Medicaid Improper Payment Report

FY 2010
Executive Summary

The Improper Payments Information Act (IPIA) of 2002, amended by the Improper Payments Elimination and Recovery Act of 2010 (IPERA), requires the heads of federal agencies to annually review programs that they administer to:

- Identify programs that may be susceptible to significant improper payments;

- Estimate the amount of improper payments;

- Submit those estimates to Congress; and

- Report on the actions the Agency is taking to reduce the improper payments.[1]

The Centers for Medicare & Medicaid Services (CMS) has identified Medicaid and Children's Health Insurance Program (CHIP) as programs at risk for significant erroneous payments. Like Medicare, these programs expend large sums on behalf of beneficiaries seeking and receiving health care, do business with numerous providers of health care services of many kinds, and receive and process large numbers of transactions involving applications for enrollment (by both beneficiaries and providers), contracts with plans, and claims for reimbursement. The CMS measures Medicaid and CHIP improper payments through the Payment Error Rate Measurement (PERM) program.

The Medicaid three-year weighted average national error rate reported for 2010 is 9.4 percent or $22.5 billion in estimated improper payments, which represents the federal share only. This rate includes improper payment data from 2008, 2009, and 2010. A CHIP error rate was not calculated in 2010.[2] As explained below, however, this rate does not reflect significant changes in measurement methods that were implemented pursuant to recent federal statutory and regulatory changes.

While the federal government, the primary funder of the Medicaid program, has responsibility for interpreting and implementing the federal Medicaid statute and ensuring that federal funds are appropriately spent—including measuring improper payments—the program is administered

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[1] OMB issued guidance for IPIA implementation requirements through OMB Circular A-123, Appendix C, on August 10, 2006 and has issued subsequent guidance on April 14, 2011.

[2] CHIPRA (P.L. 111-3) required that "Notwithstanding parts 431 and 457 of title 42, Code of Federal Regulations (as in effect on the date of enactment of this Act), the Secretary shall not calculate or publish any national or State-specific error rate based on the application of the payment error rate measurement (in this section referred to as ''PERM'') requirements to CHIP until after the date that is 6 months after the date on which a new final rule (in this section referred to as the ''new final rule'') promulgated after the date of the enactment of this Act and implementing such requirements in accordance with the requirements of subsection (c) is in effect for all States." In addition, Section 205(c) of the Medicare and Medicaid Extenders Act of 2010 exempts CMS from completing a 2010 CHIP error rate. For these reasons, CMS has not calculated nor included the CHIP payment error rate in this report.

at the state level with significant state financing. States have both a statutory obligation and a fiscal interest in assuring program integrity. States also have considerable flexibility in designing their programs within federal rules, and are accountable for operating their programs effectively and efficiently. States differ widely in program structure, eligibility, financing, and the level of sophistication and integration of management information systems. The net result is that there is a significant level of state-by-state variation. The measurement of improper payments is therefore correspondingly difficult, and efforts to reduce improper payments require federal and state cooperation.

In addition to differences in state programs, CMS notes that some of our initial methodologies for classifying errors in PERM (particularly with respect to eligibility) drew criticism from states and other stakeholders, resulting in Congressional action to revise our approach for future years. Congress included in the Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA) a provision stating that the payment error rate determined for a state should exclude payment errors resulting from the lack of certain types of verification of an applicant's self-declaration or self-certification of income, and the correct amount of, medical assistance or child health assistance, if the state process for verifying an applicant's self-declaration or self-certification of income was approved by CMS.

On August 11, 2010, CMS published a final PERM regulation allowing a self-declaration statement that is present in the case record to be used to verify eligibility for the PERM reviews if it meets certain requirements, such as not being out-of-date. If it does not meet these requirements, states may obtain a new self-declaration statement or verify the applicant's eligibility using third party sources, such as applicable caseworker notes or information obtained by the PERM reviewer. This provision will conform error rate measurement to federal and state policies concerning eligibility process and required verifications. This revised eligibility review process will first be reflected in the Medicaid 2011 error rate, and future Medicaid and CHIP error rates. Thus, readers should be cautioned when reviewing PERM statistics, particularly for eligibility, that they include some cases previously classified as errors, but which, pursuant to Congressional direction, will not be counted as such in future years.

The final rule includes a number of additional program refinements, many of which are designed to strengthen the validity of the measurement process and to reduce the degree to which the measurement process itself affects payment error rates

Reducing improper payments is a high priority for CMS. We, in collaboration with the states, are working on multiple fronts to address this issue. Through the error rate measurement, CMS identifies and classifies types of errors and shares this information with each state. States then conduct an analysis to determine the root causes for improper payments to effectively identify why the errors occur, which is a necessary precursor to developing and implementing effective corrective actions. The CMS works closely with states following each measurement cycle to develop state-specific CAPs. States, in close coordination with CMS, are responsible for implementing, monitoring, and evaluating the effectiveness of their CAPs. In addition, CMS is continuously reviewing the causes of errors and implementing national and state-focused activities to decrease Medicaid and CHIP improper payments.

Overview

History of Error Rate Production

The CMS tested and refined various methodologies to estimate improper payments in Medicaid and CHIP prior to and after the enactment of IPIA. In 2005, CMS developed the PERM program to review improper payments in three components of Medicaid and CHIP: fee-for-service (FFS) claims, managed care claims, and eligibility cases. The CMS adopted a national contracting strategy to use federal contractors to measure error rates in a subset of states every year. The federal contractors conduct the medical and data processing reviews on claims and collect state claims data and medical policies. The states are responsible for conducting eligibility reviews according to CMS' review guidelines. In 2008, CMS began issuing error rates for Medicaid and CHIP.

The PERM Process

The PERM program uses a 17-state three-year rotation for measuring improper payments in Medicaid, so that CMS measures each state once every three years. The 17 states reviewed each year are a sample of the 51 state Medicaid programs. Each year's cycle national error rate that is calculated projects results from the sample of 17 states to expenditures for the Medicaid program as a whole. The states in each cycle are shown in the table below. In addition, CMS calculates a rolling three-year national error rate, which is the official program error rate. The CHIP measurement follows the same cycle.

Table 1 States in Each Cycle

Cycle 1	Arkansas, Connecticut, Delaware, Idaho, Illinois, Kansas, Michigan, Minnesota, Missouri, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania, Virginia, Wisconsin, Wyoming
Cycle 2	Alabama, California, Colorado, Georgia, Kentucky, Maryland, Massachusetts, Nebraska, New Hampshire, New Jersey, North Carolina, Rhode Island, South Carolina, Tennessee, Utah, Vermont, West Virginia
Cycle 3	Alaska, Arizona, District of Columbia, Florida, Hawaii, Indiana, Iowa, Louisiana, Maine, Mississippi, Montana, Nevada, New York, Oregon, South Dakota, Texas, Washington.

States submit universes of claims data for the FFS and managed care components which are randomly sampled by CMS. For the 2010 report, the sample size was 540 FFS claims for each state. For the Medicaid managed care programs, the sample consisted of 280 claims per year for each state with a Medicaid managed care program. CMS and its contractors collect data for sampled FFS and managed care claims from the states and documentation from providers, evaluate the FFS and managed care sampled claims for payment errors in data processing, and perform a medical record review for FFS claims. If an error was identified during medical review or data processing review, and states disagreed with the finding, states were given the opportunity to request a difference resolution.

At the same time, the states perform the eligibility reviews. States submit the results of their eligibility reviews to CMS and CMS calculates the state and national error rates. CMS expects

to recover the federal share of Medicaid payments from the state on a claim-by-claim basis from the overpayments found in error within the sample. CMS also works closely with states to review their error rates, determine root causes of errors and develop corrective actions to address the major causes of errors.

Findings

In 2010, CMS calculated a 3-year rolling national error rate which is a weighted average of the national error rates from the past three years, as well as a projected one-year Medicaid error rate based on the cycle 1 states. The results of those calculations are explained in the following sections.

Three-Year National Rolling Error Rate

2010 is the third year that PERM calculated error rates for all components of the Medicaid program (i.e., FFS, managed care, and eligibility). CMS calculated the 3-year weighted average national error rate that includes data from 2008, 2009, and 2010. This 3-year rolling national error rate is 9.4 percent, or $22.5 billion for the federal share in estimated improper payments. This rate was calculated using the federal share of 2009 Medicaid expenditures totaling $239.0 billion and is the official error rate reported in the 2010 HHS Agency Financial Report. The 3-year rolling national error components rates are as follows: Medicaid FFS: 4.4 percent; Medicaid managed care: 1.0 percent; and Medicaid eligibility: 5.9 percent.

Figure 1 Three-Year Average Payment Error Rates at 90% Confidence Intervals
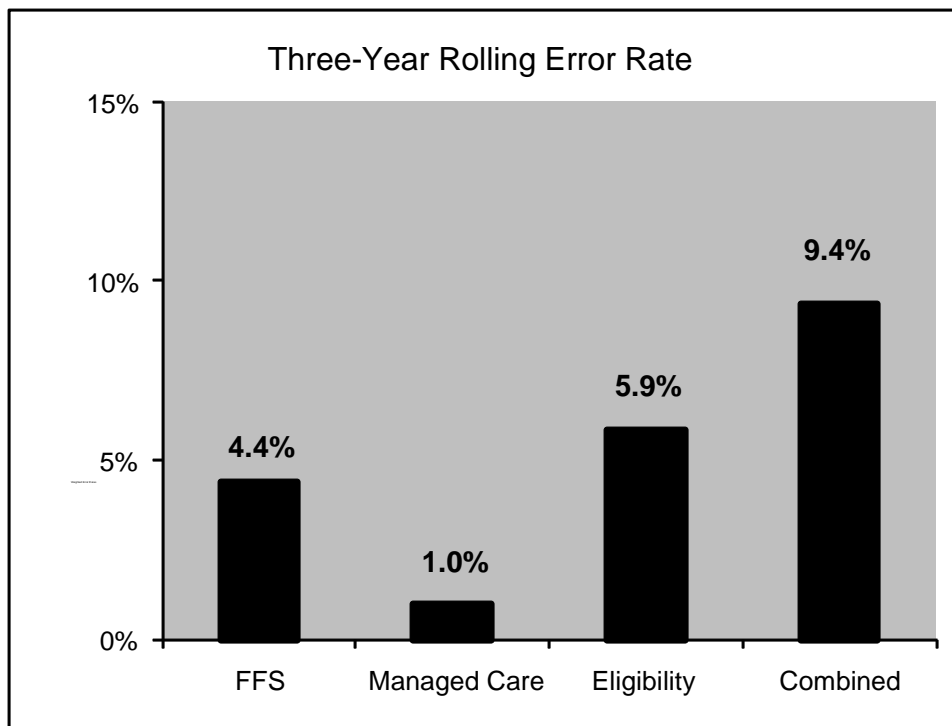
Note: The national estimate is comprised of the sum of the FFS, managed care, and eligibility components minus a small adjustment to account for the overlap between the claims and eligibility review functions.

As additional PERM cycles are completed, these error rates will be calculated on a rolling basis, where the oldest year will be dropped from the calculation and the newest year added in. The combined national rolling error rate has a margin of error of +/-2.23 percent, which is within the IPIA requirement of +/-2.5 percent.

Table 2 presents the 3-year national Medicaid rolling error rate and the projected dollars in error. Further, the table presents both the upper and the lower 90 percent confidence level percentages and dollars for each. For the projected dollars paid in error, the table separately shows the total Medicaid and the federal share of the overpayments, underpayments, and total payments.

Table 2 Three-Year National Medicaid Rolling Error Rate

		National Payment Error Rate Estimate	Lower Confidence Limit (90%)	Upper Confidence Limit (90%)
Error Rate		9.4%	7.1%	11.6%
Total	**Total CLAIMS Paid**	**Estimated Dollars in Error**	**Lower Confidence Limit**	**Upper Confidence Limit**
Total Medicaid	$357,984,470,121	$33,650,540,191	$25,416,897,379	$41,526,198,534
Federal Share	$239,012,294,122	$22,467,155,647	$16,969,872,883	$27,725,426,118
Overpayments		**Estimated Dollars in Error**	**Lower Confidence Limit**	**Upper Confidence Limit**
Total Medicaid		$32,270,603,041	$18,988,671,992	$45,552,534,089
Federal Share		$21,499,291,701	$12,292,170,145	$30,706,413,258
Underpayments		**Estimated Dollars in Error**	**Lower Confidence Limit**	**Upper Confidence Limit**
Total Medicaid		$1,379,937,151	($28,205,995)	$2,788,080,296
Federal Share		$967,863,946	$45,787,131	$1,889,940,761
Note - Rounded 3-year rolling payment error rate and confidence interval applied to Total Medicaid and Federal Share amounts without regard to slightly differing 3-year error rates between the overall and Federal Share amounts. The confidence intervals were adjusted accordingly.				

Error data from the first three PERM cycles reveal certain findings and trends:

- State Medicaid claims processing systems appear to make most individual payments accurately, with very few data processing errors detected. States also appear to be denying claims properly.

- The eligibility component was the most significant contributor to the overall error rate, especially for the two most recent PERM review cycles. As discussed previously, changes

to the way errors are classified in the eligibility process may significantly alter these results in the future. Underpayment errors contribute substantially less to the overall error rate than overpayment errors.

- In the first three years of measurement, most FFS errors discovered during medical review (both dollars in error and number of errors) result from providers failing to submit the necessary documentation to support the claims. For errors reported in 2010, medical review errors were primarily due to provider billing errors where the provider billed an incorrect diagnosis or diagnosis related group (DRG).

- States make fewer errors processing managed care payments than FFS payments.

Despite the overall consistency to the patterns just described, there are large differences in state-specific payment error rates across states, even within a single PERM cycle. These substantively important differences occur at the component level. CMS attributes the variation across states to multiple factors related to differences in how the states implement and administer their programs. For example, states with proportionately larger managed care programs are likely to have lower overall error rates, since they are processing more monthly payments to plans rather than service level transactions to providers in a FFS environment. Given our past practice of requiring states with simplified or streamlined eligibility processes to collect additional documentation not normally needed by them or provided by beneficiaries, we saw significant variation in eligibility errors based on those state policies as well (again, we expect that this particular source of variation may be reduced in future years based on methodological changes).

It is important to note that while PERM measures payment error rates, the PERM findings should be considered in the context of other policy goals and operational realities. Important next steps for CMS and the states will be identifying the drivers of these differences at the state and federal levels, working to reduce improper payments at the state level, and further refining the PERM methodology to ensure that allowable differences in state policies and administration are not also contributing to differences in error rates.

One-Year Error Rate Based on Cycle 1 States

CMS also calculated a one-year error rate for 2010 based on the sampled cycle 1 states. All cycle 1 states selected for review in this measurement cycle had a Medicaid FFS program, but only 14 had a Medicaid managed care program.

Cycle 1 States	Arkansas, Connecticut, Delaware, Idaho, Illinois, Kansas, Michigan, Minnesota, Missouri, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania, Virginia, Wisconsin, Wyoming

The estimated Medicaid payment error rate based on the cycle 1 states is 9.0 percent, with a confidence interval of +/- 5.28 percentage points at the 90 percent confidence level.

- The total dollar amount projected to be in error estimated from this national error rate is $32.1 billion.
- The federal share of the total dollar amount projected to be in error is $21.6 billion.

It is important to note that many states measured in this cycle have simplified eligibility documentation rules through use of self-declaration and administrative renewal, and were affected by the methodologies we used in the past to require additional documentation for these cases, rather than auditing against the approved state policies and procedures. One state had a 70 percent error rate, partly because of this issue, which significantly impacted the national error rate. We expect that the provision in the PERM final rule (aligning error measurement with permissible federal eligibility policy) will reduce these eligibility-based errors by better aligning PERM methodology with current Medicaid and CHIP policy.

CMS expects to recover the federal share on a claim-by-claim basis from the overpayments found in error within the sample. Within the PERM process, the only funds that can be recovered are from claims that were actually sampled and found to have contained improper payments resulting in overpayments. Therefore, these sampled and reviewed improper overpayments that are subject to recovery are a small fraction of the total amount projected to be in error for the nation for each PERM cycle.

Table 3 presents the one-year Medicaid program payment error rate for 2010 based on the cycle 1 states and the projected dollars in error. Further, the table presents both the upper and the

lower 90 percent confidence level percentages and dollars for each. For the projected dollars paid in error, the table separately shows the total Medicaid and the federal share of the overpayments, underpayments, and total payments.

Table 3 2010 Medicaid Program Payment Error Rate and Projected Dollars in Error

	SAMPLE SIZE	NATIONAL PAYMENT ERROR RATE ESTIMATE	LOWER CONFIDENCE LIMIT (90%)	UPPER CONFIDENCE LIMIT (90%)
ERROR RATE	22,297	8.98%	3.70%	14.26%
TOTAL	**TOTAL CLAIMS PAID**	**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
TOTAL MEDICAID	$ 357,984,470,121	$ 32,145,819,826	$ 13,243,168,046	$ 51,048,471,606
FEDERAL SHARE	$ 239,012,294,122	$ 21,612,721,749	$ 8,844,760,983	$ 34,380,682,516
OVERPAYMENTS		**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
TOTAL MEDICAID		$ 31,440,457,140	$ 12,543,936,162	$ 50,336,978,117
FEDERAL SHARE		$ 21,157,940,224	$ 8,391,732,902	$ 33,924,147,547
UNDERPAYMENTS		**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
TOTAL MEDICAID		$ 762,693,028	$ (447,713,955)	$ 1,973,100,011
FEDERAL SHARE		$ 492,121,196	$ (283,842,515)	$ 1,268,084,908

Table 4 presents summary information on the Medicaid results reported in 2010.

Table 4 2010 Medicaid Program Payment Error Rates Based on Cycle 1 States

FY 2010 ERROR RATE	SAMPLE SIZE	NATIONAL PAYMENT ERROR RATE ESTIMATE	LOWER CONFIDENCE LIMIT (90%)	UPPER CONFIDENCE LIMIT (90%)
TOTAL MEDICAID	22,297	8.98%[1]	3.70%	14.26%
MEDICAID FFS	9,295	1.89%	1.27%	2.51%
MEDICAID MANAGED CARE	3,938	0.13%	0.04%	0.21%
MEDICAID ELIGIBILITY	9,064	7.60%	2.26%	12.95%
[1] The national estimate is comprised of the sum of the FFS, managed care, and eligibility components minus a small adjustment to account for the overlap between the claims and eligibility review functions.				

Table 5 presents the results for the estimated dollars paid in error by the Medicaid program for 2010. The table shows the total amounts paid and the estimated amounts paid in error. The amounts shown are for overall, overpayments, and underpayments, individually.

Table 5 2010 Medicaid Program Projected Dollars in Error Based on Cycle 1 States

MEDICAID PROGRAM	TOTAL CLAIMS PAID	ESTIMATED DOLLARS IN ERROR[1]
TOTAL MEDICAID	$ 357,984,470,121	$ 32,145,819,826
MEDICAID FFS	$ 276,561,722,435	$ 5,223,579,808
MEDICAID MANAGED CARE	$ 81,422,747,686	$ 102,874,755
MEDICAID ELIGIBILITY	$ 357,984,470,121	$ 27,224,437,952
	ESTIMATED OVERPAYMENT DOLLARS IN ERROR[1]	ESTIMATED UNDERPAYMENT DOLLARS IN ERROR[1]
TOTAL MEDICAID	$ 31,440,457,140	$ 762,693,028
MEDICAID FFS	$ 4,471,623,114	$ 751,956,694
MEDICAID MANAGED CARE	$ 102,419,231	$ 455,523
MEDICAID ELIGIBILITY	$ 27,214,135,487	$ 10,302,464

[1]The total dollars in error is comprised of the sum of the FFS, managed care, and eligibility dollars in error minus a small adjustment to account for the overlap between the claims and eligibility review functions.

Reducing Improper Payments

CMS structured the PERM methodology to produce an unbiased estimate of the error rate through review of a relatively small, random sample of claims. States' systems, claims payment methodologies, eligibility determination processes, and provider compliance with record requests and billing errors have contributed to the national error rates. The PERM process identifies and classifies types of errors, but states must conduct root cause analysis to identify why the errors occur, which is a necessary precursor to effective corrective action. Thus, states are critical partners in the corrective action phase of the PERM cycle. Both CMS and state activities to decrease improper payments are discussed in the following pages.

State Corrective Actions

CMS works closely with states in each measurement cycle to develop state-specific corrective action plans (CAPs). States, in coordination with CMS, are responsible for implementing, monitoring, and evaluating the effectiveness of their CAPs.

States submit to CMS their CAPs following the publication of the error rate report. The CAPs include the following:

- Data analysis – an analysis of the findings to identify the reasons for errors and where errors are occurring
- Program analysis – an analysis of the findings to determine the root causes of error in program operations
- Corrective action planning – steps taken to determine cost-effective actions that can be implemented for achieving error reduction

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- Implementation – plans to operationalize the corrective actions, including milestones and a timeframe for achieving error reduction
- Monitoring and evaluation – to assess whether the corrective actions are in place and are effective at reducing or eliminating the targeted root causes of the errors

Cycle 1 states developed CAPs based on their first PERM measurement. Because much of the error rate that year was due to missing or insufficient documentation, the majority of states focused on provider education and communication methods to improve the responsiveness and timeliness of submission of requested documentation. These methods included provider training sessions; meetings with provider associations; notices, bulletins and provider alerts; provider surveys; improvements and clarifications to written state policies emphasizing documentation requirements; and performing more provider audits. We believe these methods proved successful as documentation errors accounted for approximately 60% of errors identified in the first PERM measurement of cycle 1 states, but only 40% in the PERM measurement of cycle 1 states.

The results of the 2010 reporting period highlighted errors in eligibility – again to be viewed with some caution in light of the changes Congress and CMS have made to our measurement approach. Nonetheless we see some important findings and states are taking action to address vulnerabilities. The three main sources of eligibility errors were: 1) undetermined findings due to states' inability to secure beneficiary information, 2) ineligible beneficiaries, and 3) eligible beneficiaries for whom ineligible services were billed. Specific corrective action strategies implemented by many states to reduce eligibility errors have included better leveraging technology and available databases to obtain eligibility verification information without client contact; providing additional caseworker training, particularly in areas determined through PERM review to be error-prone (e.g., earned income, duplicate benefits); and providing additional eligibility policy resources through a consolidated manual and web-based training. In addition, some states are using administrative renewals in an effort to streamline processes and obtain valid documentation without contacting the beneficiary. Moreover, the investments being made by the federal government and states to streamline, standardize and simplify eligibility processes, and to modernize technology solutions (including real-time verifications) in support of those activities, have the potential to greatly improve the integrity of the Medicaid and CHIP programs.

The same states reviewed in the 2010 report will be reviewed and reported again in 2013. The re-measurement audit will document effectiveness of prior years' corrective actions and we expect to see improvement in payment error rates.

CMS Program Improvements

CMS has also made significant efforts to decrease improper payments. In the first two PERM cycles, most FFS medical review errors resulted from providers failing to submit the necessary documentation to support the claims. It is possible that some or even all of these claims were accurate, but CMS and its contractors could not verify their validity in the absence of sufficient documentation. In response, CMS increased efforts to reach out to providers and to obtain medical records for reviews. This activity had a significant impact on reducing the no documentation errors in 2010. In addition, most cycle 1 states—with knowledge of the impact

these errors had on the error rates—put significant effort into educating providers, tracking medical record submission progress, and assisting in collecting records. Further, in 2009, CMS advanced a pilot program to provide states more information on the potential impact of these documentation-category errors and more time for the states to work with providers to resolve them. These combined efforts substantially reduced the number of no documentation and insufficient documentation errors. Lastly, CMS sponsored a series of provider open forum calls from May 2010 through August 2010 to educate providers on what they are required to do if they receive a request for documentation. CMS also enhanced the CMS PERM website with up-to-date information regarding the PERM program; established a separate web page for providers with relevant educational materials developed for providers; supported states' provider education efforts; and established a group e-mail account for providers to communicate directly with CMS.

CMS is also developing ways to reduce the state burden and align PERM data collection more closely with other CMS program integrity data collection processes. Over the past two years, CMS developed and pilot tested a new, streamlined methodology (referred to as "PERM Plus") to collect data required for PERM. The new methodology transfers much of the PERM data collection burden to PERM contractors where CMS holds the contractor, not the state, responsible for taking "raw" claims data and developing a universe for sampling that complies with the PERM instructions. When implemented, this approach would position CMS to integrate PERM data collection with other emerging CMS program integrity initiatives, thus easing the administrative burden on states.

Additionally, CMS is continuing to improve and modernize its data systems and processes. Through the Medicaid and CHIP Business Information Solutions (MACBIS) Council, CMS has put in place a governance structure to oversee the introduction of significant efficiencies and quality improvement activities into our data management. Through improved planning practices, CMS will reduce the requests of states to provide data without compromising the ability to generate valuable performance information.

CMS bases the PERM error rates on reviews of a sample of individual service-level FFS and managed care payments made in the fiscal year under review. However, the PERM sampling and review methodology is designed around individual service-level claims. States have struggled with including payments that are not made at a beneficiary level (such as some transportation and dental claims) referred to as "aggregate payments." States have expressed concern and confusion regarding the inclusion of these payments in the PERM universe, including both the level of effort required to generate and submit payment records, as well as the overall validity of the review. In response to these concerns, CMS developed a theoretical framework to incorporate these payments into the PERM review, and pilot tested the approach with three states. Based on the success of the pilot, the aggregate payment framework will be applied to all states in the next cycle. The framework includes specific decision points to determine not only if and whether the state should submit beneficiary-level records or aggregate payments. States that submit aggregate payments will submit them at the lowest level for which a payment entry is available electronically. The aggregate payments will be incorporated into the existing stratification approach. The review process will vary according to state-specific program documentation requirements.

CMS is continuing to review Medicaid Eligibility Quality Control (MEQC), a statutorily-required program requiring states to annually provide an estimate of improper payments in Medicaid based on eligibility reviews, and PERM program requirements to reduce redundancies between the two measurements. Harmonizing the two programs could reduce duplication and improve consistency in eligibility reviews and provide meaningful results for corrective actions. CMS is also examining how to ensure that PERM review processes are in line with the Medicaid eligibility determination changes enacted in the Affordable Care Act.

Due to the complexity of the Medicaid and CHIP programs and variations in state systems' sophistication, there are a variety of program structures, program management, and payment processes which make it difficult for states to comply with PERM, and result in late, inaccurate, or incomplete data. CMS has undertaken a variety of actions to mitigate these program vulnerabilities. CMS has updated and refined the PERM instructions to clarify the universe requirements, and established a variety of "pre-cycle" activities to assist states in understanding and applying the PERM data rules. CMS also conducts site visits to states prior to the first data submission.

As an additional program corrective action, CMS formed a state systems workgroup to address individual state systems problems that may cause payment errors. The workgroup includes representatives from the CMS central office and regional office staff and the appropriate state staff.

Lastly, the recent PERM final rule includes a number of additional program refinements, many of which are designed to strengthen the validity of the measurement process and to reduce the degree to which the measurement process itself affects payment error rates. In addition to the acceptance of beneficiary self-declared information for purposes of validating income, the final rule allows improvements to the PERM processes such as the following:

- Extends provider response time to submit records for PERM from 60 days to 75 days;
- Extends states' timeframes for requesting difference resolutions from 10 business days to 20 business days and timeframes for requesting appeals from CMS from 5 business days to 10 business days;
- Eliminates dollar thresholds for error amounts and allows states to file a CMS appeal on any error;
- Individualizes sample sizes (for each state) for future measurements based on state error rates from previous cycles; and
- Increases corrective action plan (CAP) development timeframes for states from 60 days to 90 days.

APPENDICES

Appendix 4
    Supplemental Information
    Please refer to the separate table of contents for the Supplemental Information section.

Appendix 1

Summary Tables for National Three-Year Rolling Rate

Tables 1-3 show the national three-year rolling rate 2010 Medicaid payment error rates and projected dollars in error for FFS, managed care, and eligibility.

Table 1 Three-Year National Medicaid Rolling Error Rate FFS

FFS	Sample Size	National Payment error rate Estimate	Lower Confidence Limit -90%	Upper Confidence Limit -90%
Error Rate	9,295	4.40%	3.30%	5.40%
TOTAL	**Total CLAIMS Paid**	**Estimated Dollars in Error**	**Lower Confidence Limit**	**Upper Confidence Limit**
Medicaid FFS	$276,561,722,435	$12,168,715,787	$9,126,536,840	$14,934,333,011
Federal Share	$184,095,679,960	$8,100,209,918	$6,075,157,439	$9,941,166,718
OVERPAYMENTS		**Estimated Dollars in Error**	**Lower Confidence Limit**	**Upper Confidence Limit**
Medicaid FFS		$11,416,759,093	$8,778,076,896	$14,055,441,290
Federal Share		$7,615,195,042	$5,867,128,901	$9,363,261,184
UNDERPAYMENTS		**Estimated Dollars in Error**	**Lower Confidence Limit**	**Upper Confidence Limit**
Medicaid FFS		$751,956,694	$21,355,673	$1,482,557,715
Federal Share		$485,014,876	$2,918,057	$967,111,695

Table 2 Three-Year National Medicaid Rolling Error Rate Managed Care

Managed Care	Sample Size	National Payment error rate Estimate	Lower Confidence Interval -90%	Upper Confidence Interval -90%
Error Rate	3,938	1.00%	0.40%	1.50%
TOTAL	**Total CLAIMS Paid**	**Estimated Dollars in Error**	**Lower Confidence Limit**	**Upper Confidence Limit**
Medicaid MC	$81,422,747,686	$814,227,477	$325,690,991	$1,221,341,215
Federal Share	$54,916,614,162	$549,166,142	$219,666,457	$823,749,212
OVERPAYMENTS		**Estimated Dollars in Error**	**Lower Confidence Limit**	**Upper Confidence Limit**
Medicaid MC		$813,771,954	$601,820,509	$1,025,723,398
Federal Share		$548,842,112	$405,931,037	$691,753,186
UNDERPAYMENTS		**Estimated Dollars in Error**	**Lower Confidence Limit**	**Upper Confidence Limit**
Medicaid MC		$455,523	($290,542,354)	$291,453,400
Federal Share		$324,030	($195,943,224)	$196,591,284

Table 3 Three-Year National Medicaid Rolling Error Rate Eligibility

Eligibility	Sample Size	National Payment error rate Estimate	Lower Confidence Interval -90%	Upper Confidence Interval -90%
Error Rate	9,064	5.90%	3.80%	8.00%
TOTAL	**Total CLAIMS Paid**	**Estimated Dollars in Error**	**Lower Confidence Limit**	**Upper Confidence Limit**
Medicaid Eligibility	$357,984,470,121	$21,121,083,737	$13,603,409,865	$28,638,757,610
Federal Share	$239,012,294,122	$14,101,725,353	$9,082,467,177	$19,120,983,530
OVERPAYMENTS		**Estimated Dollars in Error**	**Lower Confidence Limit**	**Upper Confidence Limit**
Medicaid Eligibility		$21,110,781,273	$13,610,849,009	$28,610,713,537
Federal Share		$14,094,929,262	$9,037,802,285	$19,152,056,239
UNDERPAYMENTS		**Estimated Dollars in Error**	**Lower Confidence Limit**	**Upper Confidence Limit**
Medicaid Eligibility		$10,302,464	($107,799,086)	$128,404,014
Federal Share		$6,796,091	($72,054,055)	$85,646,237

Appendix 2

Summary Tables for 2010 National Rate

Tables 4-6 show the national 2010 Medicaid payment error rates and projected dollars in error for each component.

Table 4 National 2010 Medicaid FFS Component Payment Error Rate and Projected Dollars in Error

	SAMPLE SIZE	NATIONAL PAYMENT ERROR RATE ESTIMATE	LOWER CONFIDENCE LIMIT (90%)	UPPER CONFIDENCE LIMIT (90%)
ERROR RATE	9,295	1.89%	1.27%	2.51%
TOTAL	TOTAL CLAIMS PAID	ESTIMATED DOLLARS IN ERROR	LOWER CONFIDENCE LIMIT	UPPER CONFIDENCE LIMIT
MEDICAID FFS	$ 276,561,722,435	$ 5,223,579,808	$ 3,500,534,250	$ 6,946,625,365
FEDERAL SHARE	$ 184,095,679,960	$ 3,463,899,199	$ 2,351,665,431	$ 4,576,132,966
OVERPAYMENTS		ESTIMATED DOLLARS IN ERROR	LOWER CONFIDENCE LIMIT	UPPER CONFIDENCE LIMIT
MEDICAID FFS		$ 4,471,623,114	$ 3,567,390,008	$ 5,375,856,220
FEDERAL SHARE		$ 2,978,884,323	$ 2,383,985,185	$ 3,573,783,461
UNDERPAYMENTS		ESTIMATED DOLLARS IN ERROR	LOWER CONFIDENCE LIMIT	UPPER CONFIDENCE LIMIT
MEDICAID FFS		$ 751,956,694	$ (458,453,358)	$ 1,962,366,746
FEDERAL SHARE		$ 485,014,876	$ (290,950,095)	$ 1,260,979,847

Table 5 National 2010 Medicaid Managed Care Component Payment Error Rate and Projected Dollars in Error

	SAMPLE SIZE	NATIONAL PAYMENT ERROR RATE ESTIMATE	LOWER CONFIDENCE INTERVAL (90%)	UPPER CONFIDENCE INTERVAL (90%)
ERROR RATE	3,938	0.13%	0.04%	0.21%
TOTAL	**TOTAL CLAIMS PAID**	**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
MEDICAID MANAGED CARE	$ 81,422,747,686	$ 102,874,755	$ 31,667,152	$ 174,082,357
FEDERAL SHARE	$ 54,916,614,162	$ 67,354,660	$ 20,907,911	$ 113,801,410
OVERPAYMENTS		**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
MEDICAID MANAGED CARE		$ 102,419,231	$ 31,214,348	$ 173,624,115
FEDERAL SHARE		$ 67,030,631	$ 20,585,991	$ 113,475,270
UNDERPAYMENTS		**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
MEDICAID MANAGED CARE		$ 455,523	$ (297,597)	$ 1,208,644
FEDERAL SHARE		$ 324,030	$ (211,691)	$ 859,751

Table 6 National 2010 Medicaid Eligibility Component Payment Error Rate and Projected Dollars in Error

	SAMPLE SIZE	NATIONAL PAYMENT ERROR RATE ESTIMATE	LOWER CONFIDENCE INTERVAL (90%)	UPPER CONFIDENCE INTERVAL (90%)
ERROR RATE	9,064	7.60%	2.26%	12.95%
TOTAL	**TOTAL CLAIMS PAID**	**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
MEDICAID ELIGIBILITY	$ 357,984,470,121	$ 27,224,437,952	$ 8,104,660,955	$ 46,344,214,949
FEDERAL SHARE	$ 239,012,294,122	$ 18,352,616,061	$ 5,435,291,984	$ 31,269,940,138
OVERPAYMENTS		**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
MEDICAID ELIGIBILITY		$ 27,214,135,487	$ 8,091,902,698	$ 46,336,368,277
FEDERAL SHARE		$ 18,345,819,970	$ 5,426,884,294	$ 31,264,755,646
UNDERPAYMENTS		**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
MEDICAID ELIGIBILITY		$ 10,302,464	$ 1,547,314	$ 19,057,615
FEDERAL SHARE		$ 6,796,091	$ 1,127,842	$ 12,464,340

Appendix 3

Statistical Sampling and Formulae

The sampling process for PERM follows a stratified two-stage design. First, all 50 states plus the District of Columbia were stratified into three strata of 17 states each based on historical total Medicaid FFS expenditures. The top strata consisting of the 17 states with the greatest expenditures were further divided into two strata: a nine state stratum of the largest expenditure states and a stratum with the remaining eight states. The states from each state stratum were selected by random sampling. States were selected to be reviewed on a three year rotation such that 17 different states would be reviewed each year and all states would be reviewed over a three year time span. This sampling of states constitutes the first stage of the sample. Starting in FY 2008, within each sampled state the universe of claims was stratified into ten payment strata, based on the size of payments, plus a Medicare Premium payments stratum for FFS. The sampled claims were subjected to medical and data processing reviews, as appropriate, to identify proper and improper payments. As a result of the reviews, state level error rates were calculated.

The state level error rate is estimated by this equation as:

$$\hat{R}_i = \frac{\hat{t}_{e_i}}{\hat{t}_{p_i}}$$

In the equation, $\hat{R}_i$ is the estimated error rate for state i; $\hat{t}_{e_i}$ is the estimated dollars in error projected for state i and $\hat{t}_{p_i}$ is the estimated total payments for state i. Then,

$$\hat{t}_{e_i} = \sum_{j=1}^{10} \frac{M_{i,j}}{m_{i,j}} E_{i,j}$$

and

$$\hat{t}_{p_i} = \sum_{j=1}^{10} \frac{M_{i,j}}{m_{i,j}} P_{i,j}$$

In these equations, $M_{i,j}$ is the number of items in the universe for state i in strata j and $m_{i,j}$ is the number of items in the sample for state I in stratum j. The ratio of items in the universe to items in the sample (i.e., the weight for that stratum, quarter, and state) is the inverse of the sampling frequency. Dollars in error in the sample for stratum j and state i, denoted $E_{i,j}$, is weighted by the inverse of the sampling frequency to estimate dollars in error in the universe for that stratum. For example, if there are 10,000 items in the universe in stratum j, and the sample size in j is 200 items, the weight for the dollars in error in the stratum j sample is 50 (10,000/200). The estimated total dollars in error are then added across each of the 10 (or 11 in FFS) strata to obtain total dollars in error for the universe. Total payments are estimated in the same way, where $P_{i,j}$ j is the total payments in the sample in stratum j for state i.

National Level Statistics

To go from the error rates for individual states to a national error rate, two steps are taken. First, states were divided into three (and then four) strata based on the size of the state, as determined by FFS expenditures at the outset of PERM. For each of the four state strata, there were some states that were sampled, and some that were not. In this step, the error rate for the entire state stratum is projected from the error rates of the states that were sampled in the stratum. The method is analogous to the method for the estimated state level error rates.

Let h represent the state strata, of which there are four, and n_h be the number of states sampled from stratum h. Then, the error rate for stratum h is given by:

$$\hat{R}_h = \frac{\hat{t}_{e_h}}{\hat{t}_{p_h}}$$

Where $\hat{t}_{e_h}$ is the total dollars in error projected for all the states (the universe) in stratum h, and $\hat{t}_{p_h}$ is the total projected payments for all of the states (the universe) in stratum h.

Total dollars in error for all the states in stratum h is projected by weighting the total projected dollars in error from the sampled states, which was calculated above for each state in the sample, by the inverse of the sampling frequency:

$$\hat{t}_{e_h} = \frac{N_h}{n_h} \sum_{i=1}^{n_h} \hat{t}_{e_{hi}}$$

In this equation N_h is the number of states in strata h, and n_h is the number of states in the sample that are in state stratum h. For example, if there are 17 states in stratum h, and the sample included 5 of those states, the total projected dollars in error for the universe of states in stratum h is the sum of the total projected dollars in error of each of the five states in h, weighted or multiplied by (17/5).

The analogous equation is used to project total payments in the stratum h universe:

$$\hat{t}_{p_h} = \frac{N_h}{n_h} \sum_{i=1}^{n_h} \hat{t}_{p_{hi}}$$

The error rate, for stratum h, is then the ratio of projected dollars in error to projected payments for that stratum, as defined above.

The final step in calculating the national error rate is to apply the state stratum rates to data on actual expenditures for the period of the estimate. The estimated national error rate is calculated as:

$$\hat{R} = \frac{\sum\limits_{h=1}^{4} t_{p_h} \hat{R}_h}{t_p}$$

where:

t_{p_h} = total universe payments for state stratum h

t_p = total universe payment

$\hat{R}_h$ = estimated error rate for stratum h

Note that there is no "^" over the state strata and national payment data. This means that they are not estimated from the sample. These are actual payment expenditures. Another way of considering the equation for the national error rate is to note that:

$$\frac{t_{p_h}}{t_p} = \text{share of national expenditures represented by states in stratum h.}$$

Therefore, the national error rate has an intuitive interpretation as a weighted sum of the estimated state stratum error rates, where the weights are shares of expenditures.

Combining Claims Review Error Rates across Program Components

Combining the claims review payment error rates, (i.e., combining the FFS and managed care payment error rates for Medicaid) is relatively straightforward because the population payments are known from federal financial management reports. Note that we do not utilize true population payments in calculating state rates for each program component. The reason for this is two-fold. First, the combined ratio estimator used allows for correction in possible bias if the sampled average payment amount differs from the universe average payment amount. However, if we utilized a combined ratio estimator to combine the program components at the state level, one program component that realized high sample average payment amount compared to the universe average would have too much influence in projections. For this reason, combining program component rates using the shares of expenditures as weights reduces the variance in the estimates from this source. Furthermore, following this method allows the same method for combining program component claims review rates at both the state and national level.

The following equations utilize the estimated state or national error rates and variances calculated in the previous two sections.

Let the overall claims review error rate for Medicaid can be defined as:

$$\hat{R}_C = \frac{t_{p_{FFS}}\hat{R}_{FFS} + t_{p_{MC}}\hat{R}_{MC}}{t_p}$$

where

$t_p = t_{p_{FFS}} + t_{p_{MC}}$. In this equations R is the error rate for FFS, managed care or combined (C), and t represents total payments for FFS, managed care, or the total, depending upon the subscript.

Payment Error Rate Formula

Sampled claims or cases are subject to reviews, and a payment error rate is calculated based on those reviews. The payment error rate is an estimate of the proportion of improper payments made in the Medicaid program to the total payments made.

The national error rate was computed using a separate ratio estimator, which combines the error rates from each state stratum using the federally reported Medicaid expenditures for those strata. The error rates for the state strata were calculated using a combined ratio estimator that accounts for the two sampling stages in the design. This method projects the improper payments and total payments using the sampling frequency of units from the state as well as the sampling frequency of states from the state's stratum. State level error rates were computed using a combined ratio estimator as well, although two stage sampling adjustments are not needed. State and national rates are calculated for each program component—FFS, managed care and eligibility—and are also combined into an overall rate, representing the total error rates for the program at the state and at the national levels.

For the calculation of state level statistics, the error rate estimator is a combined ratio estimator. The numerator consists of estimated dollars in error in the universe, and the denominator is estimated total payments, both projected from the sample on the basis of the sampling weights (i.e., the inverses of the sampling frequencies). The sample is drawn from a universe that is divided into the strata relevant to that universe, as described above. The sample dollars in error and sample payments are weighted by the inverse of the strata sampling frequencies to estimate universe values. The sampling frequencies, which are the rates at which items were sampled, vary by stratum.

To calculate the national error rate based on the individual state error rates, two steps are taken. First, states are divided into four strata based on the size of the states' Medicaid FFS programs at the onset of the PERM program. For each of the strata, there are some states that were sampled, and some that were not. In this step, the error rate for the entire state stratum is projected from the error rates of the states that are sampled in the stratum. The method is analogous to the method for the estimated state level error rates. Then, the national rate is estimated by combining rates across the state strata and is weighted by the proportion of total expenditures represented by each state stratum.

Eligibility Error Rate Formula

Three strata were defined for active cases: new applications, redeterminations, and all other cases. A total of 504 cases were sampled from the active case universe and 204 cases from the negative universe. There were 14 cases sampled from each of three active strata (i.e., new applications, redeterminations, and 'all other' cases) and 17 cases sampled from the negative stratum each of the 12 months in the FY 2009 PERM cycle for traditional PERM states. For MEQC-option states, there needed to be at least 42 PERM-eligible active cases per month that were stratified after sampling into the three active case strata.

Claims data were associated with each of the cases. The dollar value of eligibility errors assessed was based on the implications of the eligibility review for the validity of the claims associated with each case. For each state, the results of the reviews for each stratum were projected to the universe based on the sampling frequencies for each stratum in a manner analogous to that described above for the FFS and managed care errors.

The sample sizes for each state level component of PERM (i.e., FFS, managed care, active eligibility payment, and negative eligibility case error rates) were designed to achieve precision in the component error rate estimate at the state level of +/- 3 percentage points with a 95 percent confidence level, under the assumption that each of the underlying component error rates would be less than five percent, with managed care often less than three percent.

A national eligibility error rate was calculated using the same method employed in the FFS and managed care calculations. It is based on calculating an eligibility error rate for each of the four state strata, and combining these rates into an overall national rate based on the share of expenditures for the program in each stratum.

Combining Claims Error Rates and the Eligibility Error Rate

After combining the FFS and managed care components into one overall claims payment error rate for Medicaid at the state and national levels, these combined claims and managed care payment error rates are then combined with the respective eligibility payment error rates. The combining of the claims payment error rate and the eligibility payment error rate is referred to as the combined error rate. The following procedure is followed at the state and national levels. That is, the claims payment error rates are combined at the state level and combined in a separate instance at the national level. The estimated combined payment error rate is given by:

$$\hat{R}_T = \hat{R}_C + \hat{R}_E - \hat{R}_E \hat{R}_C$$

where

$\hat{R}_T$ denotes the estimated Total, or Combined Error Rate

$\hat{R}_C$ denotes the estimated Claims Error Rate

$\hat{R}_E$ denotes the estimated Eligibility Error Rate

Three-Year Trended National Error Rates

The three-year trended national error rates have two components: (1) the error rates themselves, and (2) the trended error rates' variances, which are turned into the error rates' margins of error. Each of the trended error rates (i.e., total program, FFS, MC, and Eligibility) is calculated through the same methodology. The FY 2007, FY 2008, and FY 2009 error rates were each weighted by the total applicable expenditures for that year and were then combined. The formula for the three year trended rate is as follows:

$$\hat{R}_T = c_1\hat{R}_1 + c_2\hat{R}_2 + c_3\hat{R}_3$$

where:

RT = the three-year trended error rate

R1 = the FY 2007 error rate

R2 = the FY 2008 error rate

R3 = the FY 2009 error rate

c1 = the weight for FY 2007, which is given by N1/(N1 + N2+ N3), where N1, N2, and N3 are the estimated payment totals for FY 2007, FY 2008, and FY 2009, respectively.

c2 = the weight for FY 2008, which is given by N2/(N1 + N2+ N3), where N1, N2, and N3 are the estimated payment totals for FY 2007, FY 2008, and FY 2009, respectively.

c3 = the weight for FY 2009, which is given by N3/(N1 + N2+ N3), where N1, N2, and N3 are the estimated payment totals for FY 2007, FY 2008, and FY 2009, respectively.

The weighted variance estimate ( ) for any of the three-year error rates is given by the following formula:

$$\hat{Var}(\hat{R}_T) = c_1^2\hat{\sigma}_{\hat{R}_1}^2 + c_2^2\hat{\sigma}_{\hat{R}_2}^2 + c_3^2\hat{\sigma}_{\hat{R}3}^2$$

where:

$\hat{\sigma}_{\hat{R}_1}^2$ = the estimated variance of the FY 2007 error rate

$\hat{\sigma}_{\hat{R}_2}^2$ = the estimated variance of the FY 2008 error rate

$\hat{\sigma}_{\hat{R}_3}^2$ = the estimated variance of the FY 2009 error rate

c_1^2 = the weight for FY 2007, which is given by [N1/(N1 + N2+ N3)]2, where N1, N2, and N3 are the estimated payment totals for FY 2007, FY 2008, and FY 2009, respectively

c_2^2 = the weight for FY 2008, which is given by [N2/(N1 + N2+ N3)]2, where N1, N2, and N3 are the estimated payment totals for FY 2007, FY 2008, and FY 2009, respectively

c_3^2 = the weight for FY 2009, which is given by [N3/(N1 + N2+ N3)]2, where N1, N2, and N3 are the estimated payment totals for FY 2007, FY 2008, and FY 2009, respectively

Appendix 4

Supplemental Information

As noted in the executive summary of this report, CMS reported a 3-year rolling error rate for Medicaid in 2010. In addition, CMS calculated a national error rate for 2010 based on the 17 States reviewed. This section contains additional analyses supporting that national error rate.

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Supplemental Information

Medicaid FFS Component Payment Error Rate

Table 1 presents the national 2010 Medicaid FFS payment error rate and the projected dollars in error. Further, the table presents both the upper and the lower 90 percent confidence level percentages for each. For the estimated dollars paid in error, the table separately shows Medicaid FFS and the federal share of the overpayments, underpayments, and total payments.

Table 1 National FY 2010 Medicaid FFS Component Payment Error Rate and Projected Dollars in Error

	SAMPLE SIZE	NATIONAL PAYMENT ERROR RATE ESTIMATE	LOWER CONFIDENCE LIMIT (90%)	UPPER CONFIDENCE LIMIT (90%)
ERROR RATE	9,295	1.89%	1.27%	2.51%
TOTAL	**TOTAL CLAIMS PAID**	**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
MEDICAID FFS	$ 276,561,722,435	$ 5,223,579,808	$ 3,500,534,250	$ 6,946,625,365
FEDERAL SHARE	$ 184,095,679,960	$ 3,463,899,199	$ 2,351,665,431	$ 4,576,132,966
OVERPAYMENTS		**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
MEDICAID FFS		$ 4,471,623,114	$ 3,567,390,008	$ 5,375,856,220
FEDERAL SHARE		$ 2,978,884,323	$ 2,383,985,185	$ 3,573,783,461
UNDERPAYMENTS		**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
MEDICAID FFS		$ 751,956,694	$ (458,453,358)	$ 1,962,366,746
FEDERAL SHARE		$ 485,014,876	$ (290,950,095)	$ 1,260,979,847

The estimate of the national FFS error rate is 1.89 percent for the Medicaid program, with a margin of error of +/- 0.62 percent. The estimated total Medicaid dollars in error is approximately $5.2 billion, and the federal portion of the dollars in error is approximately $3.5 billion. Almost all of the dollars in error are overpayments.

Figure 1 presents Medicaid FFS payment error rates from FY 2006 through FY 2009. Only FFS was reported in 2007.

Figure 1 Medicaid FFS Component Payment Error Rates for 2007 – FY 2010

FFS Error Rates by Year

Year	Error Rate
FY 2007	4.69%
FY 2008	8.89%
FY 2009	2.62%
FY 2010	1.89%
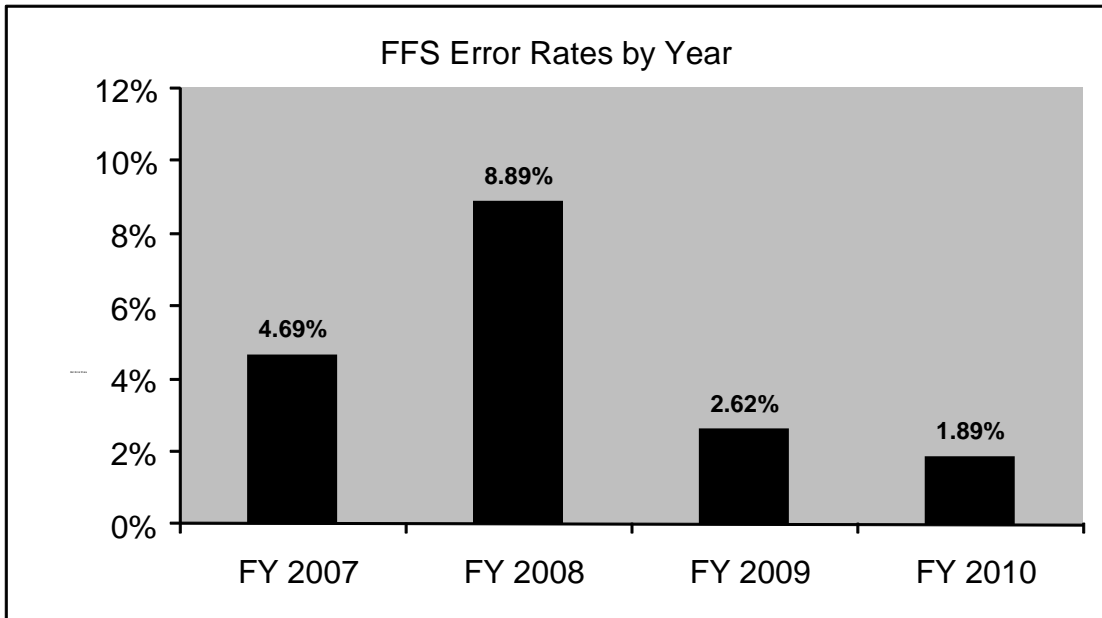
Thus, the most valuable comparison to make between cycles is to compare the same group of states over time; in this case, the states reported in 2007 and FY 2010. A marked decrease in the Medicaid FFS rate can be observed between the two measurements. The state results are shown in Figure 2.

Figure 2 Medicaid FFS Payment Error Rates for 2010
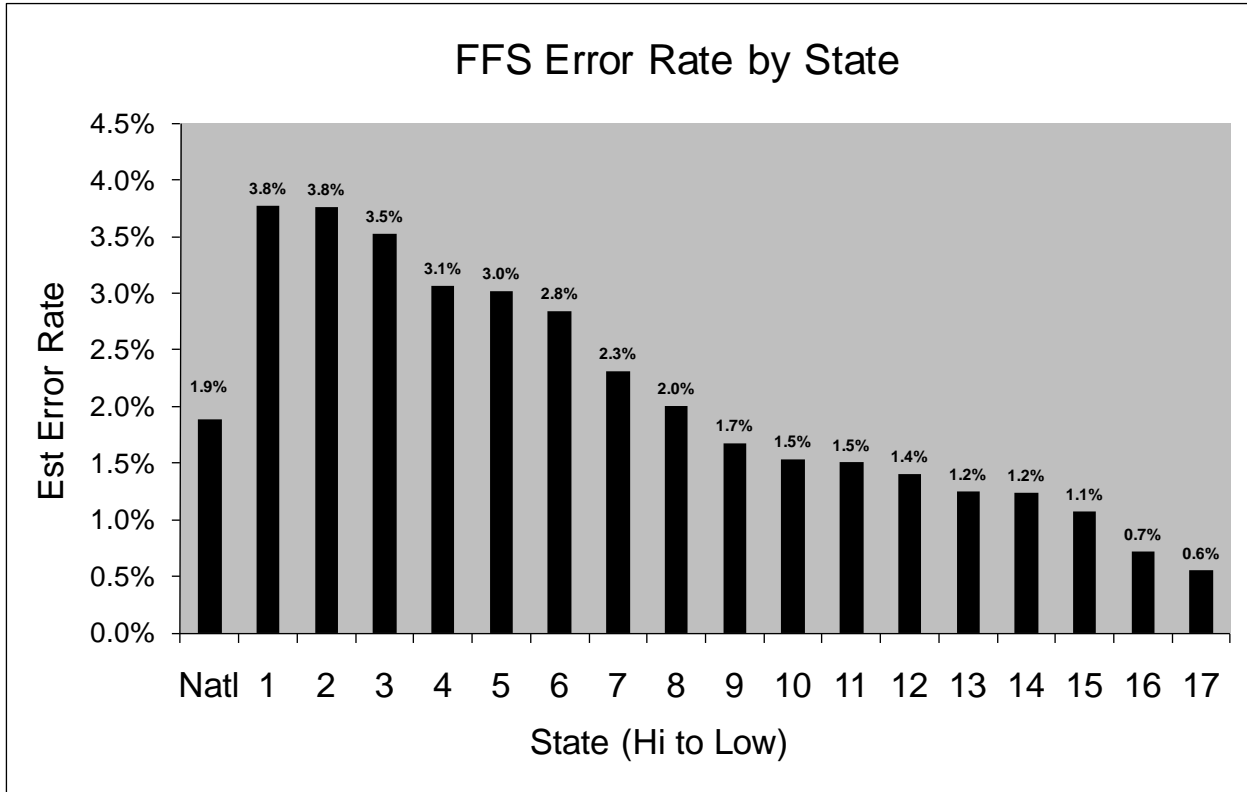
Medicaid FFS Payment Errors by Type of Error

Of the Medicaid FFS payment dollars projected to be in error due to all types of errors found, the five error types with the highest dollar amount in error are:

- "**Diagnosis Coding**" errors representing $163,612 or 37.5 percent,
- **"Insufficient Documentation"** errors representing $73,632 or 16.9 percent,
- **"Number of Units"** errors representing $58,379 or 13.4 percent,
- **"Administrative/Other (DP)"** errors representing $31,644 or 7.2 percent, and
- **"Medically Unnecessary Service"** errors representing $31,358 or 7.2 percent.

Refer to Figure 3 and Figure 4 for the relationship of the error types with the highest dollars in error compared to all other error types.

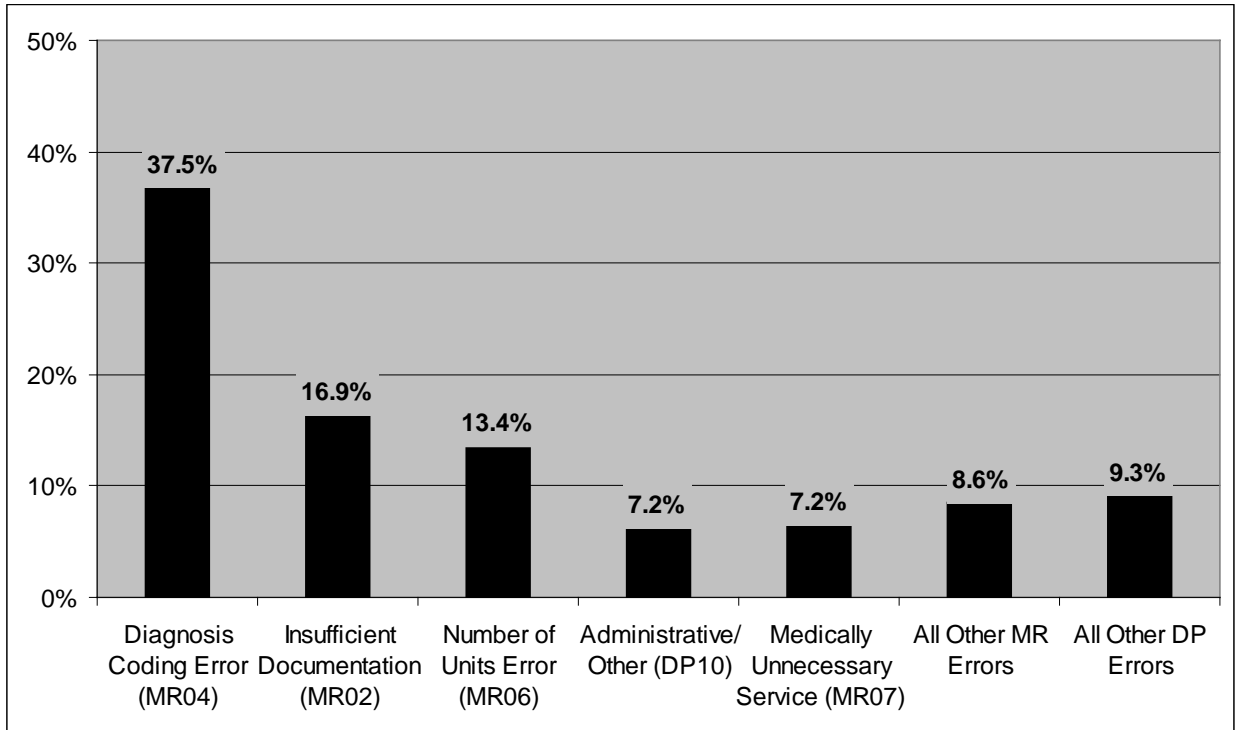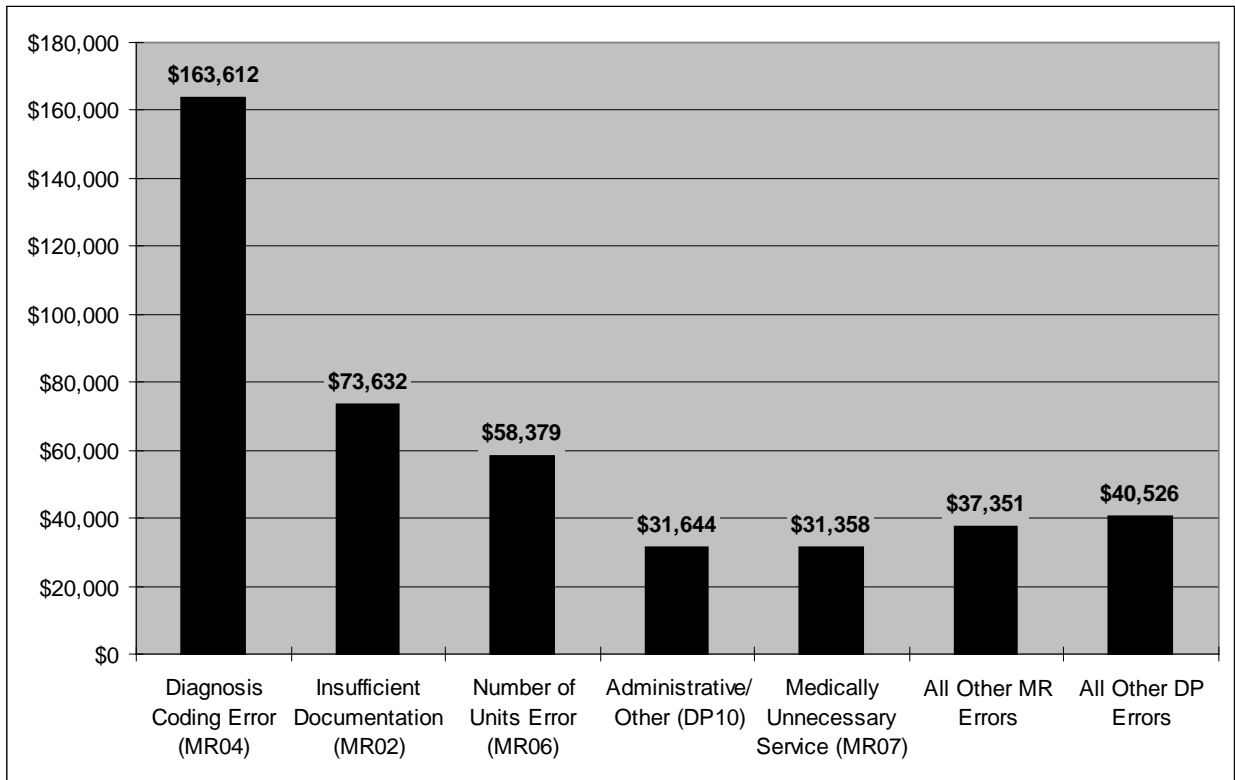**Figure 3 Medicaid FFS Costliest Types of Errors**

Figure 4 Medicaid FFS Total Dollar Amount of the Costliest Types of Error

Medicaid FFS Payment Errors by Medical Review Errors

Of the Medicaid FFS payment dollars projected to be in error due to medical review errors found, the types of errors with the highest dollar amount in error include:

- "**Diagnosis Coding**" errors (44.9 percent), followed by
- "**Insufficient Documentation**" errors (20.2 percent), and
- "**Number of Units**" errors (16.0 percent).

Medicaid FFS Payment Errors by Data Processing Errors

Of the Medicaid FFS payment dollars projected to be in error due to data processing review errors found, the types of errors with the highest dollar amount in error include:

- "**Administrative/Other (DP)**" errors (46.8 percent), followed by
- "**Duplicate Item**" errors (20.2 percent), and
- "**FFS Claim for a Managed Care Service**" errors (16.4 percent).

Overpayments and Underpayments

A total of 9,295 Medicaid FFS claims were reviewed for inclusion in the PERM 2010 report. All FFS claims were subject to independent data processing reviews and those relevant were subject to independent medical reviews.

Of the 9,295 FFS claims subjected to medical review, 189 medical review errors were found. Of the medical review errors:

- 182 overpayment errors were found with a total dollar value of $298,517, or 81.9 percent of the improper payments attributable to medical review;
- 7 underpayment errors were found with a total dollar value of $65,814, or 18.1 percent of the improper payments attributable to medical review.

Of the 9,295 FFS claims reviewed, 33 data processing review errors were found. Of the data processing review errors:

- 30 overpayment errors were found with a total value of $71,281, or 98.8 percent of the improper payments attributable to data processing reviews;
- 3 underpayment errors were found with a total dollar value of $889 or 1.2 percent of the improper payments attributable to data processing reviews.

Table 2 summarizes overpayments and underpayments by type of review.

Table 2 Summary of Medicaid Overpayments and Underpayments

	OVERPAYMENTS		UNDERPAYMENTS	
	NUMBER OF PAYMENT ERRORS	DOLLAR AMOUNT OF ERRORS	NUMBER OF PAYMENT ERRORS	DOLLAR AMOUNT OF ERRORS
FFS Medical Review	182	$ 298,517	7	$ 65,814
FFS Data Processing	30	$ 71,281	3	$ 889
Managed Care	27	$ 1,573	1	$ 166
Eligibility	611	$ 345,935	17	$ 702
Total	**850**	**$ 717,306**	**28**	**$ 67,571**

Medicaid FFS Medical Review Error Analysis

In Medicaid FFS, 189 medical review errors amount to $364,331 in error.[3] Of the nine types of medical review errors, insufficient documentation (MR02), number of units errors (MR06), and procedure coding errors (MR03) have the highest number of errors, while diagnosis coding (MR04), insufficient documentation (MR02), and number of units (MR06) have the highest dollars in error. Refer to Table 3 for a summary of the number and dollar amount of errors by medical review error type. Note that dollars are rounded.

Table 3 Number and Dollar Amount of 2010 Medicaid FFS Medical Review Errors (Within Sample)

| Error Code	Error Type[1]	Total Number of Payment Errors	Overpayments		Underpayments		Percentage of Total Errors	
			Number of Errors	Dollars in Error	Number of Errors	Dollars in Error	% of Total Number of Errors	% of Total Dollars in Error
MR02	Insufficient Documentation	68	68	$ 73,632	0	$ 0	36.0%	20.2%
MR06	Number of Units Error	48	48	$ 58,379	0	$ 0	25.4%	16.0%
MR03	Procedure Coding Error	21	18	$ 10,554	3	$ 627	11.1%	3.1%
MR01	No Documentation	14	14	$ 8,605	0	$ 0	7.4%	2.4%
MR04	Diagnosis Coding Error	12	8	$ 98,424	4	$ 65,188	6.3%	44.9%

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[3] Detail tables might differ slightly due to rounding.

Error Code	Error Type[1]	Total Number of Payment Errors	Overpayments		Underpayments		Percentage of Total Errors	
			Number of Errors	Dollars in Error	Number of Errors	Dollars in Error	% of Total Number of Errors	% of Total Dollars in Error
MR09	Administrative/ Other	12	12	$ 5,972	0	$ 0	6.3%	1.6%
MR08	Policy Violation	10	10	$ 11,593	0	$ 0	5.3%	3.2%
MR07	Medically Unnecessary Service	4	4	$ 31,358	0	$ 0	2.1%	8.6%
MR05	Unbundling	0	0	$ 0	0	$ 0	0.0%	0.0%
	Total	189	182	$ 298,517	7	$ 65,815	100%	100%

[1]To be considered a PERM error, an error must affect payment.
Note that details might slightly differ from the sum due to rounding differences.

Refer to Figure 5 for graphic presentation of number of errors.

**Figure 5 Medicaid FFS Medical Review Number of Errors**
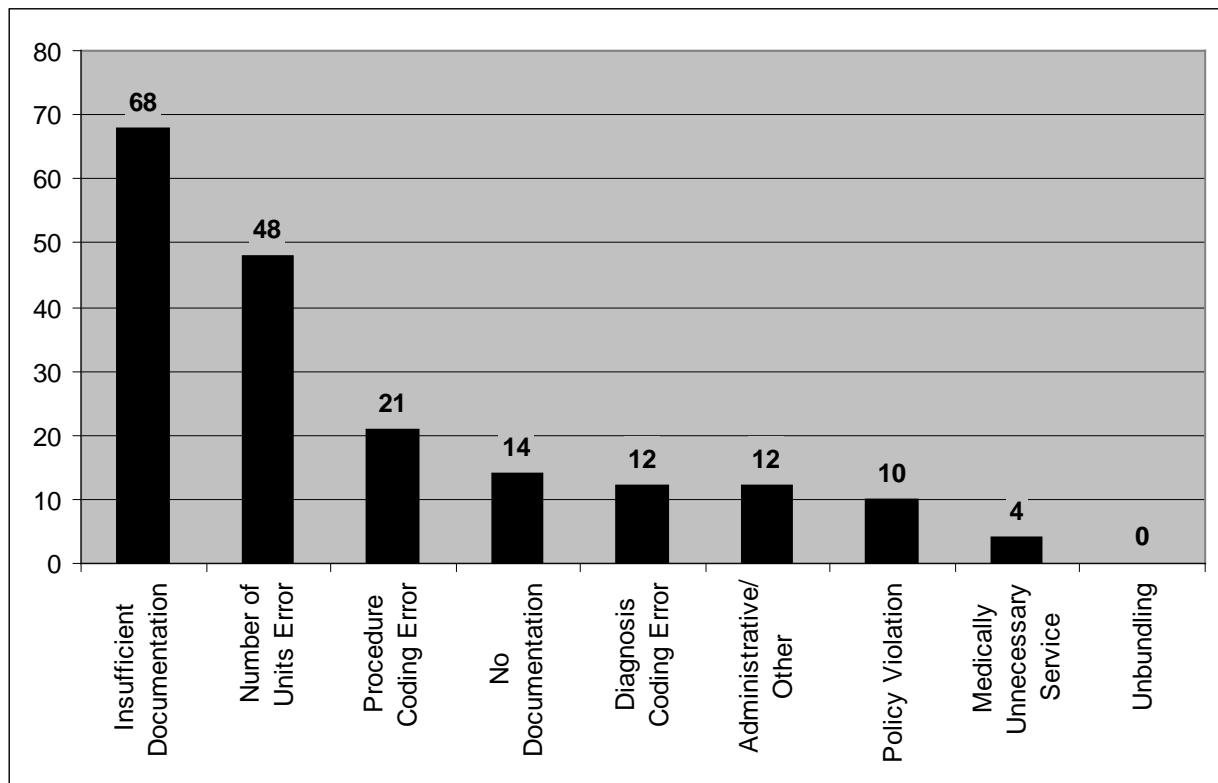
Of the 189 Medicaid FFS medical review errors identified, the three most common number of errors are insufficient documentation (68 errors), number of units (48 errors), and procedure coding (21 errors).

Insufficient documentation errors (36.0 percent), number of units errors (25.4 percent), and procedure coding errors (11.1 percent) account for approximately 72.5 percent of the total number of Medicaid FFS medical review errors, and 39.3 percent of the total dollars in error.

Medical Review Errors by Dollars in Error

Of the $364,331[4] Medicaid FFS medical review dollars in error identified, the three error categories with the highest percentages of medical review dollars in error are diagnosis coding error, insufficient documentation, and number of unit errors. Refer to Figure 6.

Figure 6 Medicaid FFS Medical Review Errors in Dollars
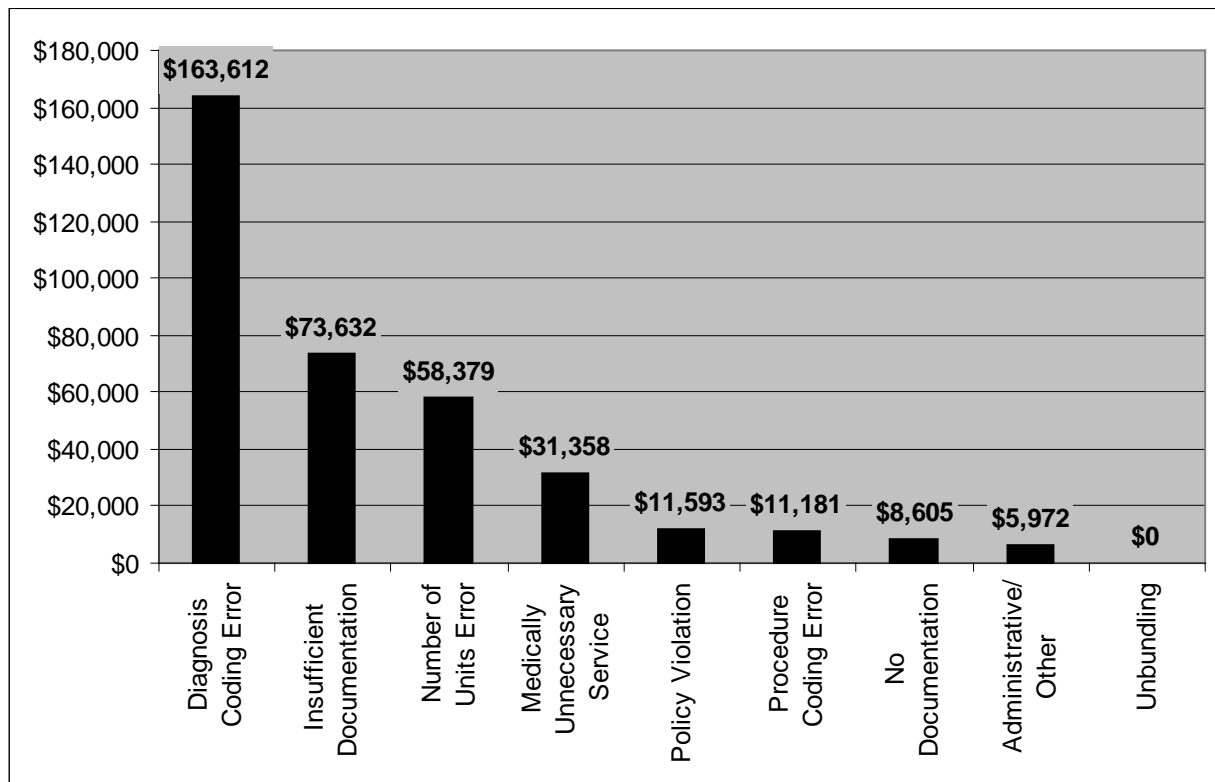
Diagnosis coding errors represent $163,612 dollars in error. Insufficient documentation errors represent $73,632 dollars in error. Number of unit errors represents $58,379 dollars in error. Refer to Figure 7.

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[4] Detail tables and graphs might differ slightly due to rounding.

Figure 7 Medicaid FFS Distribution in Dollars of the Costliest Medical Review Errors Compared to All Other Medical Review Errors
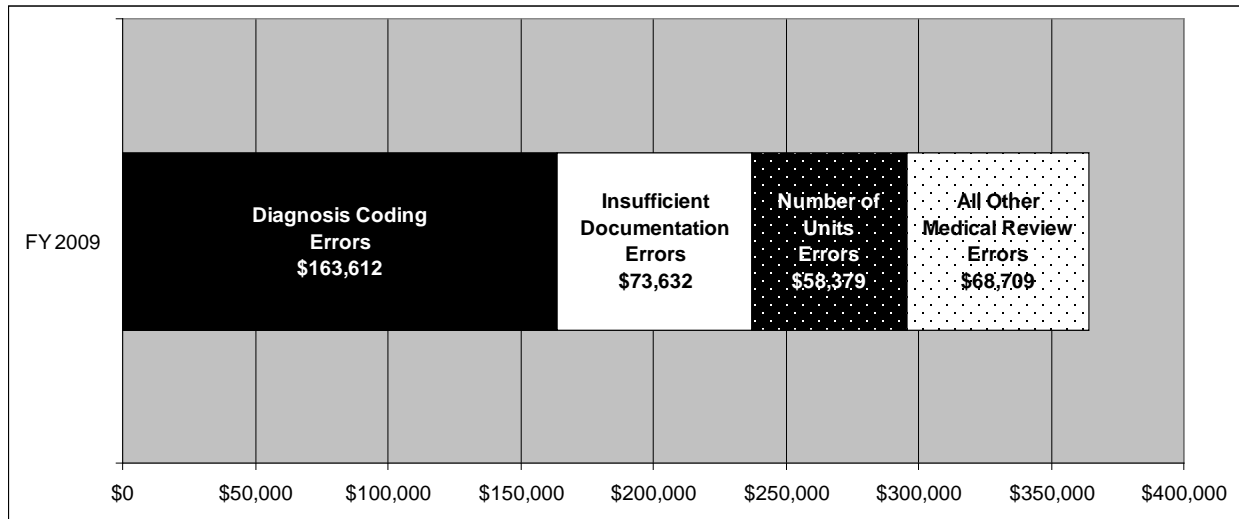
Diagnosis coding errors (44.9 percent), insufficient documentation errors (20.2 percent), and number of units errors (16.0 percent) account for 81.1 percent of the total medical review dollars in error and 67.7 percent of the total number medical review of errors.

- **Diagnosis Coding Errors (MR04)**

Diagnosis coding error is the medical review error type with the highest dollars in error. "Diagnosis coding error" means the provider billed an incorrect diagnosis or DRG.

In the Medicaid FFS component, diagnosis coding errors account for 12 errors (6.3 percent) and $163,612 (44.9 percent) of the improper payments attributable to medical review.

Diagnosis coding errors were found in seven of the 17 states. Two of the 17 states reviewed account for $118,022 (72.1 percent) of the total diagnosis coding error dollars in error. All 12 of the diagnosis coding errors occurred in the inpatient hospital service type.

The most common causes of diagnosis coding errors are:

- Incorrect DRG (91.7 percent)
- Incorrect principal diagnosis coding and/or sequencing diagnoses (8.3 percent)

- **Insufficient Documentation Errors (MR02)**

Insufficient documentation error is the medical review error type with the second highest dollars in error. "Insufficient documentation" means the provider did not include pertinent patient facts (i.e., the patient's overall condition, diagnosis, and/or extent of services performed) in the medical record information submitted.

In the Medicaid FFS component, insufficient documentation errors account for 68 errors (36.0 percent) and $73,632 (20.2 percent) of the improper payments attributable to medical review. Refer to Figure 8.

No documentation errors were found in 14 of the 17 states reviewed. Two of the 17 states reviewed account for $55,488 (75.4 percent) of the total insufficient documentation error dollars in error.

Of the 15 medical review claim categories[5], 10 claim categories had "insufficient documentation" errors. The majority of the 68 insufficient documentation errors can be attributed to the following service types: (1) prescribed drugs (13 errors); (2) personal support services (12 errors), and (3) habilitation and waiver programs, adult day care and foster care (12 errors). These service types account for 54.4 percent of the total number of errors and 21.6 percent of total dollars in error for this error type.

Of the $73,632 insufficient documentation dollars in error, $68,861 can be attributed to three service types: (1) nursing facility ICF and ICF/MR, chronic care services ($48,077 or 65.3 percent), (2) prescribed drugs ($10,881 or 14.8 percent), and (3) psychiatric, mental health, and behavioral health services ($5,903 or 8.0 percent). These three service types account for 88.1 percent of the total dollars in error for this error type and 38.2 percent of the total number of insufficient documentation errors.

For the service category of nursing facility, ICF and ICF/MR, chronic care services, our research suggests that the provider failed to supply documentation to support patient presence for the sampled dates of service.

The most common causes of insufficient documentation errors are:

- Provider did not supply sufficient documentation to support the claim (52.9 percent)
- Provider did not supply additional documentation within required timelines (17.6 percent)
- Patient not seen on sampled date of service (13.2 percent)

The following are specific examples of insufficient documentation in the medical record:

- Provider did not supply sufficient documentation to support the claim (36)
- Provider did not supply additional documentation within required timelines (12)
- Provider states patient not seen on sampled date/s of service (9)
- The medical records we received do not contain the physician's order (4)
- Medical records do not contain the daily documentation of specific tasks performed on the date of service billed (3)
- Provider did not supply a valid prescription (3)
- The medical records we received do not contain the Individual Service Plan (1)

Refer to Figure 8.

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[5] Claim categories are defined in Appendix D.

Figure 8 Specific Causes of "Insufficient Documentation" Errors
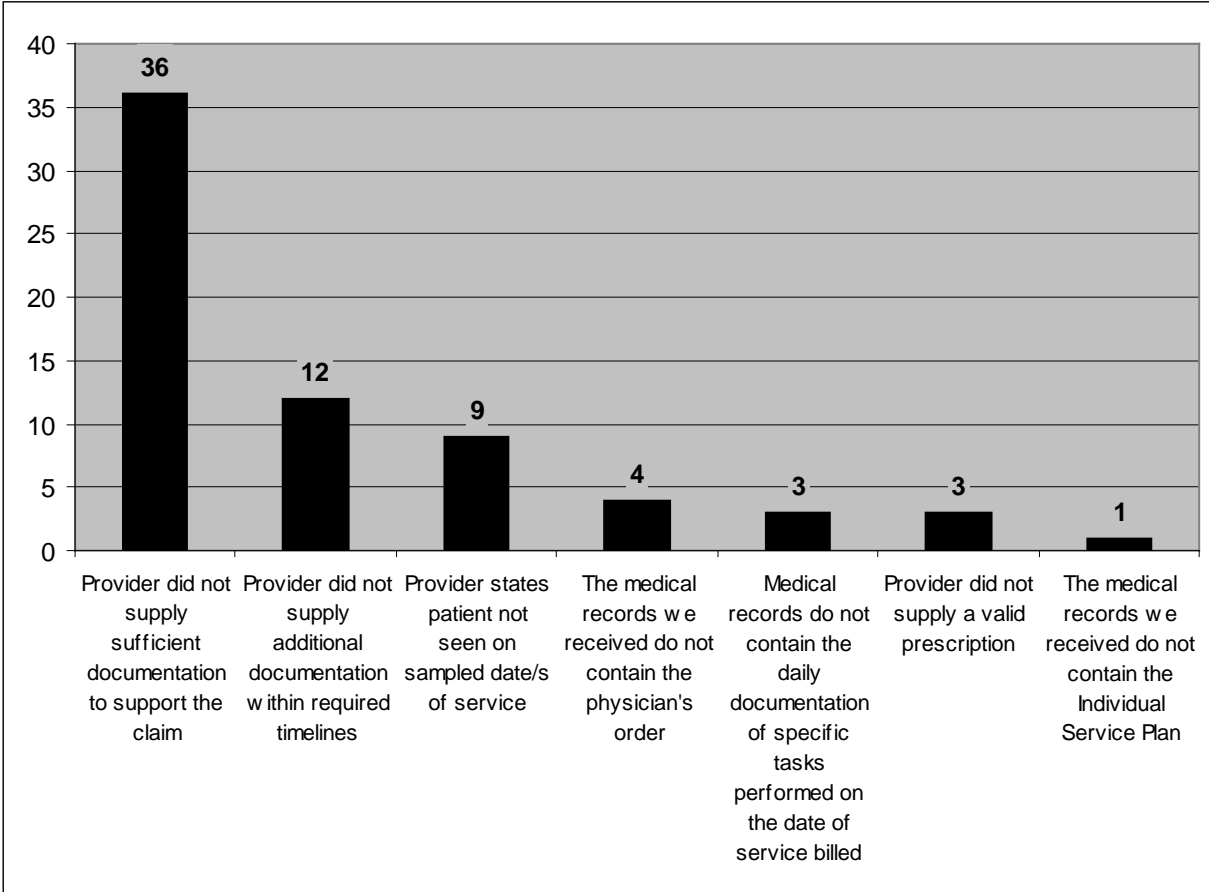
- **Number of Units Errors (MR06)**

Number of Units error is the medical review error type with the third highest dollars in error. "Number of Units" means the provider billed for an incorrect number of units for a particular service billed.

In the Medicaid FFS component, number of unit errors account for 48 errors (25.4 percent) and for $58,379 (16.0 percent) of the improper payments attributable to medical review.

Of the 48 number of unit errors, the majority of the number of errors can be attributed to the following service types: (1) personal support services (9 errors); (2) habilitation and waiver programs, adult day care and foster care (9 errors), and (3) psychiatric, mental health, and behavioral health service (8 errors). These service types account for 54.2 percent of the total number of errors and 12.9 percent of total dollars in error for this error type.

Of the $58,379 number of unit dollars in error, $43,094 can be attributed to two service types: (1) hospice services ($24,919) and (2) inpatient hospital ($18,175). These two service types account for 20.8 percent of the total number of errors and 73.7 percent of the total dollars in error for this error type.

11 of the 17 states reviewed had a number of units error. Of the 15 medical review service types, nine service types have number of unit errors.

The most common causes of number of unit errors are:

- Documentation supplied by provider supported less number of units than billed (33)
- Provider incorrectly calculated the number of units (8)
- Start and stop times for services were not documented (2)

Refer to Figure 9 for the distribution of the most common causes of number of unit errors.

Figure 9 Common Causes of "Number of Unit" Errors
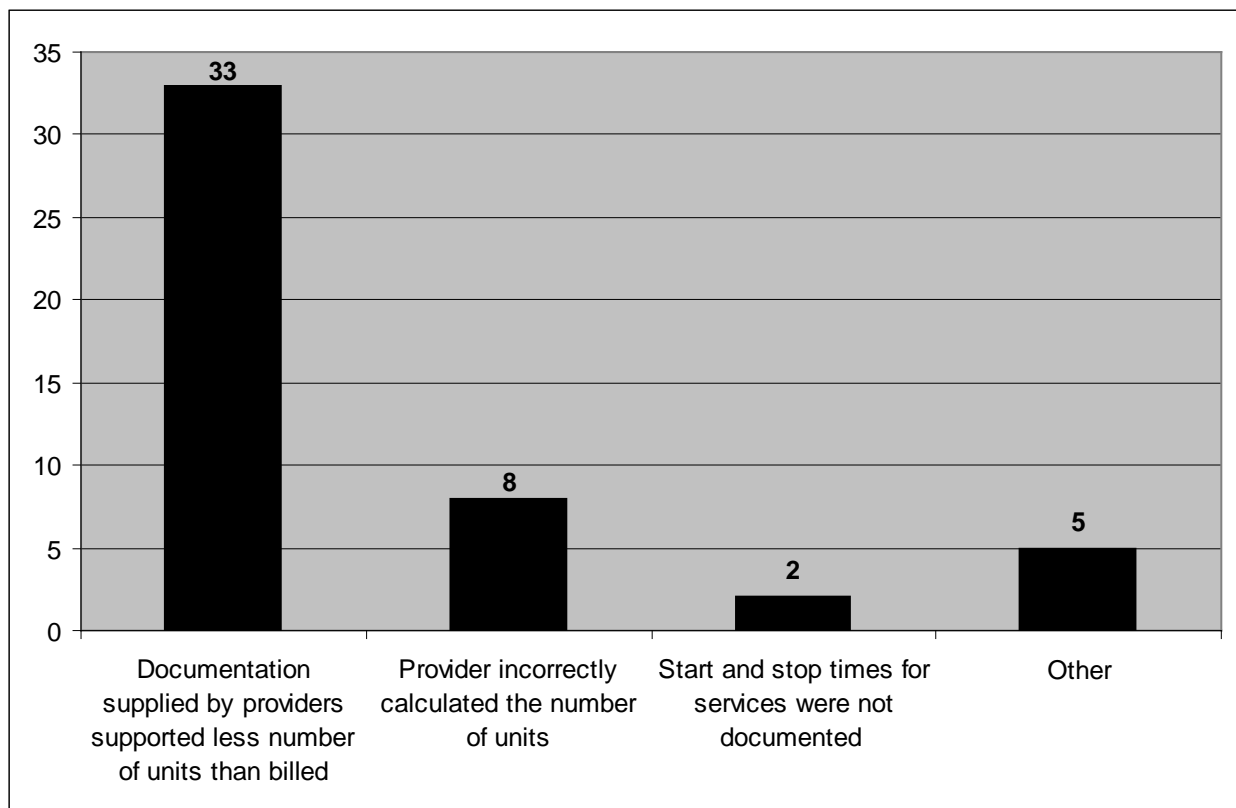
Medicaid FFS Medical Review Errors by Cost per Error

Even though insufficient documentation errors, number of unit errors, and procedure coding errors are the most frequent errors, other error types have a higher average cost per error. Refer to Table 4 for the average cost per error for medical review errors.

Table 4 Number and Dollar Amount of Medicaid FFS Medical Review Errors by Average Cost Per Error
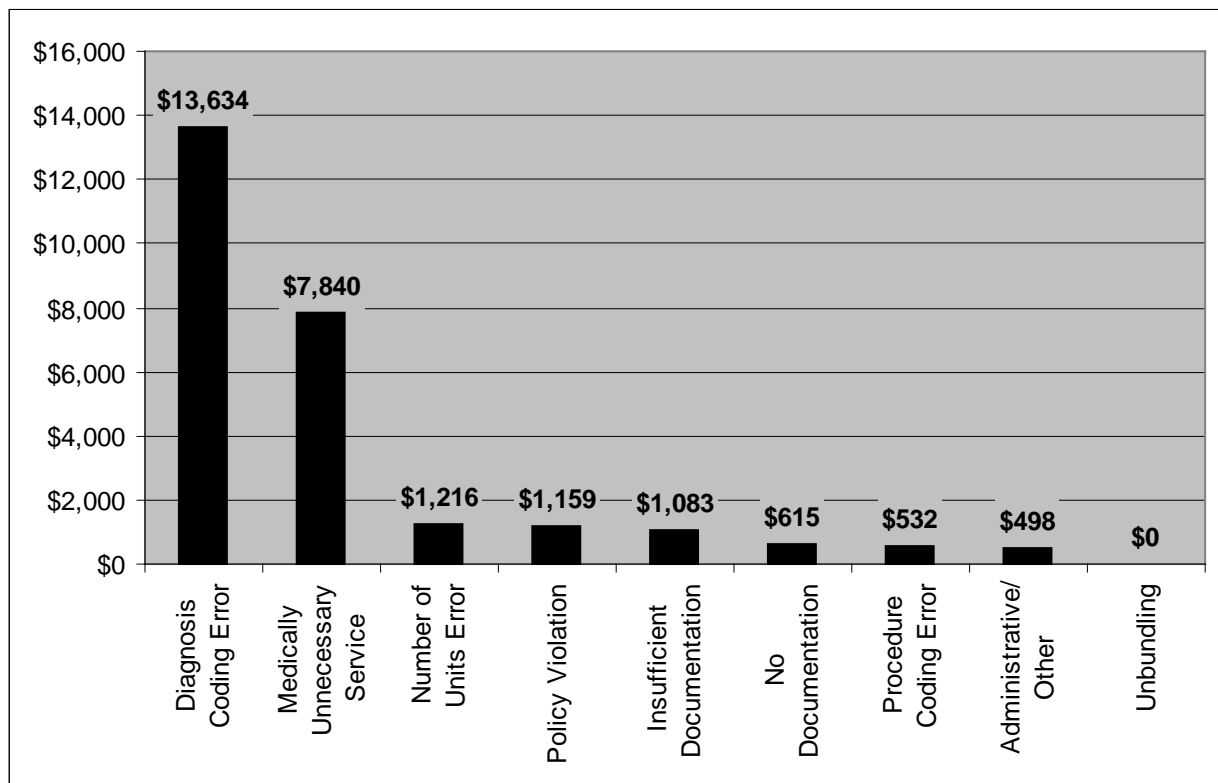
ERROR CODE	ERROR TYPE	NUMBER OF PAYMENT ERRORS		DOLLARS IN ERROR		AVERAGE COST PER ERROR
		Number of Errors	% Total Number of	Dollars In Error	% Total Dollars in	

			Errors		Error		
MR04	Diagnosis Coding Error	12	6.3%	$163,612	44.9%	$	13,634
MR07	Medically Unnecessary Service	4	2.1%	$ 31,358	8.6%	$	7,840
MR06	Number of Units Error	48	25.4%	$ 58,379	16.0%	$	1,216
MR08	Policy Violation	10	5.3%	$ 11,593	3.2%	$	1,159
MR02	Insufficient Documentation	68	36.0%	$ 73,632	20.2%	$	1,083
MR01	No Documentation	14	7.4%	$ 8,605	2.4%	$	615
MR03	Procedure Coding Error	21	11.1%	$ 11,181	3.1%	$	532
MR09	Administrative/Other	12	6.3%	$ 5,972	1.6%	$	498
MR05	Unbundling	0	0.0%	$ 0	0.0%	$	0
	Total	189	100%	$364,331	100%	$	1,928
Note that details might slightly differ from the sum due to rounding differences.							

Diagnosis coding error is the error types with the highest average cost per error ($13,634). Medically unnecessary service error is the error type with the second highest average cost per error ($7,840). Refer to Figure 10.

Figure 10 Medicaid FFS Medical Review Errors with the Highest Average Cost Per Error

Medicaid FFS Medical Review Errors by Service Type

Table 5 summarizes medical review errors by service type for Medicaid FFS claims.[6] Table 5
Medicaid FFS Medical Review Errors by Service Type

SERVICE TYPE	NUMBER OF PAYMENT ERRORS		DOLLARS IN ERROR		AVERAGE COST PER ERROR
	Number of Payment Errors	% of Total Number of Errors	Dollars in Error	% of Total Dollars in Error	
Outpatient Hospital Services, Practitioners, Clinics	38	20.1%	$ 12,789	3.4%	$ 338
Personal Support Services	28	14.8%	$ 5,371	1.5%	$ 192
Habilitation and Waiver Programs, Adult Day Care and Foster Care	24	12.7%	$ 9,737	2.7%	$ 406
Inpatient Hospital	20	10.6%	$ 213,145	58.5%	$10,657
Prescribed Drugs	19	10.1%	$ 13,206	3.6%	$ 695
Psychiatric, Mental Health, and Behavioral Health Services	17	9.0%	$ 12,389	3.4%	$ 729
Nursing Facility, ICF and ICF/MR, Chronic Care Services	11	5.8%	$ 55,428	15.2%	$ 5,039
Hospice Services	6	3.2%	$ 24,919	6.8%	$ 4,153
Laboratory, X-ray and Imaging Services	6	3.2%	$ 964	0.3%	$ 161
Home Health Services	5	2.6%	$ 3,074	0.8%	$ 615
Dental and Oral Surgery Services	5	2.6%	$ 1,494	0.4%	$ 299
Durable Medical Equipment (DME) and supplies, Prosthetic / Orthopedic devices, and Environmental Modifications	4	2.1%	$ 10,574	2.9%	$ 2,644
Therapies, Hearing and Rehabilitation Services	4	2.1%	$ 1,235	0.3%	$ 309
Transportation and Accommodations	1	0.5%	$ 255	0.1%	$ 255
Vision: Ophthalmology, Optometry and Optical services	1	0.5%	$ 90	0.0%	$ 90
Total	189	100%	$ 364,331	100%	$ 1,928
Note that details might slightly differ from the sum due to rounding differences.					

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[6] These rates only reflect the errors in the sample and are not comparable to the national error rate.

Refer to Figure 11, Figure 12, and Figure 13 for graphic representations of Table 5.

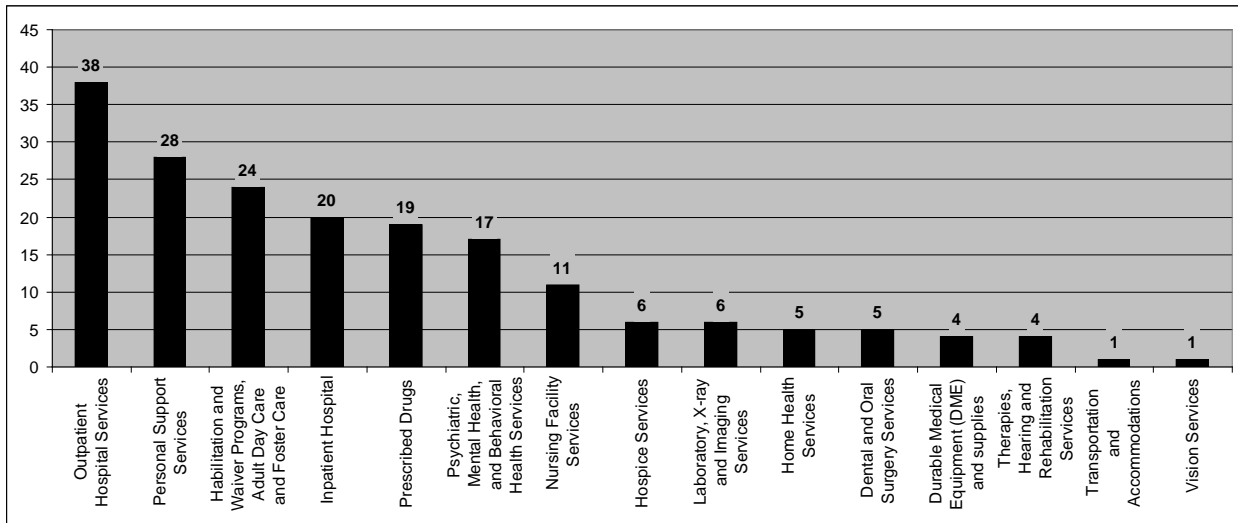**Figure 11 Medicaid FFS Number of Medical Review Errors by Service Type**

Figure 12 Medicaid FFS Dollar Amount of Medical Review Errors by Service Type
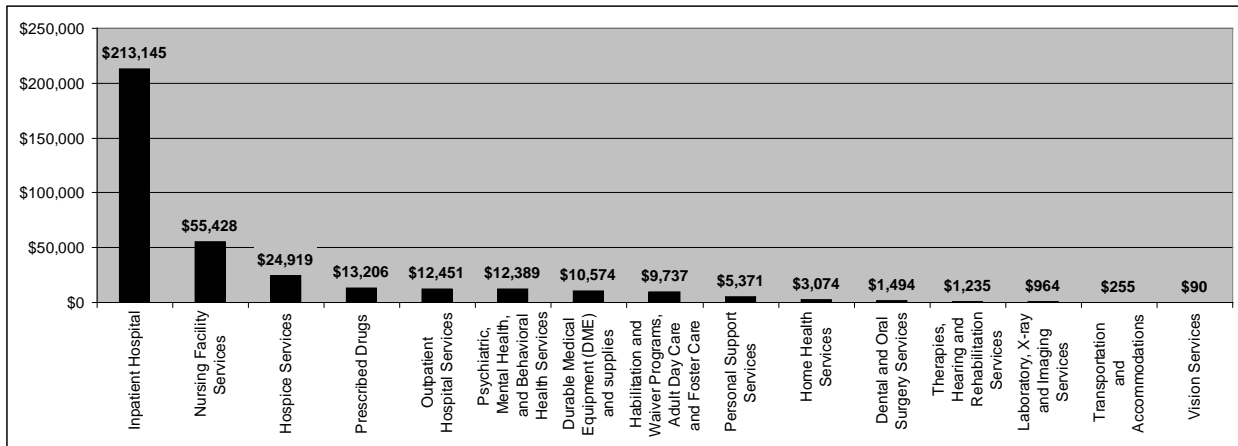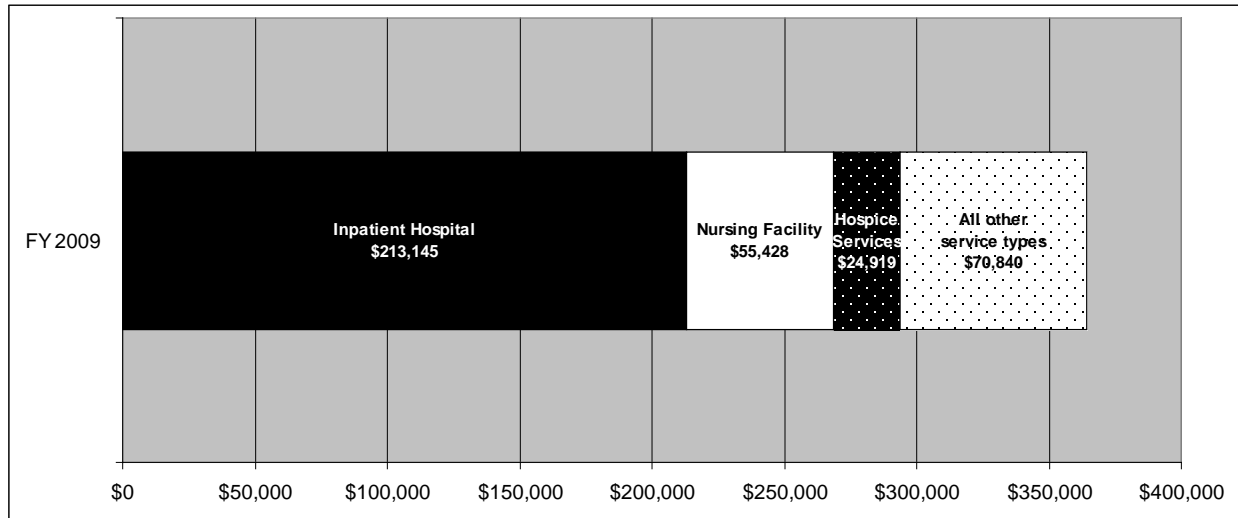
Figure 13 Medicaid FFS Service Types with the Highest Dollar Amount of Medical Review Errors

The top three service types with the highest number of errors for Medicaid FFS medical reviews are 1) outpatient hospital services, practitioners, clinics (20.1 percent), 2) personal support services (14.8 percent), and 3) habilitation and waiver programs, adult day care and foster care (12.7 percent). These three service types combined account for 47.6 percent of the total number of medical review errors but only 7.6 percent of the total dollars in error.

Within the Medicaid FFS component, the most costly errors are in 1) inpatient hospital services (58.5 percent) and 2) nursing facility, ICF and ICF/MR, chronic care services (15.2 percent). These two service types combined account for 73.7 percent of the total medical review dollars in error and 16.4 percent of the total number of medical review errors. Refer to Figure 14.

Medicaid FFS Medical Review Additional Error Analysis

In Medicaid FFS, 189 medical review errors representing $364,331 are identified.

Of the 17 reviewed states, four states have between 15 and 25 medical review errors. Combined, these states represent 45.5 percent of the total number of medical review errors identified. Two states have between 10 and 15 medical review errors. Ten states have between 5 and 10 medical review errors. One state has fewer than 5 errors. Refer to Figure 14.

Figure 14 Medicaid FFS Total Number of Medical Review Errors Across FY 2009 States
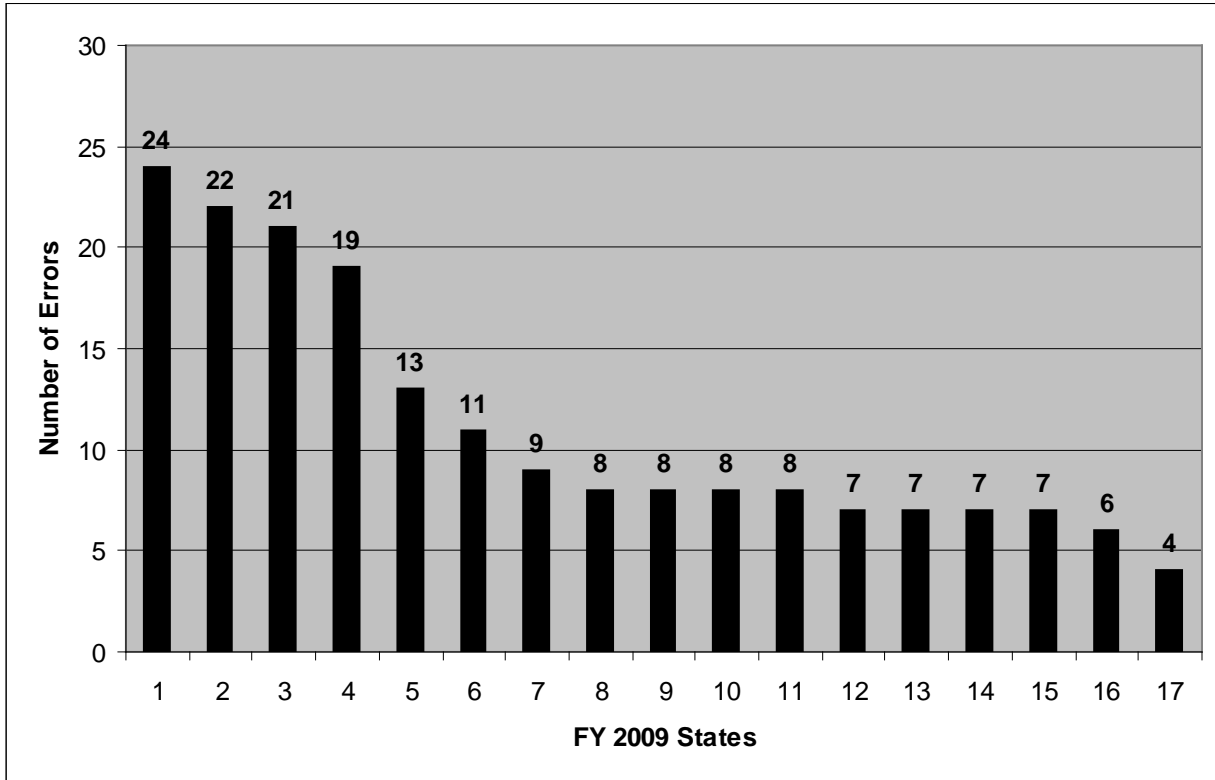
Of the 17 FY 2009 states, one state has a total Medicaid FFS medical review error amount of more than $71,000, representing 19.6 percent of the total dollar amount of Medicaid FFS medical review errors identified. Two states have total error amounts of more than $61,000, representing 17.0 percent and 16.9 percent of the total dollar amount of Medicaid FFS medical review errors. Combined, the three states with the highest dollar amount of medical review errors represent approximately $194,000 dollars in error or 53.4 percent of the total dollar amount of medical review errors identified. Three states have total error amounts in the $20,000 to $30,000 range. Four states have total error amounts in the $10,000 to $20,000 range. Seven states have a total error amount of less than $6,000. Refer to Figure 15.

Figure 15 Medicaid FFS Total Dollar Amount of Medical Review Errors across FY 2009 Cycle States
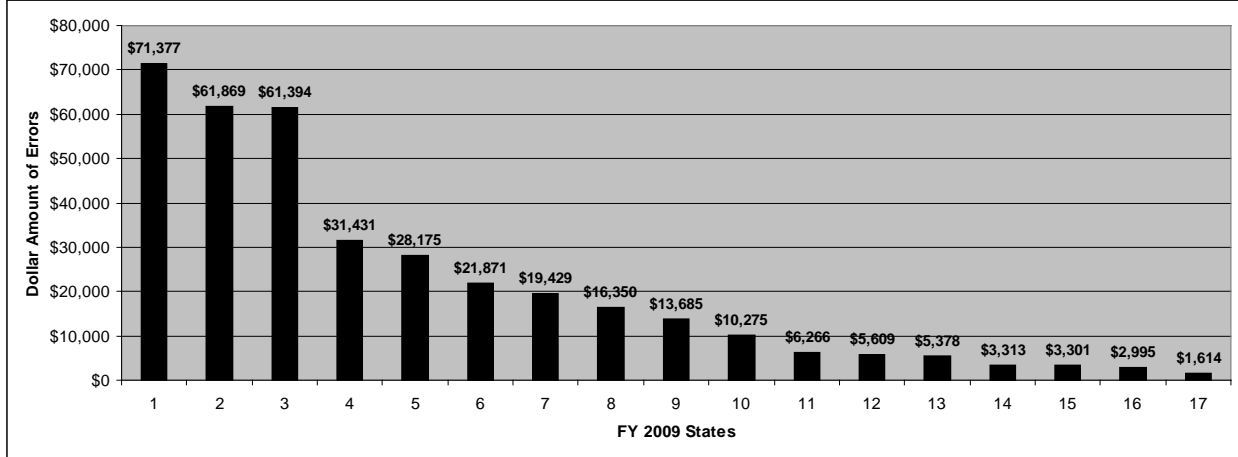
Medicaid FFS Data Processing Review Error Analysis

Table 6 summarizes the number and dollar amount of Medicaid FFS data processing errors. A total of 33 errors are identified, representing $72,170 dollars in error. Note that dollars are rounded.

Table 6 Number and Dollar Amount of Medicaid FFS Data Processing Errors (Within Sample)

Error Code	Error Type	Total Number of Errors	Overpayments		Underpayments		Percentage of Total Errors	
			Number of Errors	Dollars in Error	Number of Errors	Dollars in Error	% of Total Number of Errors	% of Total Dollars in Error
DP05	Pricing Error	14	11	$ 6,460	3	$ 889	42.4%	10.2%
DP01	Duplicate Item	6	6	$ 14,574	0	$ 0	18.2%	20.2%
DP04	Third-party Liability	4	4	$ 2,182	0	$ 0	12.1%	3.0%
DP10	Administrative/ Other	3	3	$ 31,644	0	$ 0	9.1%	43.8%
DP02	Non-Covered Service	2	2	$ 446	0	$ 0	6.1%	0.6%
DP03	FFS Claim for a Managed Care Service	1	1	$ 11,866	0	$ 0	3.0%	16.4%
DP06	Logic Edit	1	1	$ 4,028	0	$ 0	3.0%	5.6%
DP07	Data Entry Error	1	1	$ 81	0	$ 0	3.0%	0.1%
DP09	Managed Care Payment Error	1	1	$ 0[1]	0	$ 0	3.0%	0.0%
DP08	Rate Cell Error	0	0	$ 0	0	$ 0	0.0%	0.0%
	Total	33	30	$ 71,281	3	$ 889	100%	100%

[1]The actual error value was less than $0.50 and was rounded down to $0.
Note that details might slightly differ from the sum due to rounding differences.

Table 6 illustrates the three most common errors are pricing errors, duplicate item errors, and third-party liability errors, while the three most costly errors are administrative/other, duplicate item, and FFS claim for a managed care service. Refer to Figure 16.

Figure 16 Medicaid FFS Data Processing Review Number of Errors
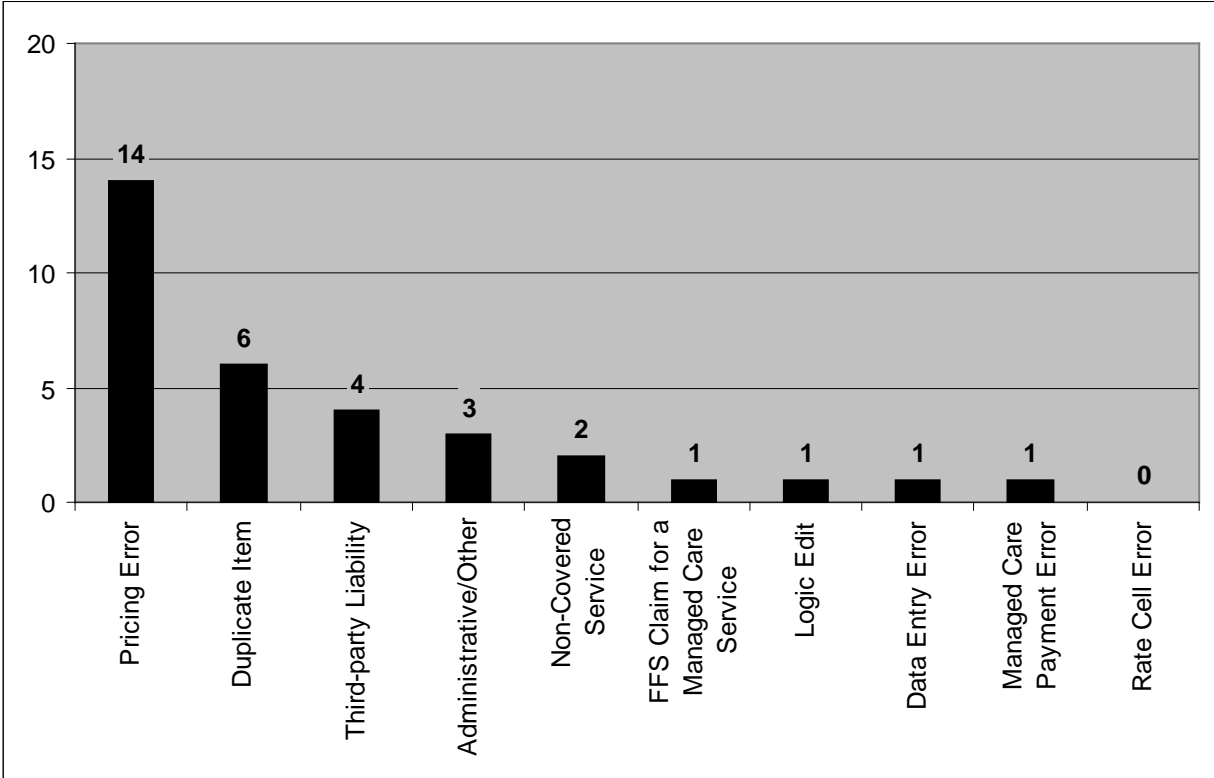
Figure 16 illustrates that of the 33 Medicaid FFS data processing review errors, the three most common errors are pricing errors (14 errors), duplicate item errors (6 errors), and third-party liability errors (4 errors).

Pricing errors (42.4 percent), duplicate item errors (20.2 percent), and third-party liability errors (12.1 percent) account for approximately 72.7 percent of the total number of errors found, yet these errors account for only 33.4 percent of the total dollars in error.

Data Processing Errors by Dollars in Error

Of the $72,170 dollars found to be in error through data processing review, the three most costly errors are administrative/other, duplicate item, and FFS claim for a managed care service. Refer to Figure 17.

Figure 17 Medicaid FFS Data Processing Errors in Dollars

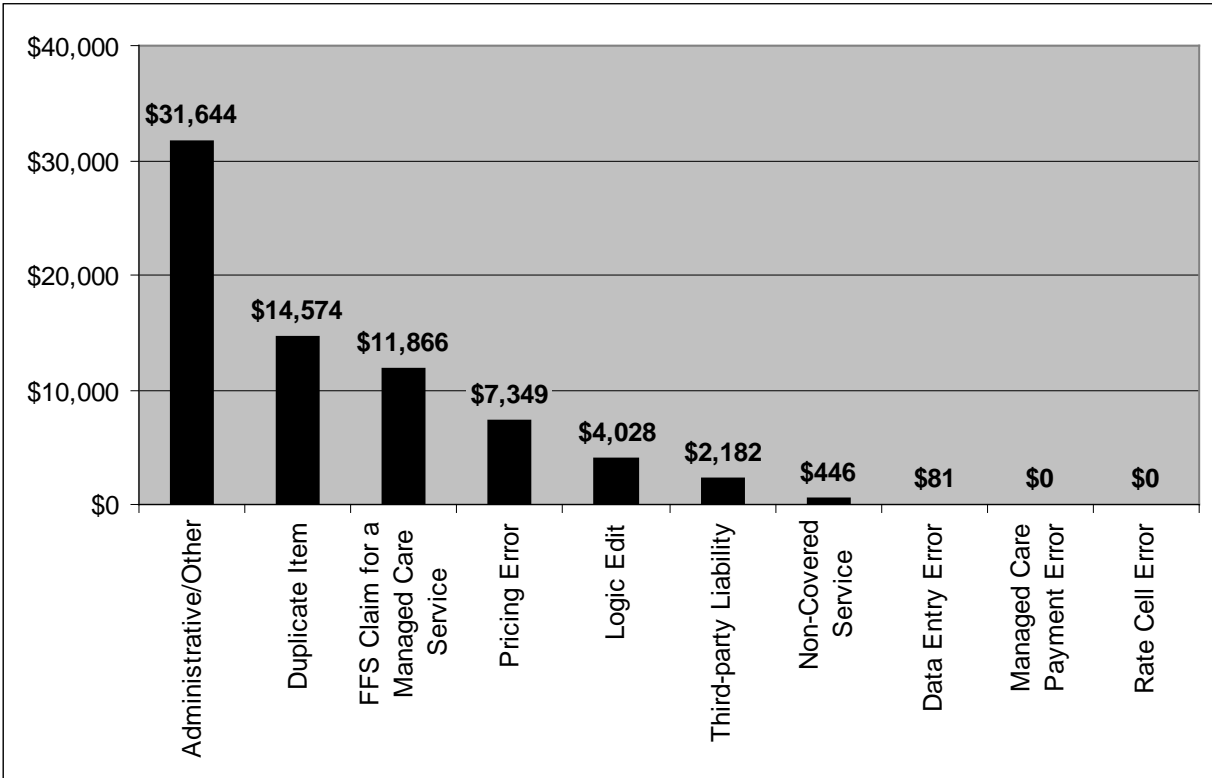

Administrative/other errors represent $31,644 dollars in error. Duplicate item errors represent $14,574 dollars in error. FFS claim for a managed care service errors represent $11,866 dollars in error.

Administrative/other errors (43.8 percent), duplicate item errors (20.2 percent), and FFS claim for a managed care service errors (16.4 percent) account for 80.4 percent of the total dollars in error and 30.3 percent of the total number of errors.

- **Administrative/Other Errors (DP10)**

Administrative/Other error is the data processing error type with the highest dollars in error. Administrative/other errors account for 9.1 percent of the total number of errors and 43.8 percent of the total dollars in error. Refer to Figure 18. An "administrative/other" error occurs when a payment error was discovered during a data processing review but the error was not a DP01 – DP09 error.

Three administrative/other errors account for $31,644 dollars in error. Two states account for 32.6 percent of dollars in error due to payment of a claim that was filed untimely. One state accounts for 67.4 percent of the dollars in error due to a situation where the claim paid by DRG but due to the recipient's partial ineligibility should have paid by per diem. However the state was unable to provide information to support how the claim should have paid, resulting in the error. Refer to Figure 18 for the distribution of the causes of administrative/other errors.

Figure 18 Common Causes of "Administrative/Other" Errors
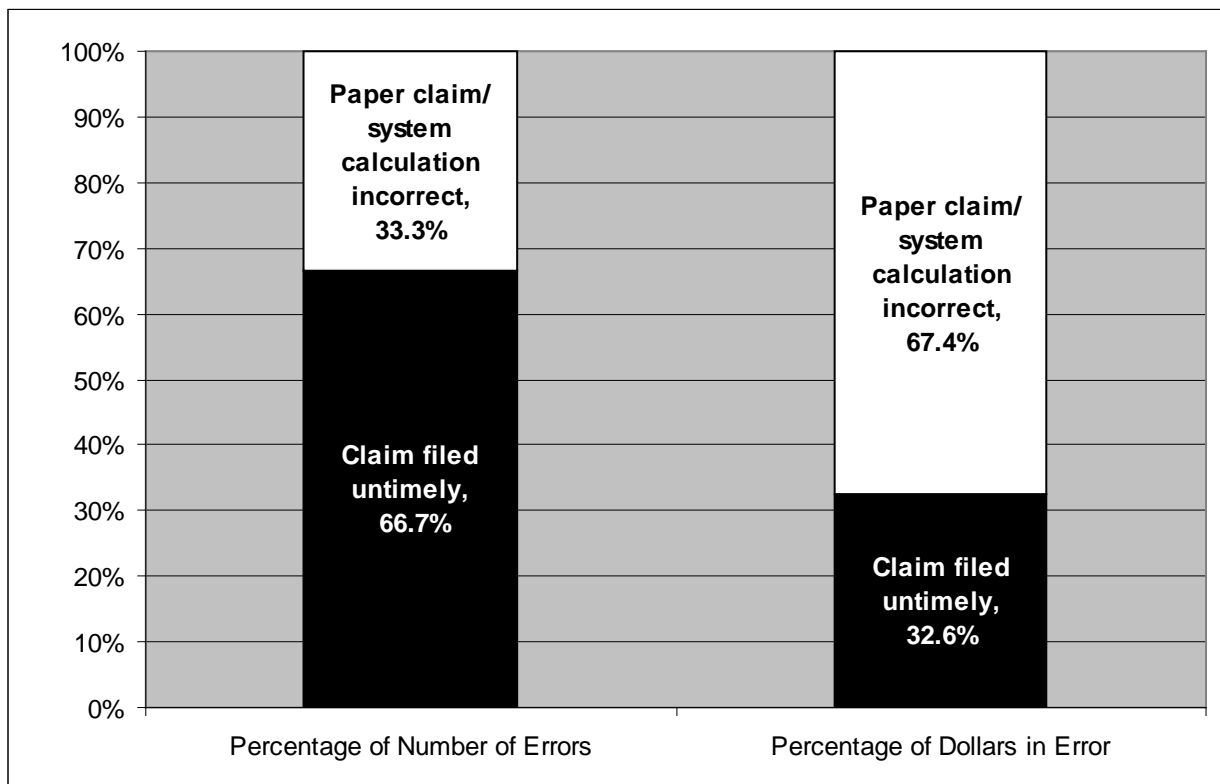
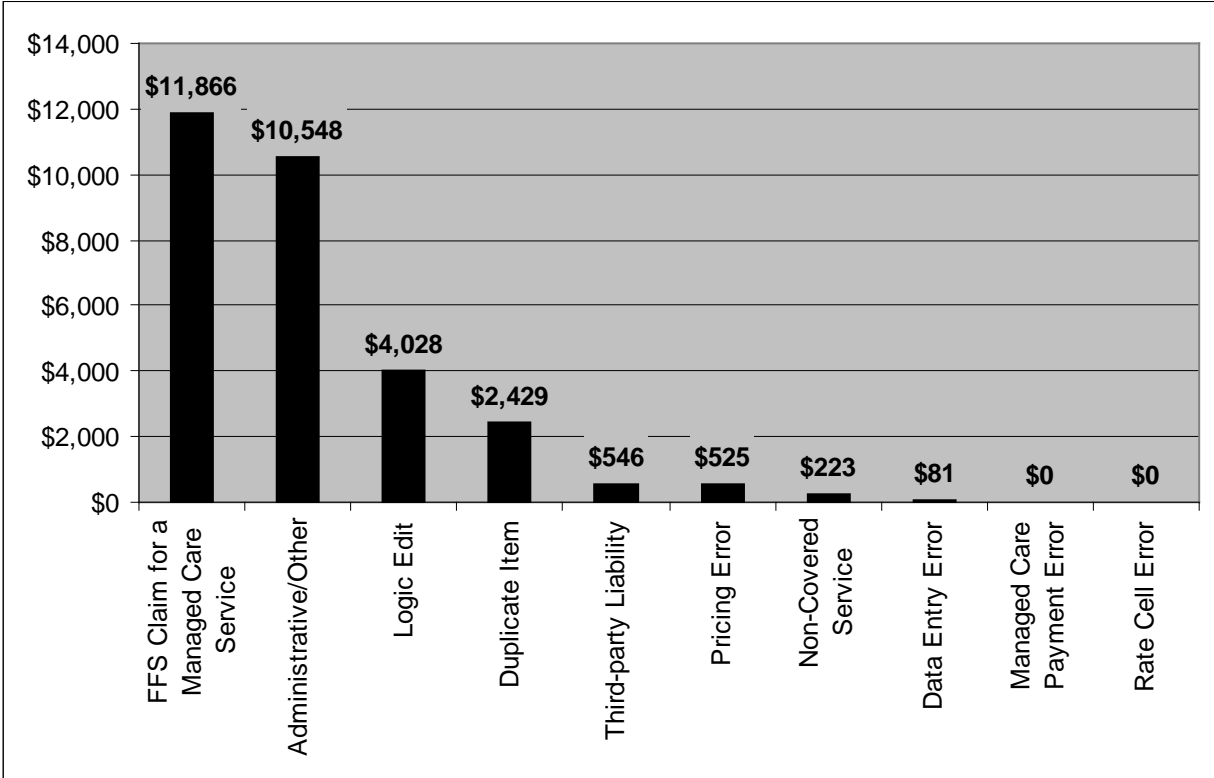**Medicaid FFS Data Processing Errors by Cost Per Error**

While pricing errors are the most frequently occurring type of errors in data processing reviews, FFS claim for a managed care service errors, administrative/other errors, and logic edit errors have the highest cost per error. Refer to Table 7 for a summary of the number and dollar value of errors by data processing error type and the cost per error. Note that dollars are rounded.

<center>Table 7 Medicaid FFS Data Processing Review Errors by Cost Per Error</center>

Error Code	Error Type	Number Of Errors		Dollars In Error		Cost Per Error
		Number of Payment Errors	% of Total Number of Errors	Dollars in Error	% of Total Dollars in Error	
DP3	FFS Claim for a Managed Care Service	1	3.0%	$ 11,866	16.4%	$11,866
DP10	Administrative/Other	3	9.1%	$ 31,644	43.8%	$10,548
DP06	Logic Edit	1	3.0%	$ 4,028	5.6%	$ 4,028
DP01	Duplicate Item	6	18.2%	$ 14,574	20.2%	$ 2,429
DP04	Third-party Liability	4	12.1%	$ 2,182	3.0%	$ 546
DP05	Pricing Error	14	42.4%	$ 7,349	10.2%	$ 525
DP02	Non-Covered Service	2	6.1%	$ 446	0.6%	$ 223
DP07	Data Entry Error	1	3.0%	$ 81	0.1%	$ 81
DP09	Managed Care Payment Error	1	3.0%	$ 0[1]	0.0%	$ 0
DP08	Rate Cell Error	0	0.0%	$ 0	0.0%	$ 0
	Total	33	100%	$ 72,170	100%	$ 2,187

[1]The actual error value was less than $0.50 and was rounded down to $0.
Note that details might slightly differ from the sum due to rounding differences.

While the number of data processing errors were few, several of them were quite large in terms of dollar value. One FFS claim for a managed care service error caused an $11,866 error; the three administrative/other errors have an average of $10,548 per error; and the single logic edit error caused a $4,028 error. Refer to Figure 19.

<center>49</center>

Figure 19 Medicaid FFS Data Processing Errors with the Highest Average Cost Per Error

Medicaid FFS Data Processing Additional Error Analysis

In Medicaid FFS, 33 data processing errors representing $72,170 are identified.

Of the 17 FY 2009 states, one state has eight data processing errors and one state has six errors. Combined, these two states represent 42.2 percent of the total number of Medicaid FFS data processing errors identified. Four states have three errors. Two states have two errors. Three states have one error. Six states have no Medicaid FFS data processing errors. Refer to Figure 20.

Figure 20 Medicaid FFS Total Number of Data Processing Errors Across States
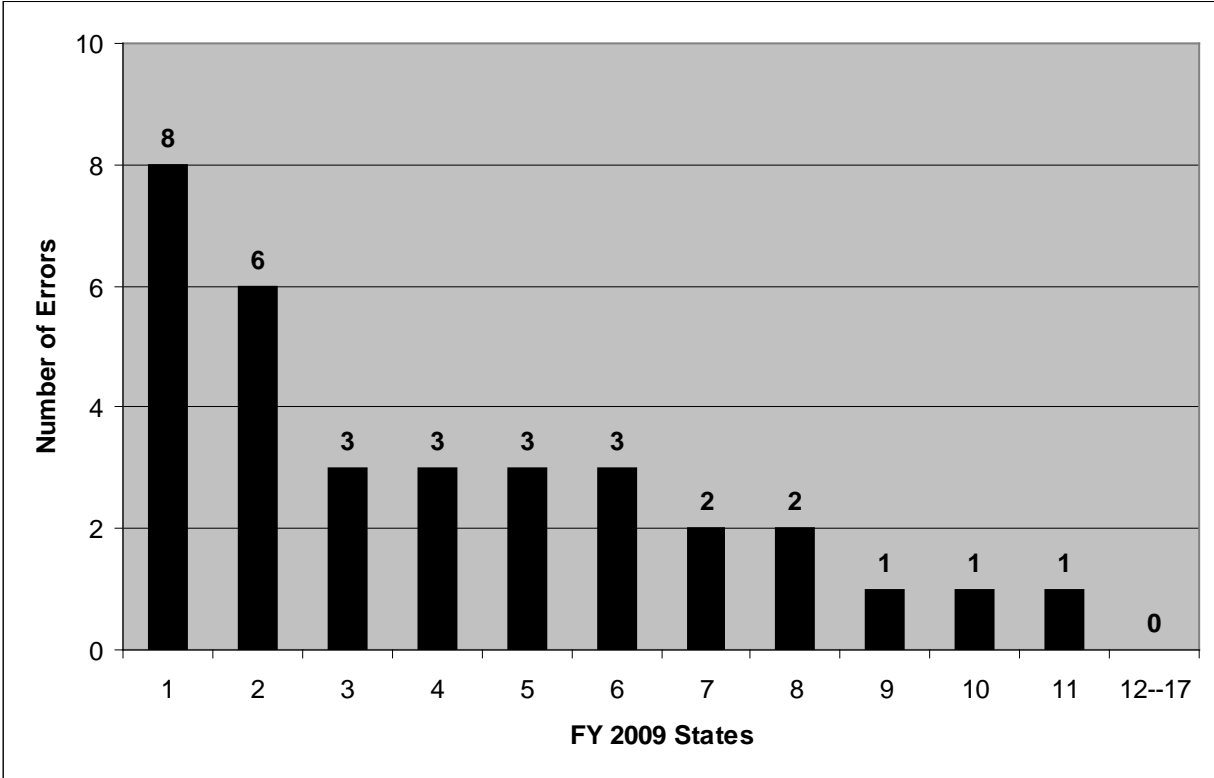
Of the 17 FY 2009 states, one state has a total Medicaid FFS data processing error amount of more than $21,000, representing 29.6 percent of the total dollar amount of Medicaid FFS data processing errors identified. Three states have total error amounts in the $10,000 to $15,000 range. Two states have a total error amount of approximately $5,000. Three states have a total error amounts less than $1,000. One state has a total error amount of less than $1. Six states have no Medicaid FFS data processing review errors. Refer to Figure 21.

Figure 21 Medicaid FFS Total Dollar Amount of Data Processing Errors Across States
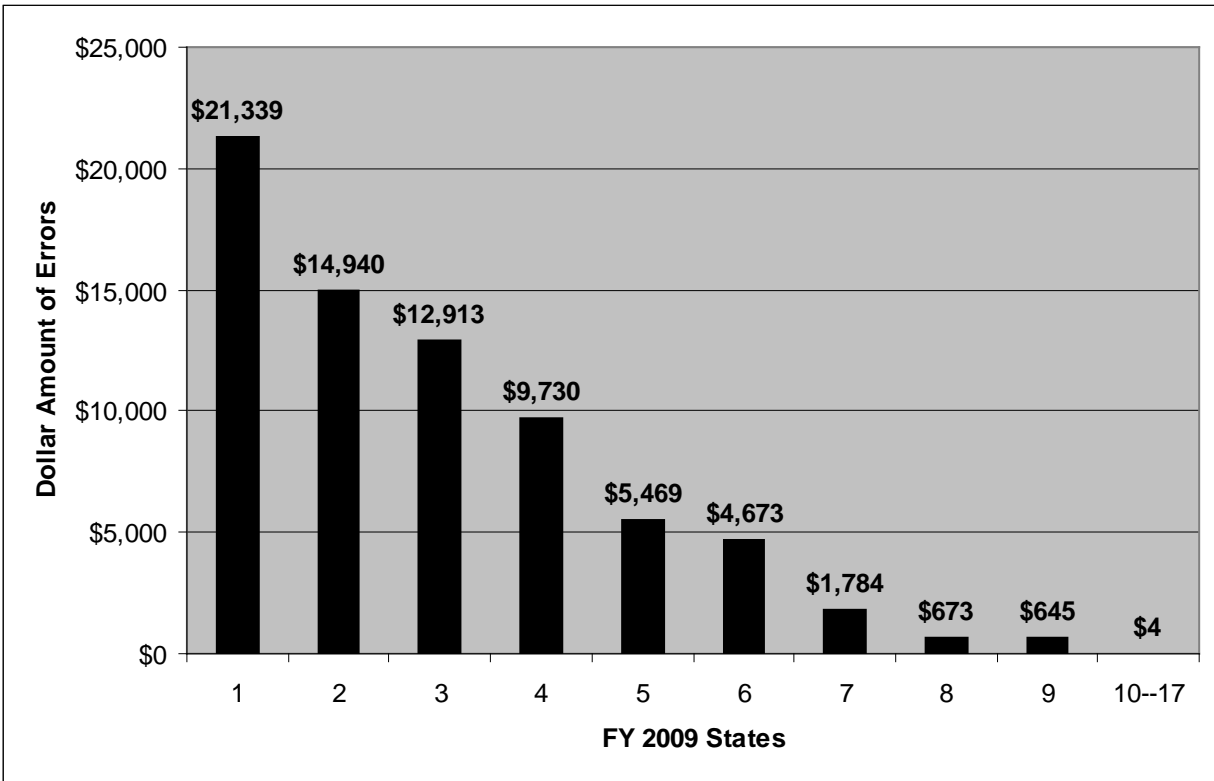
Medicaid Managed Care Component Payment Error Rate

Table 8 presents the 2010 national Medicaid managed care error rate and the projected dollars in error. Further, the table presents both the upper and the lower 90 percent confidence level percentages for each. For the dollars paid in error, the table separately shows the total Medicaid and the federal share of the overpayments, underpayments, and total payments.

An important distinction between FFS and managed care reviews is that managed care payments are only evaluated through the Data Processing component of the review process, whereas most FFS claims are also reviewed through the Medical Review process.

Table 8 National 2010 Medicaid Managed Care Component Payment Error Rate and Projected Dollars in Error

	SAMPLE SIZE	NATIONAL PAYMENT ERROR RATE ESTIMATE	LOWER CONFIDENCE INTERVAL (90%)	UPPER CONFIDENCE INTERVAL (90%)
ERROR RATE	3,938	0.13%	0.04%	0.21%
TOTAL	**TOTAL CLAIMS PAID**	**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
MEDICAID MANAGED CARE	$ 81,422,747,686	$ 102,874,755	$ 31,667,152	$ 174,082,357
FEDERAL SHARE	$ 54,916,614,162	$ 67,354,660	$ 20,907,911	$ 113,801,410
OVERPAYMENTS		**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
MEDICAID MANAGED CARE		$ 102,419,231	$ 31,214,348	$ 173,624,115
FEDERAL SHARE		$ 67,030,631	$ 20,585,991	$ 113,475,270
UNDERPAYMENTS		**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
MEDICAID MANAGED CARE		$ 455,523	$ (297,597)	$ 1,208,644
FEDERAL SHARE		$ 324,030	$ (211,691)	$ 859,751

The estimate of the national managed care error rate is 0.13 percent for the Medicaid program, with a margin of error of +/- 0.09 percent. The estimated total Medicaid dollars in error is approximately $102.9 million, and the federal portion of the dollars in error is approximately $67.3 million. Almost all of the dollars in error are overpayments.

Figure 22 presents Medicaid managed care payment error rates from FY 2007 through FY 2009. The graph also shows a linear trend line for the same time period.

Figure 22 State Medicaid Managed Care Component Payment Error Rates
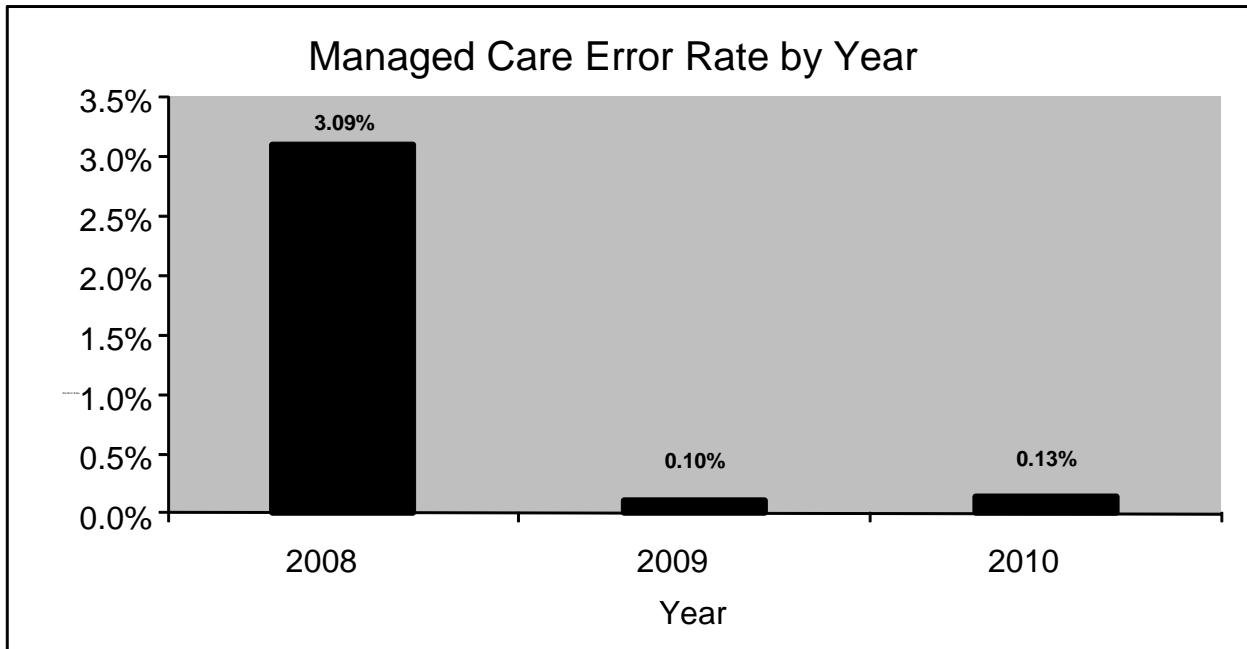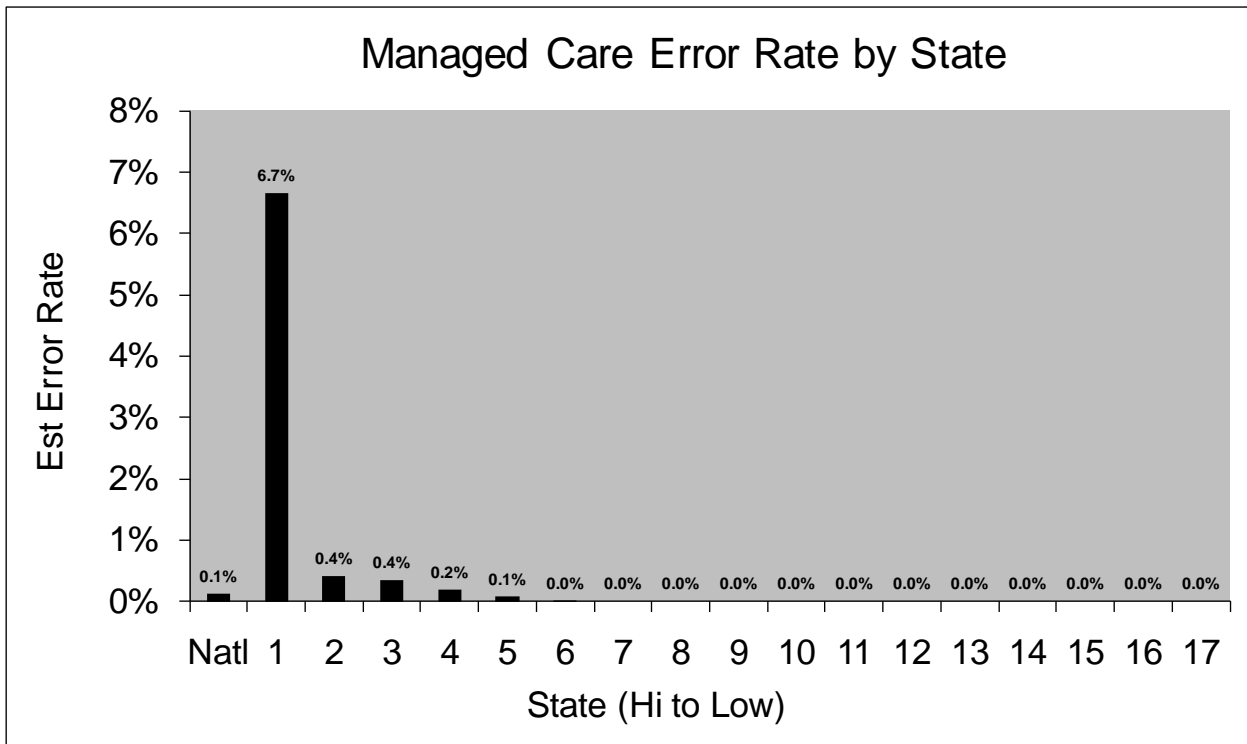
Managed Care Error Rate by Year

Figure 23 presents Medicaid managed care payment error rates for FY 2009 states.

Figure 23 Medicaid Managed Care Payment Error Rates for States

Managed Care Error Rate by State

Medicaid Managed Care Payment Errors by Type of Error

Of the Medicaid managed care payments projected to be in error due to data processing errors found, the types of errors with the highest dollar amount in error include:

- "**Non-Covered Service**" errors (58 percent), followed by
- "**Administrative/Other**" errors (34 percent), and
- "**Duplicate Item**" errors (2 percent).

Overpayments and Underpayments

A total of 3,938 managed care payments were reviewed for inclusion in the PERM FY 2009 measurement. All managed care payments were subjected to independent data processing reviews.

Of the 3,938 managed care payments reviewed, 28 errors were found.

- 27 overpayments were found with a total value of $1,573 or 90.5 percent of the improper payments attributable to managed care reviews;
- 1 underpayment was found with a total value of $166 or 9.5 percent of the improper payments attributable to managed care reviews.

Table 9 summarizes overpayments and underpayments by type of review.

Table 9 Summary of Medicaid Overpayments and Underpayments

	OVERPAYMENTS		UNDERPAYMENTS	
	NUMBER OF PAYMENT ERRORS	DOLLAR AMOUNT OF ERRORS	NUMBER OF PAYMENT ERRORS	DOLLAR AMOUNT OF ERRORS
FFS Medical Review	182	$ 298,517	7	$ 65,814
FFS Data Processing	30	$ 71,281	3	$ 889
Managed Care	27	$ 1,573	1	$ 166
Eligibility	611	$ 345,935	17	$ 702
Total	**850**	**$ 717,306**	**28**	**$ 67,571**

Medicaid Managed Care Error Analysis

Of the 17 states selected this measurement, 14 states have a Medicaid managed care program. The universe for the managed care component consisted of managed care payments made on behalf of beneficiaries between October 1, 2008 and September 30, 2009. A total of 3,938 managed care sampling units were reviewed. Medicaid managed care sampling units were subject to a data processing review only.

Table 10 shows a total of 28 identified errors, representing $1,739 in payment errors.[7] The most common types of errors are non-covered service (67.9 percent), managed care payment (17.9 percent), and duplicate item (7.1 percent) errors. The most expensive types of errors are non-covered service errors (86.1 percent), pricing errors (9.5 percent), and duplicate item errors (2.3 percent).

Table 10 Medicaid Managed Care Errors by Cost Per Error

ERROR CODE	ERROR TYPE	NUMBER OF ERRORS		DOLLARS IN ERROR		COST PER ERROR
		NUMBER OF PAYMENT ERRORS	% OF TOTAL NUMBER OF ERRORS	DOLLARS IN ERROR	% OF TOTAL DOLLARS IN ERROR	
DP02	Not Covered Service	19	67.9%	$ 1,499	86.1%	$ 79
DP09	Managed Care Payment Error	5	17.9%	$ 5	0.3%	$ 1
DP01	Duplicate Item	2	7.1%	$ 40	2.3%	$ 20
DP05	Pricing Error	1	3.6%	$ 166	9.5%	$ 166
DP10	Administrative/Other	1	3.6%	$ 31	1.8%	$ 31
DP03	Managed Care Service	0	0.0%	$ 0	0.0%	$ 0
DP04	Third-party Liability	0	0.0%	$ 0	0.0%	$ 0
DP06	Logic Edit	0	0.0%	$ 0	0.0%	$ 0
DP07	Data Entry Error	0	0.0%	$ 0	0.0%	$ 0
DP08	Rate Cell Error	0	0.0%	$ 0	0.0%	$ 0
	Total	28	100%	$ 1,739	100%	$ 62
Note that details might slightly differ from the sum due to rounding differences.						

Table 10 shows that the 28 managed care errors are distributed among five error types: non-covered service (19 errors), managed care payment (5 errors), duplicate item (2 errors), administrative/other (1 errors), and pricing (1 error).

Nineteen errors are DP02 errors, or non-covered service errors, where state policies indicated that the service was not payable by Medicaid under the state plan or for the coverage category under which the person was eligible. Non-covered service errors total $1,499. It is important to note that all 19 DP02 errors were found in one state and therefore these findings should not be interpreted to indicate a national error trend.

Five errors are DP09 errors, or managed care payment errors, where the beneficiary was enrolled in managed care, but was assigned the wrong payment amount and an adjustment for correct payment was made, but after the 60 day window. Managed care payment errors total $5 and have an average cost per error of $1.

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[7] Note that detail tables might not exactly sum to this amount due to rounding.

The most expensive types of errors are: non-covered service errors, representing $1,499; pricing errors, representing $166; and duplicate item errors, representing $40.

Among all Medicaid managed care errors, non-covered service errors represent the most common (67.9 percent) and the most expensive (86.1 percent) type of error. Refer to Figure 24.

Figure 24 Medicaid Managed Care "Non-covered Service Errors" Compared to All Other Managed Care Errors
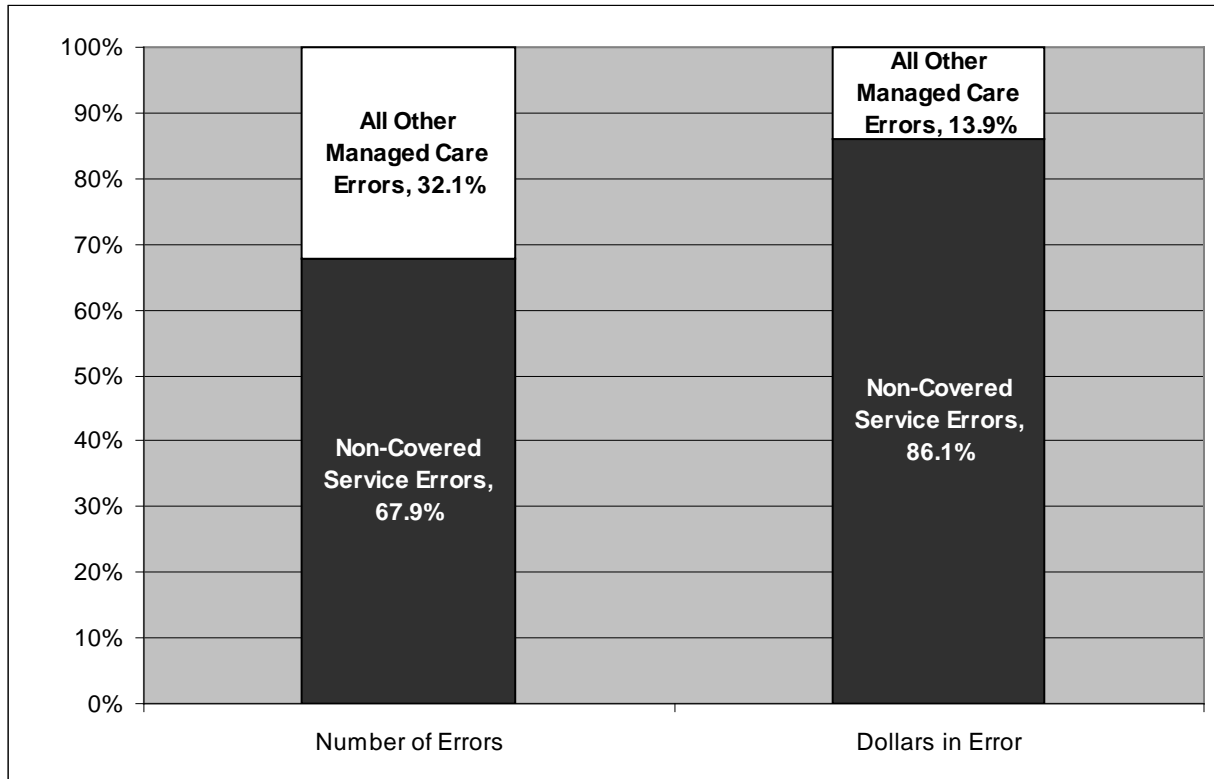
Medicaid Eligibility Component Payment Error Analysis

Table 11 presents the national Medicaid eligibility payment error rate and the projected dollars in error. Further, the table presents both the upper and the lower 90 percent confidence level percentages for each. For the dollars paid in error, the table separately shows the total Medicaid and the federal share of the overpayments, underpayments and total payments.

Table 11 National Medicaid Eligibility Component Payment Error Rate and Projected Dollars in Error

	SAMPLE SIZE	NATIONAL PAYMENT ERROR RATE ESTIMATE	LOWER CONFIDENCE INTERVAL (90%)	UPPER CONFIDENCE INTERVAL (90%)
ERROR RATE	9,064	7.60%	2.26%	12.95%
TOTAL	**TOTAL CLAIMS PAID**	**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
MEDICAID ELIGIBILITY	$ 357,984,470,121	$ 27,224,437,952	$ 8,104,660,955	$ 46,344,214,949
FEDERAL SHARE	$ 239,012,294,122	$ 18,352,616,061	$ 5,435,291,984	$ 31,269,940,138
OVERPAYMENTS		**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
MEDICAID ELIGIBILITY		$ 27,214,135,487	$ 8,091,902,698	$ 46,336,368,277
FEDERAL SHARE		$ 18,345,819,970	$ 5,426,884,294	$ 31,264,755,646
UNDERPAYMENTS		**ESTIMATED DOLLARS IN ERROR**	**LOWER CONFIDENCE LIMIT**	**UPPER CONFIDENCE LIMIT**
MEDICAID ELIGIBILITY		$ 10,302,464	$ 1,547,314	$ 19,057,615
FEDERAL SHARE		$ 6,796,091	$ 1,127,842	$ 12,464,340

The estimate of the national eligibility error rate is 7.60 percent for the Medicaid program, with a margin of error of +/- 5.34 percent. The estimated total Medicaid dollars in error is approximately $27.2 billion, and the federal portion of the dollars in error is approximately $18.4 billion. Almost all of the dollars in error are overpayments.

Figure 25 presents Medicaid eligibility payment error rates from 2008 to 2010. The graph also shows a linear trend line for the same time period.

Figure 25 State Medicaid Eligibility Component Payment Error Rates
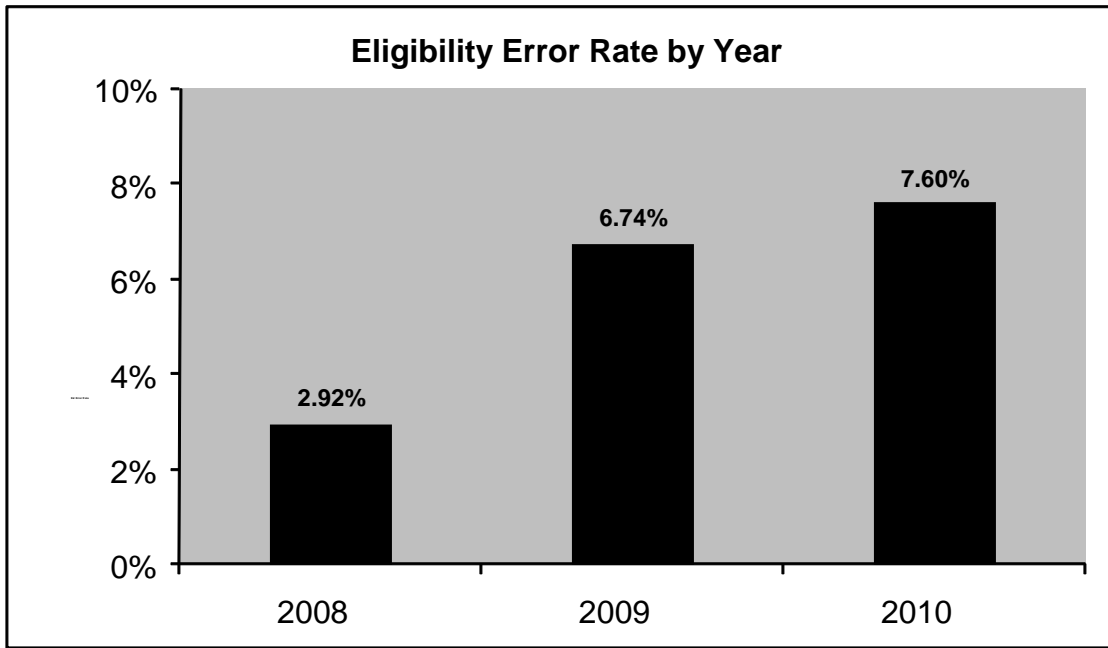
Error rates at the state level for Medicaid eligibility ranged from 0.00 percent to 69.59 percent. The state results are shown in Figure 26.

Figure 26 Medicaid Eligibility Payment Error Rates for FY 2009 States
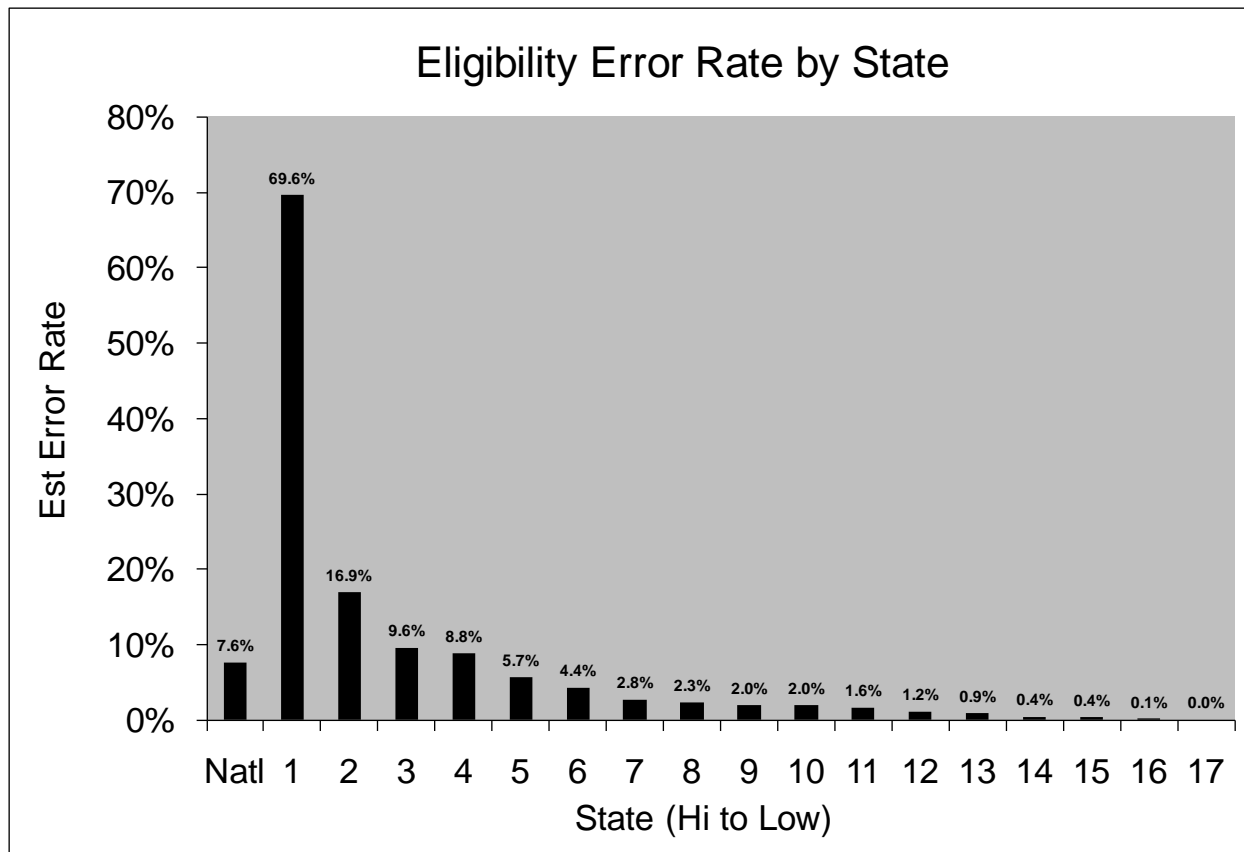
Eligibility Payment Errors by Type of Error

Of the Medicaid eligibility payments projected to be in error due to state errors found, the types of errors with the highest dollar amount in error include:

- "**Undetermined**" errors are the largest source of error (64 percent), followed by
- "**Not Eligible**" errors (26 percent), and
- "**Eligible with ineligible services**" errors (7 percent).

Overpayments and Underpayments

A total of 9,064 eligibility cases were reviewed for inclusion in the measurement. All eligibility cases were reviewed by each state.

Of the 9,064 active cases reviewed for eligibility, 628 cases had eligibility payment errors. An additional 298 cases had an eligibility error but did not have payments associated with the case and thus no eligibility payment errors.

- 611 cases with eligibility errors had overpayment errors valued at $345,935, or 99.8 percent of the improper payments attributable to eligibility reviews;
- 17 cases with eligibility errors had underpayments valued at $702, or 0.2 percent of the improper payments attributable to eligibility reviews.
- 278 cases had an eligibility error that did not impact payment, such as not being eligible but having no payments in the sampled month.

Table 12 summarizes overpayments and underpayments by type of review.

Table 12 Summary of Medicaid Overpayments and Underpayments

	OVERPAYMENTS		UNDERPAYMENTS	
	NUMBER OF PAYMENT ERRORS	DOLLAR AMOUNT OF ERRORS	NUMBER OF PAYMENT ERRORS	DOLLAR AMOUNT OF ERRORS
FFS Medical Review	182	$ 298,517	7	$ 65,814
FFS Data Processing	30	$ 71,281	3	$ 889
Managed Care	27	$ 1,573	1	$ 166
Eligibility	611	$ 345,935	17	$ 702
Total	**850**	**$ 717,306**	**28**	**$ 67,571**

Medicaid Eligibility Additional Error Analysis

States were required to submit their monthly eligibility review and payment review findings in order to calculate state specific and national eligibility error rates. Table 13 shows the review findings for the eligibility measurement for active cases reviewed with errors. It contains the number of cases cited with each eligibility review finding and the percentage of all active cases with errors found in each finding category and the dollars in error found.

Table 13 Medicaid Eligibility Review Findings for Active Cases

FINDINGS	NUMBER OF PAYMENT ERROR CASES	PERCENTAGE OF PAYMENT ERROR CASES	DOLLARS IN ERROR
Undetermined	320	51.0%	$ 221,164
Not eligible	195	31.1%	$ 90,255
Eligible with ineligible services	27	4.3%	$ 22,697
Liability understated	68	10.8%	$ 11,762
Liability overstated	17	2.7%	$ 702
Managed care error, ineligible for managed care	1	0.2%	$ 57
Managed care error, eligible for managed care but improperly enrolled	0	0.0%	$ 0

FINDINGS	NUMBER OF PAYMENT ERROR CASES	PERCENTAGE OF PAYMENT ERROR CASES	DOLLARS IN ERROR
Active Cases in Error	**628**	**100%**	**$ 346,637**

Over half of all the active cases and dollars in error are due to being undetermined cases. Almost one-third of all active cases and one-quarter of the erroneous payments in error are associated with cases found to be not eligible.

Table 14 summarizes the number and dollar amounts of Medicaid eligibility review errors. "Not eligible" and "undetermined case" errors contribute the most number and dollars in error. "Eligible cases with ineligible services" contribute notable number and dollars in error. By definition, the only review findings that result in underpayments are "liability overstated." All detailed findings are held at the state level since the states conduct the eligibility reviews. Eligibility policies and procedures vary by state and state-specific error trends are addressed during the corrective action activities in PERM.

Table 14 Number and Dollar Amount of Medicaid Eligibility Errors for Active Cases (Within Sample)

Error Code	Error Type	Total Number of Payment Errors	Overpayments		Underpayments		Percentage of Total Errors	
			Number of Payment Errors	Dollars in Error	Number of Payment Errors	Dollars in Error	% of Total Number of Payment Errors	% of Total Dollars in Error
U	Undetermined	478	320	$ 221,164	0	$ 0	51.0%	63.8%
NE	Not eligible	275	195	$ 90,255	0	$ 0	31.1%	26.0%
EI	Eligible with ineligible services	32	27	$ 22,697	0	$ 0	4.3%	6.5%
L/U	Liability understated	99	68	$ 11,762	0	$ 0	10.8%	3.4%
L/O	Liability overstated	21	0	$ -	17	$ 702	2.7%	0.2%
MCE1	Managed care error, ineligible for managed care	1	1	$ 57	0	$ 0	0.2%	0.0%
	Total	906	611	$ 345,935	17	$ 702	100%	100%

In addition to the active case eligibility reviews that determined the number of cases in error and the eligibility payment error rate that determined the dollars in error, Table 15 shows the review findings for the negative cases reviewed. It contains the number of cases cited as correct, improperly denied, or improperly terminated. Of the 11.24 percent of negative cases in error, improper terminations account for fewer errors than improper denials.

Table 15 Medicaid Eligibility Review Findings for Negative Cases

STRATUM	NUMBER OF CASES	PERCENTAGE OF CASES	DOLLARS IN ERROR	
Correct	3087	88.8%	$	0
Improper Termination	145	4.2%	$	0
Improper Denial	246	7.1%	$	0
Total Negative Cases	3478	100%	$	0

Our eligibility data are limited as each state under the PERM program performs their own eligibility reviews and is only required to report its eligibility and payment findings.

Review Methodology

Medicaid FFS claims were subjected to data processing review and, if applicable, medical review. Medicaid managed care claims were subjected only to data processing review. If an error was identified during medical review or data processing review, states were given the opportunity to request a difference resolution and /or appeal to CMS. Medicaid eligibility claims were reviewed by states.

Medical Review Methodology

From a state's quarterly sample selection, detailed information on each sampled claim was requested from the state and copies of the relevant medical records were requested from the providers. The medical records were used to perform medical reviews on the claims to validate whether the claim was paid correctly. Each claim was assessed to determine the following:

- Adherence to states' guidelines and policies related to the service type;
- Completeness of medical record documentation to substantiate the claim;
- Medical necessity of the service provided;
- Validation that the service was provided as ordered and billed; and
- Claim was correctly coded.

A medical review error is a payment error that is determined from a review of the medical documentation submitted, the relevant state policies, and a comparison to the information presented on the claim. The medical reviews consisted of reviewing sampled FFS claims for the errors listed in Table 16.

Table 16 Medical Review Errors

ERROR CODE	ERROR	DEFINITION
MR01	No documentation	The provider did not respond to the request for records within the required timeframe.
MR02	Insufficient documentation	The provider did not return information requested or did not submit sufficient documentation for the reviewer to determine whether the claim should have been paid.
MR03	Procedure coding error	The provider performed a procedure but billed using an incorrect procedure code.
MR04	Diagnosis coding error	The provider billed using an incorrect diagnosis and /or DRG.
MR05	Unbundling	The provider billed for the separate components of a procedure code when only one inclusive procedure code should have been billed.
MR06	Number of unit(s) error	The provider billed for an incorrect number of units for a particular service provided.
MR07	Medically unnecessary service	The provider billed for a service determined to have been medically unnecessary based upon the information regarding the patient's condition in the medical record.
MR08	Policy violation	Either the provider billed and was paid for a service that was not in agreement with state policy, or the provider billed and was not paid for a service that, according to state policy, should have been paid.
MR09	Administrative/other	A payment error was discovered during a medical review but was not a MR01 – MR8. The specific nature of the error is recorded.

Data Processing Review Methodology

Data processing reviews were also conducted to validate that each sampled claim was processed correctly based on information found in the state's claims processing system when it was adjudicated compared with the following:

- State specific policies and fee schedules in effect at the time of payment;
- Beneficiary enrollment; and
- Provider participation in the Medicaid program.

A data processing error is a payment error resulting in an overpayment or underpayment that could be avoided through the state's Medicaid Management Information System (MMIS) or other payment system. Claims not processed through a state's MMIS were subject to validation through a paper audit trail, state summary, or other proof of payment. The data processing reviews consisted of reviewing the sampled claims for the errors listed in Table 17.

Table 17 Data Processing Errors

ERROR CODE	ERROR	DEFINITION
DP01	Duplicate item	An exact duplicate of the sampling unit was paid.
DP02	Non-covered service	State policies indicate that the service is not payable by Medicaid under the state plan or for the coverage category under which the person is eligible.
DP03	FFS claim for a managed care service	The beneficiary is enrolled in a managed care plan and the managed care plan should have covered the service rather than paid under FFS.
DP04	Third-party liability	A third-party insurer is liable for all or part of the payment.
DP05	Pricing error	Payment for the service does not correspond with the pricing schedule for that service.
DP06	Logic edit	A system edit was not in place based on policy or a system edit was in place but was not working correctly and the sampling unit was paid (e.g., incompatibility between gender and procedure, or ineligible beneficiary or provider).
DP07	Data entry error	Clerical error in the data entry of the sampling unit.
DP08	Rate cell error	The beneficiary was enrolled in managed care and payment was made, but for the wrong rate cell.
DP09	Managed care payment error	The beneficiary was enrolled in managed care, but was assigned the wrong payment amount.
DP10	Administrative/other	A payment error was discovered during a data processing review but the error was not a DP01 – DP09 error. The specific nature of the error is recorded.

Difference Resolution

If an error was identified that affected payment, the state was notified and given an opportunity to review the documentation associated with the payment and dispute the error finding. An independent difference resolution review was performed to consider the state's information and to make a final determination. If the state determined additional review was necessary, the state could then appeal the error finding to CMS with the exception of errors where the difference in finding was less than $100.

Errors that were not challenged by the states, not eligible for difference resolution or appeal, or upheld following the difference resolution and appeal process were included in the payment error rate calculation. If a payment error was found in both the data processing review and medical review for a specific claim, the total error amount reported was adjusted to not exceed the total paid amount for the claim, unless the underpayment amount exceeded the original claim amount, such as in the case of zero-paid claims.

Eligibility Review Methodology

After the sample was selected for each sample month, state PERM review staff performed eligibility reviews on each sampled case from the active and negative universe. Each active case was reviewed for eligibility as of the last state action. The eligibility reviews verify that the individual was eligible for the Medicaid program according to state and federal eligibility policies, not whether the state's policies comply with federal law or whether the caseworker acted appropriately on cases. Negative cases were reviewed to verify whether the beneficiary was denied or terminated from the programs correctly.

For each case sampled in the active case universe, claims data were collected for payments made on the behalf of the beneficiary for services received in the sample month and paid in that month and in the four subsequent months. These payments constitute the universe of payments affected by the eligibility review of the sampled cases. Because states perform the eligibility reviews, there is no difference resolution at the federal level for eligibility payment errors.

Upon reviewing a case to verify eligibility, states report their eligibility and payment findings based on the review finding codes in Table 18. Cases can be found eligible, not eligible, undetermined, or eligible but with a payment error (e.g., a portion of the total payments for a reviewed case can be improperly paid, while the rest of the payments were made correctly).

Table 18 Eligibility Review Findings

CODE	REVIEW FINDING	DEFINITION
E	Eligible	An individual beneficiary meets the state's categorical and financial criteria for receipt of benefits under the Medicaid program.
EI	Eligible with ineligible services	An individual beneficiary meets the state's categorical and financial criteria for receipt of benefits under the Medicaid program but was not eligible to receive particular services.
NE	Not eligible	An individual beneficiary is receiving benefits under the program but does not meet the state's categorical and financial criteria for the month eligibility is being verified.
U	Undetermined	A beneficiary case subject to a Medicaid eligibility determination under PERM about which a definitive determination could not be made.
L/O	Liability overstated	The beneficiary paid too much toward his/her liability amount or cost of institutional care and the state paid too little.
L/U	Liability understated	The beneficiary paid too little towards his/her liability amount or cost of institutional care and the state paid too much.
MCE1	Managed care error, ineligible for managed care	Upon verification of residency and program eligibility, the beneficiary is enrolled in managed care but is not eligible for managed care.
MCE2	Managed care error, eligible for managed care but improperly enrolled	Beneficiary is eligible for both the program and for managed care, but not enrolled in the correct managed care plan as of the month eligibility is being verified.

For purposes of this report, undetermined cases are included in the error counts and improper payments. Findings of undetermined occur when, after due diligence, evidence cannot be obtained to make a definitive determination of eligibility on a case.

Claim Categories

Claim categories are listed in Table 19.

Table 19 Claim Categories

CLAIM CATEGORY CODE	CLAIM CATEGORY DESCRIPTION
1	Inpatient Hospital
2	Psychiatric, Mental Health, and Behavioral Health Services
3	Nursing Facility, Intermediate Care Facilities (ICF) and ICF for the Mentally Retarded, Chronic Care Services
4	Outpatient Hospital Services, Practitioners, Clinics
5	Dental and Oral Surgery Services
6	Prescribed Drugs
7	Home Health Services
8	Personal Support Services
9	Hospice Services
10	Therapies, Hearing and Rehabilitation Services
11	Habilitation and Waiver Programs, Adult Day Care and Foster Care
12	Laboratory, X-ray and Imaging Services
13	Vision: Ophthalmology, Optometry and Optical Services
14	Durable Medical Equipment (DME) and supplies, Prosthetic/Orthopedic devices, and Environmental Modifications
15	Transportation and Accommodations
16	Denied Claims
17	Crossover Claims
30	Capitated Care/Fixed Payments
50	Managed Care
99	Unknown