hospital Other Part B	80	16	20.0%
	Hospital Outpatient	1,828	158	8.6%
	Hospital based hospice	122	31	25.4%
	Nonhospital based hospice	632	61	9.7%
	SNF Inpatient	1,335	118	8.8%
	Other	331	51	15.4%
Diagnosis Code	Acute kidney failure and chronic kidney disease	604	30	5.0%
	All Codes With Less Than 30 Claims	496	53	10.7%
	Cerebrovascular diseases	339	41	12.1%
	Chronic lower respiratory diseases	231	42	18.2%
	Diabetes mellitus	231	46	19.9%
	Encounters for other specific health care	411	55	13.4%
	Hypertensive diseases	350	72	20.6%
	Ischemic heart diseases	157	19	12.1%
	Other degenerative diseases of the nervous system	210	23	11.0%
	Other forms of heart disease	344	39	11.3%
	Other	3,807	421	11.1%

Table N4: Claims in Error: Part A Hospital IPPS

Variable		Claims Reviewed	Claims Containing Errors	Percent of Claims Containing Errors
DRG Label	Aftercare, Musculoskeletal System & Connective Tissue W CC (560)	169	26	15.4%
	Aftercare, Musculoskeletal System & Connective Tissue W/O CC/MCC (561)	177	44	24.9%
	All Codes With Less Than 30 Claims	2,659	210	7.9%
	Degenerative Nervous System Disorders W/O MCC (057)	342	60	17.5%
	Endovascular Cardiac Valve Replacement & Supplement Procedures W MCC (266)	142	28	19.7%
	Endovascular Cardiac Valve Replacement & Supplement Procedures W/O MCC (267)	128	20	15.6%
	Major Hip And Knee Joint Replacement Or Reattachment Of Lower Extremity W/O MCC (470)	597	122	20.4%
	Psychoses (885)	317	23	7.3%
	Septicemia Or Severe Sepsis W/O MV >96 Hours W MCC (871)	255	16	6.3%
	Simple Pneumonia & Pleurisy W MCC (193)	143	9	6.3%
	Other	6,399	629	9.8%
TOS Code	Aftercare, Musculoskeletal System & Connective Tissue (559, 560, 561)	424	81	19.1%
	All Codes With Less Than 30 Claims	1,768	166	9.4%
	Degenerative Nervous System Disorders (056, 057)	386	64	16.6%
	Endovascular Cardiac Valve Replacement & Supplement Procedures (266, 267)	270	48	17.8%
	GI Hemorrhage (377, 378, 379)	195	10	5.1%
	Intracranial Hemorrhage Or Cerebral Infarction (064, 065, 066)	209	14	6.7%
	Major Hip And Knee Joint Replacement Or Reattachment Of Lower Extremity (469, 470)	643	124	19.3%
	Psychoses (885)	317	23	7.3%
	Septicemia Or Severe Sepsis W/O MV >96 Hours (871, 872)	302	20	6.6%
	Simple Pneumonia & Pleurisy (193, 194, 195)	241	15	6.2%
	Other	6,573	622	9.5%
Diagnosis Code	All Codes With Less Than 30 Claims	470	36	7.7%
	Cerebrovascular diseases	417	30	7.2%
	Complications of surgical and medical care, not elsewhere classified	777	77	9.9%
	Hypertensive diseases	396	44	11.1%
	Influenza and pneumonia	281	17	6.0%
	Ischemic heart diseases	421	24	5.7%
	Osteoarthritis	669	142	21.2%
	Other bacterial diseases	466	26	5.6%
	Other forms of heart disease	729	100	13.7%
	Spondylopathies	392	60	15.3%
	Other	6,310	631	10.0%

Table N5: "Included In" and "Excluded From" the Sample[30]

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

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

Error Type	Included	Excluded	Total	Percent Included
Paid	14,267	411	14,678	97.2%
No Resolution	14,267	411	14,678	97.2%
Provider Compliance	14,267	411	14,678	97.2%

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

Error Type	Included	Excluded	Total	Percent Included
Paid	9,235	411	9,646	95.7%
No Resolution	9,235	411	9,646	95.7%
Provider Compliance	9,235	411	9,646	95.7%

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	18,508	9,571	28,079	65.9%
No Resolution	18,518	9,561	28,079	65.9%
Provider Compliance	18,508	9,571	28,079	65.9%

[30]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 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.

Appendix O: List of Acronyms

Acronym	Definition
AICD	Automatic Implantable Cardioverter Defibrillator
AMI	Acute Myocardial Infarction
CAH	Critical Access Hospital
CAT/CT/CTA	Computed Axial Tomography/Computed Tomography/Computed Tomography Angiography
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
ECMO	Extracorporeal Membrane Oxygenation
EKG	Electrocardiogram
E&M	Evaluation and Management
ESRD	End-Stage Renal Disease
FI	Fiscal Intermediary
FQHC	Federally Qualified Health Center
FY	Fiscal Year
GI	Gastrointestinal
HCPCS	Healthcare Common Procedure Coding System
HFCWO	High Frequency Chest Wall Oscillation
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
OPT	Outpatient Physical Therapy
OPPS	Outpatient Prospective Payment System
O.R.	Operating Room
ORF	Outpatient Rehabilitation Facility
PDX	Principal Diagnosis
RAP	Request for Advanced Payment
RHC	Rural Health Clinic
RTP	Return to Provider
SNF	Skilled Nursing Facility

Acronym	Definition
TOB	Type of Bill
TOS	Type of Service
W	With
W/O	Without