Encounter Data Validation Study Aggregate Report

July 1, 2013 – June 30, 2014

Medi-Cal Managed Care Division
California Department of
Health Care Services

February 2015

HSAG HEALTH SERVICES ADVISORY GROUP

DHCS California Department of HealthCareServices

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SFY 2013–14 Encounter Data Validation Study Aggregate Report

1. EXECUTIVE SUMMARY

Accurate and complete encounter data are critical to assessing quality, monitoring program integrity, and making financial decisions for a managed care program. Therefore, California's Medi-Cal Managed Care program (MCMC) requires its contracted managed care plans (MCPs) to submit high-quality encounter data. The California Department of Health Care Services (DHCS) relies on the quality of the MCP encounter data submissions to accurately and effectively monitor and improve MCMC's quality of care, establish appropriate performance metrics, generate accurate and reliable reports, and obtain complete and accurate utilization information. Beginning in State Fiscal Year (SFY) 2012–13, DHCS contracted with Health Services Advisory Group, Inc. (HSAG), to conduct an Encounter Data Validation (EDV) study. For SFY 2013–14, the goal of the EDV study was to examine the completeness and accuracy of the encounter data submitted to DHCS by the MCPs through a review of the medical records.

Methodology

Medical and clinical records are considered the "gold standard" for documenting access to and the quality of health care services. During the second contract year (SFY 2013–14), HSAG evaluated MCMC encounter data completeness and accuracy via the review of medical records for physician services rendered in calendar year 2012. The study answered the following question:

- Are the data elements *Date of Service*, *Diagnosis Code*, *Procedure Code*, *Procedure Code Modifier*, *Rendering Provider Name*, and *Billing Provider Name* found on the professional encounters complete and accurate when compared to information contained within the medical records?

HSAG conducted the following steps to answer the study question:

- Identified the eligible population and generated random samples from the data extracted from the DHCS data warehouse.
- Procured medical records from providers.
- Reviewed medical records against the submitted encounter data.
- Calculated study indicators.

Key Findings from Medical Record Review

Encounter Data Completeness

- DHCS encounters were moderately supported by the documentation in members' medical records. Statewide, 26.3 percent of the dates of service, 31.6 percent of diagnosis codes, 43.8 percent of procedure codes, 58.5 percent of procedure code modifiers, 25.0 percent of the rendering provider names, and 35.0 percent of the billing provider names identified in the electronic encounter data were not found in the corresponding medical records.
- While DHCS encounters had supporting documentation in the medical records at a moderate level, not all services documented in the medical records were submitted to DHCS (encounter data omission). For instance, 9.2 percent of the dates of service, 34.6 percent of diagnosis codes, 22.5 percent of procedure codes, 46.0 percent of procedure code modifiers, 68.1 percent of the rendering provider names, and 8.6 percent of the billing provider names identified in members' medical records were not found in DHCS's encounter data.
- Omissions identified in the medical records (services located in the encounter data but not supported in the medical record) and omissions in the encounter data (services located in the medical record but not in the encounter data) illustrated discrepancies in the completeness of DHCS's encounter data. Data completeness at the MCP level varied considerably.

Encounter Data Accuracy

- Among the data elements that were evaluated for accuracy, 83.6 percent of diagnosis codes, 77.6 percent of procedure codes, 99.5 percent of procedure code modifiers, 63.0 percent of the rendering provider names, and 68.6 percent of the billing provider names identified in the electronic encounter data were supported by medical record documentation.
- Less than 5 percent of the dates of service present in both data sources accurately represent all five data elements (i.e., *Diagnosis Code*, *Procedure Code*, *Procedure Code Modifier*, *Rendering Provider Name*, and *Billing Provider Name*) when compared to members' medical records.

Based on the study findings, HSAG recommends the following:

- DHCS should review its processes and procedures to ensure that no system issues impact the acceptance of encounter data submitted by the MCPs.
- DHCS should work with MCPs to identify the reasons for incompleteness and/or inaccuracy and develop strategies for encounter data quality improvement.
- DHCS may want to consider requiring the MCPs to develop an encounter-related education program and subsequent audit for their providers.

List of Contracted MCPs

Table 1.1 presents the contracted MCPs included in this study.

Table 1.1—List of Contracted MCPs

MCP Name	MCP Abbreviation	MCP County	Model
AHF Healthcare Centers	AHF	Los Angeles	Specialty
Alameda Alliance for Health	AAH	Alameda	LI
Anthem Blue Cross Partnership Plan	Anthem	Alameda	CP
		Contra Costa	CP
		Fresno	CP
		Kings	CP
		Madera	CP
		Sacramento	GMC
		San Francisco	CP
		Santa Clara	CP
		Tulare	LI
CalOptima	CalOptima	Orange	COHS
CalViva Health	CalViva	Fresno	LI
		Kings	LI
		Madera	LI
Care1st Partner Plan	Care1st	San Diego	GMC
CenCal Health	CenCal	Santa Barbara	COHS
		San Luis Obispo	COHS
Central California Alliance for Health	CCAH	Monterey	COHS
		Santa Cruz	COHS
		Merced	COHS
Community Health Group Partnership Plan	CHG	San Diego	GMC
Contra Costa Health Plan	CCHP	Contra Costa	LI
Gold Coast Health Plan	Gold Coast	Ventura	COHS

MCP Name	MCP Abbreviation	MCP County	Model
Health Net Community Solutions, Inc.	Health Net	Kern	CP
		Los Angeles	CP
		Sacramento	GMC
		San Diego	GMC
		Stanislaus	CP
		Tulare	CP
Health Plan of San Joaquin	HPSJ	San Joaquin	LI
Health Plan of San Mateo	HPSM	San Mateo	COHS
Inland Empire Health Plan	IEHP	Riverside	LI
		San Bernardino	LI
Kaiser North	Kaiser North	Sacramento	GMC
Kaiser South	Kaiser South	San Diego	GMC
Kern Family Health Care	KFHC	Kern	LI
L.A. Care Health Plan	L.A. Care	Los Angeles	LI
Molina Healthcare of California Partner Plan, Inc.	Molina	Riverside	CP
		San Bernardino	CP
		Sacramento	GMC
		San Diego	GMC
Partnership HealthPlan of California	Partnership	Marin	COHS
		Mendocino	COHS
		Napa	COHS
		Solano	COHS
		Sonoma	COHS
		Yolo	COHS
San Francisco Health Plan	SFHP	San Francisco	LI
Santa Clara Family Health Plan	SCFHP	Santa Clara	LI
SCAN Health Plan	SCAN	Los Angeles	Specialty
		Riverside	Specialty
		San Bernardino	Specialty

Overview

Accurate and complete encounter data are critical to assessing quality, monitoring program integrity, and making financial decisions for a managed care program. Therefore, California's Medi-Cal Managed Care program (MCMC) requires its contracted managed care plans (MCPs) to submit high-quality encounter data. The California Department of Health Care Services (DHCS) relies on the quality of these MCP encounter data submissions to accurately and effectively monitor and improve MCMC's quality of care, establish appropriate performance metrics, generate accurate and reliable reports, and obtain complete and accurate utilization information. The completeness and accuracy of these data are essential to the success of DHCS's overall management and oversight of MCMC.

Beginning in State Fiscal Year (SFY) 2012–13, DHCS contracted with Health Services Advisory Group, Inc. (HSAG), to conduct an Encounter Data Validation (EDV) study. During the first contract year, the EDV study focused on an information systems review and a comparative analysis between the encounter data in the DHCS data warehouse and the data in the MCPs' data systems. For SFY 2013–14, the goal of the EDV study was to examine the completeness and accuracy of the encounter data submitted to DHCS by the MCPs through a review of the medical records. HSAG assessed the encounter data submitted by the MCPs operating under the Two-Plan Model (TPM—both local initiative [LI] and commercial plan [CP]), Geographic Managed Care (GMC) model, County Organized Health Systems (COHS) model, and two specialty plans. This report is the aggregate report which focuses on the statewide results, MCP-level variations, and opportunities for DHCS to improve encounter data quality.

Methodology

Medical and clinical records are considered the "gold standard" for documenting access to and the quality of health care services. During the second contract year (SFY 2013–14), HSAG evaluated MCMC encounter data completeness and accuracy via the review of medical records for physician services rendered in calendar year 2012. The study answers the following question:

- Are the data elements in Table 2.1 found on the professional encounters complete and accurate when compared to information contained within the medical records?

Table 2.1—Key Data Elements for Medical Record Review

Key Data Element	
Date of Service	Diagnosis Code
Procedure Code	Procedure Code Modifier
Rendering Provider Name	Billing Provider Name

Note: *Rendering Provider Name* is not a data element in the DHCS encounter data. Therefore, HSAG joined the DHCS encounter data, which contain rendering provider identification numbers, with the DHCS provider data to identify the rendering provider name(s) associated with each sampled case. Additionally, as *Rendering Provider Name* and *Billing Provider Name* are not generally found in members' medical records, results for these elements are limited. To augment the information collected during this study, HSAG captured additional provider information during the procurement process in order to assess the accuracy/completeness of the fields. However, since these elements are not directly accessible through the medical record review process, results from this analysis are limited.

To answer the study question, HSAG conducted the following steps:

- Identified the eligible population and generated samples from the data extracted from the DHCS data warehouse.
- Procured medical records from providers.
- Reviewed medical records against the submitted encounter data.
- Calculated study indicators.

Study Population

To be eligible for the medical record review, a member had to be continuously enrolled in the same county and the same MCP under the same program during the study period, and had to have at least one professional visit during the study period. Because the MCMC enrollment of the Seniors and Persons with Disabilities (SPD) population was not completed until May 2012, the study period for the SPD population was from June 1, 2012, to December 31, 2012. The study period for the non-SPD population was from January 1, 2012, to December 31, 2012. In this report, HSAG refers to "professional visits" as the services that met all criteria in Table 2.2.

Table 2.2—Criteria for Professional Visits Included in the Study

Data Element	Criteria
Claim Type	Claim Type = "4" (Medical/Physician) in the DHCS data warehouse
Provider Type	Certified nurse midwife
	Certified pediatric nurse practitioner and certified family nurse practitioner
	Clinic—otherwise undesignated
	Community clinics
	Group certified pediatric nurse practitioner and certified family nurse practitioner

Data Element	Criteria
	Multi-specialty clinics
	Physicians
	Physicians group
	Podiatrists
	Rural Health Clinics and Federally Qualified Health Centers
Place of Service	Assisted Living Facility
	Emergency Room—Hospital
	Federally Qualified Health Center
	Group Home
	Home
	Independent Clinic
	Office
	Public Health Clinic
	Rural Health Clinic
	Urgent Care Facility
Procedure Code	If all detail lines for a visit had a procedure code starting with "E," "D," or "V," the visit was excluded from the study since these procedure codes are for services outside the scope of work for this study (e.g., durable medical equipment [DME], dental, vision).

Sampling Strategy

HSAG used a two-stage sampling technique to select samples based on the member enrollment and encounter data extracted from the DHCS data warehouse. HSAG first identified all SPD and non-SPD members who met the study population eligibility criteria. Proportional random sampling was then used to select 120 members[1] from the eligible population for each of the 53 participating MCP county combinations based on the eligible population size of each MCP's SPD and non-SPD populations. For example, if 90 percent of the eligible population in an MCP county were non-SPD members, HSAG randomly selected 108 non-SPD members (120 * 90% = 108) and 12 SPD members for a total of 120 sampled members for this MCP county. Secondly, for each selected sampled member, HSAG used the SURVEYSELECT procedure in SAS® to randomly select one professional visit[2] that occurred in the study period (i.e., June 1, 2012, to December 31, 2012, for an SPD member, and January 1, 2012, to December 31, 2012, for a

[1] The sample size 120 is based on a 90 percent confidence level, a margin of error of 6.5 percent, and a theoretical medical record omission rate of 25 percent.

[2] To ensure that the medical record review included all services provided on the same date of service, encounters with the same date of service and same billing and rendering provider were consolidated into one visit for sampling purposes.

non-SPD member). Additionally, to evaluate whether any of the dates of service were omitted from the DHCS data warehouse, HSAG reviewed a second date of service rendered by the same provider during the review period which was closest to the selected date of service and was selected by the provider from the medical records for each sampled member. If a sampled member did not have a second visit with this provider during the review period, HSAG evaluated only one date of service for that member. As such, the final number of cases reviewed was between 120 and 240 cases in total for each MCP county.

Due to the two-stage sampling protocol, the probability of a sample case being selected was dependent on both the distribution of an MCP's SPD and non-SPD population, as well as the distribution of encounters for SPD and non-SPD members, and the calculation of MCP county rates were derived using sample weights. While the distribution of SPD and non-SPD members was accounted for within the first stage using proportional sampling, similar adjustments for encounter distributions could not be made in advance of locating and reviewing medical records. Therefore, in order to calculate a representative rate for the overall population for each MCP county, HSAG assigned weights to the non-SPD and SPD rates based on the volume of professional visits from the non-SPD population in calendar year 2012 and the projected volume of professional visits from the SPD population in 2012. This method ensured that the MCP county results were not over- or underreported for non-SPD and SPD rates.

Since an equal number of cases was selected from each MCP county to ensure an adequate sample size when reporting rates at the MCP county level, additional adjustments were required to aggregate rates at the MCP and statewide level to account for population differences among the MCPs and MCP counties. When reporting MCP or aggregate statewide rates for the overall population, the MCP counties' raw rates were weighted according to the volume of professional visits among the eligible population for each MCP county. Similarly, MCP weighted rates were used and adjusted to calculate the statewide weighted rates. This methodology ensured that no MCP county was over- or underrepresented in the MCP or statewide aggregate rates. HSAG used a similar weighting method to calculate MCP and statewide rates for the SPD population.

Medical Record Procurement

Prior to initiating the medical record procurement, HSAG sent an introduction letter to each MCP outlining the scope of the EDV study and disseminated details specific to the medical record procurement. The letter also announced that HSAG would be using a California-based medical record procurement vendor to collect the medical records and conduct the medical record review. In addition, because the DHCS provider data did not contain provider telephone numbers, HSAG requested each MCP to submit the provider contact information to assist with the medical record procurement.

When the sample was finalized, the associated date of service and service provider were identified for each sampled member. For each provider identified, the vendor first telephoned the provider's office to introduce the study, verified the correct address of the provider's practice location and fax number, and obtained a contact name for the practice. The vendor then faxed a standardized record request letter explaining the purpose of the study and included both a listing of the sampled members from the provider's practice and the required medical record documentation requested. The vendor discussed the most efficient method for the provider to supply the requested documentation—either by fax, direct upload to the vendor's Web portal, or by arranging a convenient time to visit the site and scan the required documents directly into the vendor's secure file transfer protocol (SFTP) site. All electronic medical records were maintained on a secure site, which allowed the vendor's trained certified coders to validate the cases at a centralized location under supervision and oversight. As with all medical record review and research activities, HSAG and its subcontracted vendors have implemented a thorough Health Insurance Portability and Accountability Act of 1996 (HIPAA) compliance and protection program in accordance with federal regulations that includes recurring training as well as policies and procedures that address physical security, electronic security, and day-to-day operations. Based on discussions with DHCS, HSAG did not allow providers to submit medical records via U.S. mail and worked with providers to determine an alternative method for record submission.

Review of Medical Records

Concurrent with record procurement activities, HSAG trained the vendor's certified coding staff on specific study protocols and conducted interrater reliability and rater-to-standard testing. All reviewers had to achieve a 95 percent accuracy rate before they were allowed to review medical records and collect data for the study.

During the medical record review, trained and certified coders first verified whether the sampled date of service from the DHCS encounter data could be found in the member's medical record. If so, the coders determined that the date of service was valid; if not, the coders listed the date of service as a *medical record omission*. The coders then reviewed the services provided on the selected date of service and validated the key data elements in Table 2.1. All findings were entered into an electronic medical record abstraction tool to ensure data integrity.

After the coders evaluated the selected date of service, they determined if the provider submitted medical record documentation for a second date of service in the study period. If the documentation for a second date of service was available, the coder reviewed the services rendered on this date and validated the key data elements associated with the second date of service. If the second date of service was missing from the DHCS data warehouse, it was listed as an *encounter data omission*. The missing values associated with this visit were listed as an omission for each key data element, respectively.

Study Indicators

Once the medical record abstraction was completed, HSAG analysts exported the abstraction data from the electronic tool, reviewed the data, and conducted the analysis. HSAG developed four study indicators to report the medical record review results:

- *Medical record omission rate*: the percentage of dates of service identified in the electronic encounter data that were not found in the members' medical records. HSAG also calculated this rate for the other key data elements in Table 2.1.
- *Encounter data omission rate*: the percentage of dates of service from members' medical records that were not found in the electronic encounter data. HSAG also calculated this rate for the other key data elements in Table 2.1.
- *Accuracy rate of coding*: the percentage of diagnosis codes, procedure codes, procedure code modifiers, billing provider names, and rendering provider names associated with validated dates of service from the electronic encounter data that were correctly coded based on the members' medical records.
- *Overall accuracy rate:* the percentage of dates of service with all data elements coded correctly among all the validated dates of service from the electronic encounter data.

For each study indicator, HSAG used the following schema to assign a percentile ranking to show the performance among all MCPs with reportable rates. The 10th, 25th, 75th, and 90th percentiles were calculated based on MCPs' rates using the UNIVARIATE procedure in SAS. Although 24 MCPs were evaluated in the EDV study, the number of rates used to derive the percentiles may be less than 24 because MCPs with a rate of "NA" were not included in the percentile calculation (refer to Appendix A for the number of rates included for each study indicator).

Table 2.3—Criteria for Percentile Ranking

Percentile Ranking	Study Indicator	Criteria
<10th	Medical record procurement, element accuracy, or all-element accuracy	Rate below the 10th percentile among all MCPs with reportable rates
10th–25th		Rate at or above the 10th percentile but below the 25th percentile among all MCPs with reportable rates
25th–75th		Rate at or above the 25th percentile but below the 75th percentile among all MCPs with reportable rates
75th–90th		Rate at or above the 75th percentile but below the 90th percentile among all MCPs with reportable rates
≥90th		Rate at or above the 90th percentile among all MCPs with reportable rates
NA		No percentile ranking due to small denominator (i.e., <30)

Percentile Ranking	Study Indicator	Criteria
<10th	Medical record omission or encounter data omission	Rate above the 90th percentile among all MCPs with reportable rates
10th–25th		Rate at or below the 90th percentile but above the 75th percentile among all MCPs with reportable rates
25th–75th		Rate at or below the 75th percentile but above the 25th percentile among all MCPs with reportable rates
75th–90th		Rate at or below the 25th percentile but above the 10th percentile among all MCPs with reportable rates
≥90th		Rate at or below the 10th percentile among all MCPs with reportable rates
NA		No percentile ranking due to small denominator (i.e., <30)

For the medical record omission and encounter data omission rates, lower rates represent better performance. Therefore, the percentile ranking criteria are different from those for the element accuracy and all-element accuracy rates(i.e., the percentiles were reversed when assigning percentile ranking so that "≥90th" always represents the top 10 percent performance among the MCPs with reportable rates). Appendix A contains the values for the 10th, 25th, 75th, and 90th percentiles for each study indicator listed in this report. Due to the skewed distribution of results for certain indicators, the percentile ranking notation may differ slightly from the percentile rankings noted in Table 2.3, i.e., 0–≤25th, >25th–<75th, and ≥75th.

Medical Record Procurement Status

After identifying the sample cases, the vendor contacted the providers based on the provider contact information submitted by the MCPs. Table 3.1 shows the medical record procurement status for each MCP. With the exception of cases with valid exclusion reasons, cases without medical records were included in the analysis because the encounter was submitted by the MCP and the members met the eligibility requirements. In addition, the cases without medical records contributed to the medical record omission results in the Encounter Data Completeness section of this report. For example, when no medical records were submitted for a sampled date of service, all diagnosis codes associated with that date of service were treated as a medical record omission. Therefore, if an MCP had a relatively low medical record submission rate, it would generally have a relatively high medical record omission rate for each key data element.

Table 3.1—Medical Record Procurement Status

MCP	Initial Sample Size	Valid Exclusions	Adjusted Sample Size	Number of Records Submitted	Percentage of Records Submitted	Percentile Ranking
AAH	120	0	120	104	**86.7%**	**25th–75th**
AHF	120	0	120	105	**87.5%**	**75th–90th**
Anthem	1,080	0	1,080	573	**53.1%**	**<10th**
CCAH	360	0	360	333	**92.5%**	**75th–90th**
CCHP	120	0	120	86	**71.7%**	**10th–25th**
CHG	120	1	119	104	**87.4%**	**75th–90th**
CalOptima	120	0	120	104	**86.7%**	**25th–75th**
CalViva	360	0	360	252	**70.0%**	**10th–25th**
Care1st	120	0	120	91	**75.8%**	**25th–75th**
CenCal	240	0	240	180	**75.0%**	**25th–75th**
Gold Coast	120	0	120	79	**65.8%**	**<10th**
HPSJ	120	0	120	102	**85.0%**	**25th–75th**
HPSM	120	0	120	93	**77.5%**	**25th–75th**
Health Net	720	4	716	511	**71.4%**	**10th–25th**
IEHP	240	1	239	172	**72.0%**	**10th–25th**
KFHC	120	0	120	97	**80.8%**	**25th–75th**
Kaiser North	120	0	120	120	**100.0%**	**≥90th**
Kaiser South	120	0	120	119	**99.2%**	**≥90th**
L.A. Care	120	0	120	89	**74.2%**	**25th–75th**
Molina	480	5	475	370	**77.9%**	**25th–75th**
Partnership	720	1	719	635	**88.3%**	**75th–90th**
SCAN	360	2	358	299	**83.5%**	**25th–75th**

MCP	Initial Sample Size	Valid Exclusions	Adjusted Sample Size	Number of Records Submitted	Percentage of Records Submitted	Percentile Ranking
SCFHP	120	0	120	103	**85.8%**	**25th–75th**
SFHP	120	0	120	103	**85.8%**	**25th–75th**
Statewide Total	**6,360**	**14**	**6,346**	**4,824**	**76.0%**	**25th–75th**

Although HSAG applied the criteria listed in Table 2.2 during the sampling stage, 14 of 6,360 cases (0.2 percent) did not meet the sampling criteria based on the medical record documentation or the information collected during the record procurement process. Therefore, these cases were excluded from the sample. In general, the invalid samples were caused by the incorrect provider types or place of service codes associated with the encounters. For example, for certain invalid samples, the encounter data showed "Physicians" as the provider type. After contacting the provider, however, it was determined that the provider type was "DME."

Overall, the statewide medical record submission rate was 76.0 percent, with MCPs' rates ranging from 53.1 percent to 100 percent. Table 3.2 lists the reasons for missing medical records, with the main reason being that HSAG was unable to identify valid provider demographic information (e.g., telephone numbers) to procure the medical records. The rendering provider demographic information was sourced from DHCS's encounter data or was submitted by the MCPs for this EDV study. The second reason for missing medical records was that, according to the provider, members did not access care during the review period. This could either mean that provider information in the encounter data was inaccurate or that, although DHCS recorded an encounter, a member did not access care.

Table 3.2—Reasons for Missing Medical Records

Non-Submission Reason	Count	Percent
Unable to identify valid provider demographic information	869	57.1%
According to the provider, member did not access care during review period	348	22.9%
Missing rendering provider information	117	7.7%
According to the provider, not my patient	98	6.4%
Provider refused to release record	54	3.5%
Fee requested by provider	12	0.8%
Non-responsive provider	12	0.8%
Consent required by provider	10	0.7%
According to the provider, incomplete member information	2	0.1%
Total	**1,522**	**100.0%**

In addition, Table 3.3 displays the number and percent of records with one additional date of service selected and submitted to HSAG by the providers. Overall, 27.5 percent of the procured medical records had a second date of service submitted for validation. The MCPs' results ranged from 0.0 percent (Kaiser North and Kaiser South) to 52.4 percent (SFHP). The low submission rate for the second date of service could be due to various reasons (e.g., the member did not have more than one visit with the same provider in the study period, the provider did not follow the instructions to submit the second date of service, or the second date of service submitted was outside of the review period).

Table 3.3—Medical Record Submission Status for Second Date of Service

MCP	Number of Records Submitted	Number of Records with One Additional Date of Service	Percent
AAH	104	38	36.5%
AHF	105	21	20.0%
Anthem	573	163	28.4%
CCAH	333	96	28.8%
CCHP	86	20	23.3%
CHG	104	47	45.2%
CalOptima	104	21	20.2%
CalViva	252	68	27.0%
Care1st	91	21	23.1%
CenCal	180	55	30.6%
Gold Coast	79	19	24.1%
HPSJ	102	25	24.5%
HPSM	93	42	45.2%
Health Net	511	174	34.1%
IEHP	172	44	25.6%
KFHC	97	36	37.1%
Kaiser North	120	0	0.0%
Kaiser South	119	0	0.0%
L.A. Care	89	29	32.6%
Molina	370	112	30.3%
Partnership	635	117	18.4%
SCAN	299	105	35.1%
SCFHP	103	22	21.4%
SFHP	103	54	52.4%
Statewide Total	**4,824**	**1,329**	**27.5%**

Encounter Data Completeness

HSAG evaluated encounter data completeness by identifying differences between the electronic encounter data and the members' medical records. Medical record omission and encounter data omission represent two aspects of encounter data completeness. Medical record omissions occurred when an encounter data element (i.e., *Date of Service*, *Diagnosis Code*, or *Procedure Code*) was not supported by documentation in a member's medical record or the medical record could not be found. Medical record omissions suggest opportunities for improvement within the provider's internal processes, such as billing processes and record documentation.

Encounter data omissions occurred when an encounter data element (i.e., *Date of Service*, *Diagnosis Code*, or *Procedure Code*) was found in a member's medical record but was not present in the electronic encounter data. Encounter data omissions also suggest opportunities for improvement in the areas of claims and encounters submissions and/or processing routes among the providers, MCPs, and DHCS.

HSAG evaluated the *medical record omission* rate and the *encounter data omission* rate using the date of service it selected and an additional date of service the provider selected, if one was available. If more than one additional date of service was available from the medical record, the provider selected the one closest to HSAG's selected date of service. For both rates, lower values indicate better performance.

Date of Service Completeness

Table 3.4 displays the statewide medical record omission and encounter data omission rates for the *Date of Service* data element by population type (i.e., non-SPD; SPD; and the overall population, which includes the SPD and non-SPD populations. The analyses were conducted at the date of service level.

Table 3.4—Date of Service Completeness

	Medical Record Omission Rate		Encounter Data Omission Rate	
Population Type	**Statewide Rate**	**MCP Range**	**Statewide Rate**	**MCP Range**
Non-SPD	26.7%	3.4%–54.5%	9.5%	0.0%–18.9%
SPD	25.5%	3.2%–56.6%	8.3%	0.0%–20.0%
Overall	**26.3%**	**3.3%–55.0%**	**9.2%**	**0.0%–18.7%**

Key findings for medical record omission rates:

- For the overall population, 26.3 percent of the dates of service in the electronic encounter data were not supported by members' medical records (i.e., medical record omission). The relatively high medical record omission rate for the data element *Date of Service* was primarily due to the inability to find evidence that the date of service existed in the medical records; the low medical record submission rates as illustrated in Table 3.1 were also a contributing factor.

- The statewide medical record omission rates for the non-SPD and SPD populations differed from the overall population by 1 percentage point or less.
- For the non-SPD, SPD, and overall populations, MCPs' medical record omission rates varied considerably, ranging from approximately 3 percent (Kaiser South) to approximately 55 percent (Anthem).

Key findings for encounter data omission rates:

- For the overall population, 9.2 percent of the dates of service in the medical records were not in the electronic encounter data (i.e., encounter data omission). Compared to the medical record omission rate, the encounter data omission rate was more than 17 percentage points lower. This is partially due to the low percentage of medical records with a second date of service to validate (refer to Table 3.3). The denominator for encounter data omission is the number of dates of service identified in the medical records, and the numerator is the number of dates of service with no evidence of submission in the electronic encounter data. If no second date of service was available in the medical records for validation, then no date of service would be contributed to the numerator. The 0.0 percent encounter data omission rates for Kaiser South and Kaiser North were because no second dates of service were included in the documentation submitted for the study.
- The statewide encounter data omission rates for the non-SPD and SPD populations differed from the overall population by 1 percentage point or less.
- For the non-SPD, SPD, and overall populations, MCPs' encounter data omission rates ranged from 0 percent to approximately 18 percent.

Table 3.5 and Table 3.6 illustrate detailed information on the completeness of the data element *Date of Service* by MCP and population type.

Table 3.5—Medical Record Omission for Date of Service by MCP

	Non-SPD		SPD		Overall	
MCP	Date of Service Identified in Electronic Encounter Data	Rate*	Date of Service Identified in Electronic Encounter Data	Rate*	Rate	Percentile Ranking
AAH	112	13.4%	41	24.4%	**18.3%**	**25th–75th**
AHF	4	NA	128	30.5%	**30.9%**	**10th–25th**
Anthem	927	54.2%	224	56.6%	**55.0%**	**<10th**
CCAH	306	10.0%	116	7.9%	**9.1%**	**≥90th**
CCHP	99	36.4%	33	12.1%	**26.9%**	**10th–25th**
CHG	120	20.0%	22	NA	**22.2%**	**25th–75th**
CalOptima	112	17.0%	19	NA	**19.2%**	**25th–75th**
CalViva	358	27.6%	53	19.7%	**25.8%**	**25th–75th**
Care1st	83	27.7%	48	18.8%	**23.0%**	**25th–75th**
CenCal	168	24.6%	98	24.3%	**24.4%**	**25th–75th**
Gold Coast	98	30.6%	33	42.4%	**34.9%**	**<10th**
HPSJ	106	18.9%	27	NA	**17.7%**	**75th–90th**
HPSM	80	25.0%	61	21.3%	**22.6%**	**25th–75th**
Health Net	665	31.0%	161	31.4%	**31.1%**	**10th–25th**
IEHP	223	30.6%	44	25.0%	**29.1%**	**10th–25th**
KFHC	116	16.4%	19	NA	**23.5%**	**25th–75th**
Kaiser North	90	13.3%	30	16.7%	**14.7%**	**75th–90th**
Kaiser South	89	3.4%	31	3.2%	**3.3%**	**≥90th**
L.A. Care	119	26.1%	17	NA	**25.6%**	**25th–75th**
Molina	432	23.2%	105	19.1%	**21.7%**	**25th–75th**
Partnership	510	14.2%	285	14.7%	**14.4%**	**75th–90th**
SCAN**	—	—	418	18.9%	**18.9%**	**25th–75th**
SCFHP	111	26.1%	27	NA	**25.0%**	**25th–75th**
SFHP	106	10.4%	44	27.3%	**17.8%**	**75th–90th**
Statewide Total	**5,034**	**26.7%**	**2,084**	**25.5%**	**26.3%**	**25th–75th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Table 3.6—Encounter Data Omission for Date of Service by MCP

	Non-SPD		SPD		Overall	
MCP	Date of Service Identified in Medical Records	Rate*	Date of Service Identified in Medical Records	Rate*	Rate	Percentile Ranking
AAH	100	3.0%	33	6.1%	**4.4%**	**75th–90th**
AHF	3	NA	97	8.2%	**8.8%**	**25th–75th**
Anthem	558	13.8%	130	15.7%	**14.4%**	**10th–25th**
CCAH	305	8.8%	113	5.3%	**7.2%**	**25th–75th**
CCHP	69	8.7%	31	6.5%	**7.8%**	**25th–75th**
CHG	115	16.5%	21	NA	**18.7%**	**<10th**
CalOptima	101	7.9%	16	NA	**9.0%**	**25th–75th**
CalViva	265	6.1%	39	2.3%	**5.2%**	**75th–90th**
Care1st	69	13.0%	40	2.5%	**7.4%**	**25th–75th**
CenCal	148	10.7%	79	13.8%	**12.2%**	**10th–25th**
Gold Coast	74	8.1%	21	NA	**8.6%**	**25th–75th**
HPSJ	98	12.2%	23	NA	**8.6%**	**25th–75th**
HPSM	74	18.9%	55	12.7%	**14.9%**	**10th–25th**
Health Net	516	9.2%	116	2.5%	**7.3%**	**25th–75th**
IEHP	169	8.8%	34	2.8%	**7.2%**	**25th–75th**
KFHC	115	15.7%	14	NA	**17.3%**	**<10th**
Kaiser North	78	0.0%	25	NA	**0.0%¥**	**≥90th**
Kaiser South	86	0.0%	30	0.0%	**0.0%¥**	**≥90th**
L.A. Care	99	11.1%	15	NA	**11.5%**	**25th–75th**
Molina	367	10.6%	90	7.9%	**9.6%**	**25th–75th**
Partnership	461	5.0%	264	8.4%	**6.8%**	**75th–90th**
SCAN	—	—	373	10.9%	**10.9%**	**25th–75th**
SCFHP	85	3.5%	22	NA	**3.8%**	**75th–90th**
SFHP	111	14.4%	40	20.0%	**16.9%**	**10th–25th**
Statewide Total	**4,066**	**9.5%**	**1,721**	**8.3%**	**9.2%**	**25th–75th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

***Note: HSAG displayed "¥" to indicate that the 0.0 percent encounter data omission rates for Kaiser South and Kaiser North were listed as such because no second dates of service were included in the documentation submitted for the study.

Diagnosis Code Completeness

Table 3.7 displays the statewide medical record and encounter data omission rates for the data element *Diagnosis Code* by population type. The analyses were conducted at the diagnosis code level.

Table 3.7—Diagnosis Code Completeness

	Medical Record Omission Rate		Encounter Data Omission Rate	
Population Type	Statewide Rate	MCP Range	Statewide Rate	MCP Range
Non-SPD	32.6%	11.3%–54.9%	31.8%	7.6%–42.5%
SPD	29.2%	10.0%–57.5%	40.9%	28.0%–62.3%
Overall	**31.6%**	**10.8%–55.7%**	**34.6%**	**15.8%–62.5%**

Key findings for medical record omission rates:

- For the overall population, 31.6 percent of the diagnosis codes in the electronic encounter data had no supporting documents in members' medical records (i.e., medical record omission). This rate was only 5.3 percentage points higher than the *Date of Service* medical record omission rate, indicating that omission of the date of service from medical records was the main factor contributing to the *Diagnosis Code* medical record omissions. In the analysis, when no medical records were submitted for a sampled date of service, all diagnosis codes associated with that date of service were treated as a medical record omission.
- The statewide medical record omission rates for the non-SPD and SPD populations differed from the overall population by 2.4 percentage points or less.
- For the non-SPD, SPD, and overall populations, MCPs' medical record omission rates ranged from approximately 10 percent (Kaiser South) to approximately 55 percent (Anthem).
- The diagnosis code most frequently identified in the electronic encounter data but not supported in enrollees' medical records was V20.2 (routine infant or child health check), which accounted for 6.3 percent of the omissions.

Key findings for encounter data omission rates:

- For the overall population, 34.6 percent of the diagnosis codes identified in the medical records were not present in the encounter data, with individual MCP rates ranging from 15.8 percent (Kaiser North) to 62.5 percent (AHF). The statewide encounter data omission rate for the SPD population was 9.1 percentage points higher than the non-SPD population's rate.
- The encounter data omission rate for *Diagnosis Code* exceeded the encounter data omission rate for *Date of Service* by more than 25 percentage points, indicating that the omission of dates of service from encounter data was only one factor contributing to the *Diagnosis Code* encounter data omissions. Other contributing factors included the following:
  - DHCS's encounter data only stores up to two diagnosis codes per encounter record. However, a physician visit using a Centers for Medicare & Medicaid Services (CMS) 1500 form could contain more than two diagnosis codes.
  - Coding errors from provider billing offices.
  - A deficiency in the MCPs' data submission processes.
- The diagnosis codes most frequently found in members' medical records but omitted from electronic encounter data included V04.81 (need for prophylactic vaccination and inoculation, Influenza) and V20.2 (routine infant or child health check), which together only accounted for 2.7 percent of the omissions.

Table 3.8 and Table 3.9 illustrate detailed information on the completeness of the *Diagnosis Code* data element by MCP and population type.

Table 3.8—Medical Record Omission for Diagnosis Code by MCP

	Non-SPD		SPD		Overall	
MCP	Number of Diagnoses Identified in Electronic Encounter Data	Rate*	Number of Diagnoses Identified in Electronic Encounter Data	Rate*	Rate	Percentile Ranking
AAH	177	28.8%	67	32.8%	**30.6%**	**25th–75th**
AHF	8	NA	222	30.2%	**30.9%**	**25th–75th**
Anthem	1,170	54.9%	320	57.5%	**55.7%**	**<10th**
CCAH	436	14.2%	194	13.2%	**13.8%**	**≥90th**
CCHP	145	42.8%	56	32.1%	**38.6%**	**10th–25th**
CHG	187	25.1%	32	28.1%	**26.0%**	**25th–75th**
CalOptima	159	23.3%	31	22.6%	**23.1%**	**75th–90th**
CalViva	554	32.9%	90	20.0%	**30.0%**	**25th–75th**
Care1st	129	33.3%	78	25.6%	**29.2%**	**25th–75th**
CenCal	233	30.2%	151	30.3%	**30.2%**	**25th–75th**
Gold Coast	143	41.3%	57	45.6%	**42.8%**	**<10th**
HPSJ	136	28.7%	46	21.7%	**26.6%**	**25th–75th**
HPSM	123	34.1%	108	25.9%	**28.8%**	**25th–75th**
Health Net	902	34.4%	247	38.5%	**35.6%**	**10th–25th**
IEHP	295	36.2%	75	25.4%	**33.3%**	**10th–25th**
KFHC	180	24.4%	28	NA	**28.5%**	**25th–75th**
Kaiser North	160	31.3%	50	18.0%	**25.9%**	**75th–90th**
Kaiser South	133	11.3%	50	10.0%	**10.8%**	**≥90th**
L.A. Care	165	32.7%	26	NA	**31.7%**	**25th–75th**
Molina	624	30.7%	164	25.1%	**28.8%**	**25th–75th**
Partnership	744	19.5%	472	18.1%	**18.8%**	**75th–90th**
SCAN	—	—	705	23.9%	**23.9%**	**75th–90th**
SCFHP	170	37.1%	46	28.3%	**34.5%**	**10th–25th**
SFHP	156	17.9%	67	37.3%	**26.4%**	**25th–75th**
Statewide Total	**7,129**	**32.6%**	**3,382**	**29.2%**	**31.6%**	**25th–75th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Table 3.9—Encounter Data Omission for Diagnosis Code by MCP

	Non–SPD		SPD		Overall	
MCP	Number of Diagnoses Identified in Medical Records	Rate*	Number of Diagnoses Identified in Medical Records	Rate*	Rate	Percentile Ranking
AAH	162	22.2%	66	31.8%	**26.5%**	**75th–90th**
AHF	11	NA	411	62.3%	**62.5%**	**<10th**
Anthem	1,001	42.5%	292	48.6%	**44.4%**	**10th–25th**
CCAH	528	27.8%	278	38.2%	**32.3%**	**25th–75th**
CCHP	121	31.4%	55	30.9%	**31.2%**	**25th–75th**
CHG	219	36.1%	61	62.3%	**43.9%**	**10th–25th**
CalOptima	188	35.1%	45	46.7%	**37.8%**	**25th–75th**
CalViva	484	24.5%	96	31.0%	**26.0%**	**75th–90th**
Care1st	124	30.6%	107	45.8%	**38.7%**	**25th–75th**
CenCal	261	33.1%	182	47.0%	**40.0%**	**10th–25th**
Gold Coast	111	24.3%	67	53.7%	**34.9%**	**25th–75th**
HPSJ	136	28.7%	50	28.0%	**28.5%**	**75th–90th**
HPSM	134	39.6%	120	33.3%	**35.5%**	**25th–75th**
Health Net	836	32.0%	254	48.3%	**36.6%**	**25th–75th**
IEHP	263	28.5%	86	33.4%	**29.9%**	**25th–75th**
KFHC	209	34.9%	28	NA	**36.1%**	**25th–75th**
Kaiser North	119	7.6%	57	28.1%	**15.8%**	**≥90th**
Kaiser South	146	19.2%	66	31.8%	**24.2%**	**≥90th**
L.A. Care	176	36.9%	36	47.2%	**38.8%**	**25th–75th**
Molina	588	25.9%	199	37.6%	**30.0%**	**25th–75th**
Partnership	738	19.8%	601	33.4%	**27.0%**	**75th–90th**
SCAN	—	—	969	44.4%	**44.4%**	**10th–25th**
SCFHP	140	23.6%	64	48.4%	**30.7%**	**25th–75th**
SFHP	197	35.0%	89	52.8%	**42.8%**	**10th–25th**
Statewide Total	**6,892**	**31.8%**	**4,279**	**40.9%**	**34.6%**	**25th–75th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Procedure Code Completeness

Due to the adjudication history and other anomalies in DHCS's data, HSAG identified duplicate line items with the same member, date of service, provider, procedure code, and procedure code modifier. In accordance with national coding standards, certain procedure codes may be submitted more than once for a given visit (e.g., immunization administration) while others are only allowed to be submitted once (e.g., preventive visit code). HSAG removed the duplicate lines for procedure codes that are limited to one submission for a single visit; duplicate line items were included when acceptable. This approach minimized the amount of bias introduced due to the inability to determine true duplicates within the data.

For physician visits evaluated in the EDV study, the DHCS data warehouse contained 13,442 encounter records for all MCPs after de-duplicating specific line items. There were 492 encounter lines (3.7 percent) that contained non-standard and local procedure codes (collectively referred to as non-standard procedure codes). While encounters containing non-standard procedure codes were included in the study, HSAG could not evaluate the non-standard procedure codes since there were no criteria for comparison. However, by retaining the overall encounters and simply removing the non-standard procedure codes, HSAG was able to validate the dates of service, diagnosis codes, and standard procedure codes. Overall, these 492 encounter lines accounted for 4.2 percent of the sampled physician visits and 4.2 percent of the sampled members as shown in Table 3.10. Additionally, Table 3.11 below displays the top 10 non-standard procedure codes excluded from the EDV study.

Table 3.10—Impact of Non-Standard Procedure Codes

Evaluation Unit	Statewide Total	Number of Evaluation Units with Non-Standard Procedure Code*	Percent
Member	6,346	266	4.2%
Physician Visit	7,118	301	4.2%
Encounter Line	13,442	492	3.7%

* The non-standard procedure codes are defined as any code starting with "X," "Z," "C0," "CH," or codes starting with "C" and a length of three.

Table 3.11—Top 10 Non-Standard Procedure Codes

Non-Standard Procedure Code	Count	Percent
Z7502	70	14.2%
Z1034	42	8.5%
Z2702	26	5.3%
X1500	25	5.1%
Z7610	17	3.5%
Z6410	14	2.8%
X7722	13	2.6%
C07	12	2.4%
C01	10	2.0%
Z6400	9	1.8%

By removing specific duplicate line items and excluding non-standard procedure codes and procedure codes not applicable to medical record review, Table 3.12 displays the statewide medical record and encounter data omission rates for the *Procedure Code* data element by population type. The analyses were conducted at the procedure code level.

Table 3.12—Procedure Code Completeness

	Medical Record Omission Rate		Encounter Data Omission Rate	
Population Type	**Statewide Rate**	**MCP Range**	**Statewide Rate**	**MCP Range**
Non-SPD	44.9%	13.0%–61.3%	25.1%	11.2%–51.8%
SPD	41.5%	16.9%–68.2%	16.5%	5.2%–46.6%
Overall	**43.8%**	**9.3%–66.9%**	**22.5%**	**10.7%–44.7%**

Key findings for medical record omission rates:

- For the overall population, 43.8 percent of the procedure codes in the electronic encounter data were not found in members' medical records (i.e., medical record omission). Individual MCP rates indicated wide variation, with rates ranging from 9.3 percent (Kaiser South) to 66.9 percent (AHF).
- The statewide medical record omission rates for the non-SPD and SPD populations differed from the overall population by 2.3 percentage points or less.
- The potential contributors for the *Procedure Code* medical record omissions are listed below:
  - Medical record could not be located. In the analysis, when no medical records were submitted for a sampled date of service, all procedure codes associated with that date of service were treated as a medical record omission.
  - The provider did not document the services performed in the medical record, despite submitting the procedure code to the MCPs.
  - The provider did not perform the service that was submitted to DHCS.
  - Due to inclusion of the adjudication history, the DHCS encounter data contained additional procedure codes which should not have been included for comparison with the medical records.
- Accounting for 10.2 percent of the omissions, the procedure code most frequently identified in the electronic encounter data but not found in members' medical records was 99213 (office or other outpatient visit for the evaluation and management of an established patient), which requires at least two of the following three key components: (1) an expanded, problem-focused history; (2) an expanded, problem-focused examination; and (3) medical decision making of low complexity. Counseling and coordination of care with other providers or agencies are provided,

consistent with the nature of the problem[s] and the patient's and/or family's needs. Usually, the presenting problem[s] are of low to moderate severity. Physicians typically spend 15 minutes face-to-face with the patient and/or family).

Key findings for encounter data omission rates:

- Overall, 22.5 percent of the procedure codes identified in the medical records were not present in the electronic encounter data. MCP rates varied from 10.7 percent (CalViva) to 44.7 percent (SCFHP).
- The statewide encounter data omission rate for the SPD population was 8.6 percentage points lower than the non-SPD population.
- The potential contributors for the *Procedure Code* encounter data omissions were:
  - Dates of service were omitted from the encounter data; therefore, all procedure codes associated with that date of service were treated as encounter data omissions.
  - The provider submitted non-standard codes instead of standard procedure codes. As the non-standard procedure codes in the DHCS encounter data had been removed from the analysis and HSAG reviewers coded the services documented in the medical records using standard procedure codes, submitting non-standard codes would have contributed to the encounter data omission.
  - The provider made a coding error or did not submit the procedure code despite performing the services.
  - A deficiency from the MCPs in the resubmission of denied or rejected encounters to DHCS. For example, if DHCS rejected certain encounters and the MCP did not resubmit them, procedure codes associated with these encounters would have contributed to the *Procedure Code* encounter data omissions.
  - A lag occurred between the provider's performance of the service and submission of the encounter to the MCPs and/or DHCS.
- The procedure codes most frequently found in members' medical records but omitted from the electronic encounter data included the following two codes and each procedure code accounted for approximately 11 percent of omissions.
  - 90471 (immunization administration [includes percutaneous, intradermal, subcutaneous, or intramuscular injections]; 1 vaccine [single or combination vaccine/toxoid]).
  - 90472 (immunization administration [includes percutaneous, intradermal, subcutaneous, or intramuscular injections]; each additional vaccine [single or combination vaccine/toxoid]).

Table 3.13 and Table 3.14 illustrate detailed information on the completeness of data element *Diagnosis Code* by MCP and population type.

Table 3.13—Medical Record Omission for Procedure Code by MCP

	Non-SPD		SPD		Overall	
MCP	Number of Procedures Identified in Electronic Encounter Data	Rate*	Number of Procedures Identified in Electronic Encounter Data	Rate*	Rate	Percentile Ranking
AAH	242	48.3%	57	43.9%	**46.3%**	**10th–25th**
AHF	10	NA	268	66.8%	**66.9%**	**<10th**
Anthem	2,119	61.3%	377	68.2%	**63.4%**	**<10th**
CCAH	389	15.7%	172	16.9%	**16.2%**	**≥90th**
CCHP	219	51.1%	48	29.2%	**42.5%**	**25th–75th**
CHG	231	28.6%	43	60.5%	**38.1%**	**25th–75th**
CalOptima	279	42.3%	29	NA	**42.1%**	**25th–75th**
CalViva	744	46.3%	91	27.3%	**42.0%**	**25th–75th**
Care1st	208	50.0%	91	19.8%	**33.9%**	**25th–75th**
CenCal	223	30.3%	135	26.7%	**28.5%**	**75th–90th**
Gold Coast	129	39.5%	63	61.9%	**47.6%**	**10th–25th**
HPSJ	245	39.6%	56	30.4%	**36.8%**	**25th–75th**
HPSM	229	51.1%	94	29.8%	**37.1%**	**25th–75th**
Health Net	1,441	43.2%	291	45.5%	**43.8%**	**25th–75th**
IEHP	312	40.0%	66	45.0%	**41.3%**	**25th–75th**
KFHC	279	27.6%	27	NA	**33.3%**	**25th–75th**
Kaiser North	106	26.4%	34	29.4%	**27.6%**	**75th–90th**
Kaiser South	92	13.0%	27	NA	**9.3%**	**≥90th**
L.A. Care	333	59.5%	38	57.9%	**59.2%**	**10th–25th**
Molina	742	38.0%	162	29.1%	**34.9%**	**25th–75th**
Partnership	497	21.5%	407	29.4%	**25.8%**	**75th–90th**
SCAN	—	—	823	43.8%	**43.8%**	**25th–75th**
SCFHP	146	43.8%	36	33.3%	**40.8%**	**25th–75th**
SFHP	243	24.7%	50	38.0%	**30.5%**	**75th–90th**
Statewide Total	**9,458**	**44.9%**	**3,485**	**41.5%**	**43.8%**	**25th–75th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Table 3.14—Encounter Data Omission for Procedure Code by MCP

	Non–SPD		SPD		Overall	
MCP	Number of Procedures Identified in Medical Records	Rate*	Number of Procedures Identified in Medical Records	Rate*	Rate	Percentile Ranking
AAH	153	18.3%	36	11.1%	**15.1%**	**75th–90th**
AHF	4	NA	106	16.0%	**16.2%**	**75th–90th**
Anthem	1,077	20.9%	175	18.6%	**20.2%**	**25th–75th**
CCAH	442	25.1%	165	13.2%	**19.9%**	**25th–75th**
CCHP	146	26.7%	44	22.7%	**25.2%**	**25th–75th**
CHG	217	24.0%	31	45.2%	**30.3%**	**10th–25th**
CalOptima	218	26.1%	25	NA	**27.5%**	**25th–75th**
CalViva	501	11.2%	65	9.0%	**10.7%**	**≥90th**
Care1st	139	25.2%	77	5.2%	**14.6%**	**75th–90th**
CenCal	278	39.3%	116	24.5%	**32.0%**	**10th–25th**
Gold Coast	119	34.5%	28	NA	**27.2%**	**25th–75th**
HPSJ	184	19.6%	43	9.3%	**16.5%**	**25th–75th**
HPSM	154	27.3%	77	14.3%	**18.8%**	**25th–75th**
Health Net	1,047	15.1%	164	5.5%	**12.4%**	**75th–90th**
IEHP	258	25.5%	42	12.8%	**22.0%**	**25th–75th**
KFHC	286	29.4%	18	NA	**27.4%**	**25th–75th**
Kaiser North	96	18.8%	33	27.3%	**22.2%**	**25th–75th**
Kaiser South	108	25.9%	37	29.7%	**27.4%**	**25th–75th**
L.A. Care	194	30.4%	19	NA	**27.7%**	**25th–75th**
Molina	600	22.5%	129	15.1%	**19.9%**	**25th–75th**
Partnership	768	46.2%	368	18.6%	**31.5%**	**10th–25th**
SCAN	—	—	520	11.5%	**11.5%**	**≥90th**
SCFHP	170	51.8%	33	27.3%	**44.7%**	**<10th**
SFHP	247	25.9%	58	46.6%	**35.0%**	**<10th**
Statewide Total	**7,406**	**25.1%**	**2,409**	**16.5%**	**22.5%**	**25th–75th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Procedure Code Modifier Completeness

For the physician visits evaluated in the EDV study, the DHCS data warehouse contained 2,911 encounter records with modifiers for all MCPs. Among them, 443 encounter lines (15.2 percent) contained the non-standard modifier code "ZS." While encounters containing non-standard modifiers were included in the study, HSAG could not evaluate the non-standard modifiers since there were no criteria for comparison. However, by retaining the overall encounters and simply removing the non-standard modifiers, HSAG was able to validate the dates of service, diagnosis codes, procedure codes, and standard procedure code modifiers. Overall, these 443 encounter lines with the "ZS" modifier accounted for 15.7 percent of the sampled physician visits with modifiers and 15.6 percent of the sampled members with modifiers as shown in Table 3.15.

Table 3.15—Impact of Non-Standard Procedure Code Modifier "ZS"

Evaluation Unit	Statewide Total	Number of Evaluation Units with Non-Standard Procedure Code Modifier "ZS"	Percent
Member	1,668	261	15.6%
Physician Visit	1,749	274	15.7%
Encounter Line	2,911	443	15.2%

By removing specific duplicated procedure codes and modifiers, excluding non-standard procedure codes and modifiers, and excluding procedure codes and modifiers not applicable to medical record review, Table 3.16 displays the statewide medical record and encounter data omission rates for the data element *Procedure Code Modifier* by population type. The analyses were conducted at the modifier level.

Table 3.16—Procedure Code Modifier Completeness

	Medical Record Omission Rate		Encounter Data Omission Rate	
Population Type	**Statewide Rate**	**MCP Range**	**Statewide Rate**	**MCP Range**
Non-SPD	57.7%	21.8%–91.9%	45.0%	26.3%–71.4%
SPD	60.2%	32.8%–79.4%	48.5%	12.2%–47.6%
Overall	**58.5%**	**19.2%–72.3%**	**46.0%**	**19.0%–77.6%**

Key findings for medical record omission rates:

- Overall, 58.5 percent of the selected procedure code modifiers in the electronic encounter data were not found in members' medical records (i.e., medical record omission). Individual MCP rates indicated wide variation, with rates ranging from 19.2 percent (Care1st) to 72.3 percent (AAH). Three MCPs did not have denominators large enough (less than 30) to report rates.
- The statewide medical record omission rates for the non-SPD and SPD populations differed from the overall population by 1.7 percentage points or less.

- The potential contributors for the *Procedure Code Modifier* medical record omissions were:
  - Medical records could not be located. In the analysis, when there were no medical records submitted for a sampled date of service, all procedure code modifiers associated with that date of service were treated as a medical record omission.
  - The procedure codes associated with the modifiers were omitted from the medical records.
  - The provider did not document the evidence related to the modifiers in the medical record despite submitting the modifiers to the MCPs.
  - Due to the inclusion of the adjudication history, the DHCS encounter data contained additional procedure codes and the associated modifiers, which should not have been included for comparison with the medical records.
- The modifiers most frequently identified in the electronic encounter data but not found in the members' medical record included:
  - 26 (professional component of a global service or procedure) which accounted for 22.0 percent of the omissions.
  - SL (state supplied vaccine) which accounted for 20.9 percent of the omissions.
  - 25 (significant separately identifiable evaluation and management service by the same provider on a day of a procedure) which accounted for 13.2 percent of the omissions.

Key findings for encounter data omission rates:

- Overall, 46.0 percent of the procedure code modifiers identified in the medical records were not present in the encounter data. Individual MCP rates indicated considerable variation, with rates ranging from 19.0 percent (KFHC) to 77.6 percent (SFHP). Seven MCPs did not have denominators large enough (less than 30) to report rates.
- The statewide encounter data omission rates for the non-SPD and SPD populations differed from the overall population by 2.5 percentage points or less.
- The potential contributors for *Procedure Code Modifier* encounter data omissions were:
  - Dates of service were omitted from the encounter data; therefore, all procedure code modifiers associated with that date of service were treated as encounter data omissions.
  - The procedure codes were omitted from the encounter data; therefore, all procedure code modifiers corresponding to those procedure codes were treated as encounter data omissions.

  - The DHCS encounter data format only allowed for one modifier field for MCPs using the Encounter Data Element Dictionary[3] while allowing four modifier fields for MCPs using the Standard 35C file format.[4]
  - The provider submitted the non-standard codes instead of the standard procedure code modifiers, made a coding error, or did not submit the procedure code modifiers despite performing the specific services.
- The procedure code modifier most frequently found in members' medical records but omitted from the electronic encounter data was 25 (significant, separately identifiable evaluation and management service by the same provider on a day of a procedure), which accounted for 88.7 percent of the omissions.

It is important to note that the procedure code modifiers are significant as a means to report or indicate that the service or procedure performed has been altered by a "specific circumstance," but has not changed in its definition or code. Modifiers also enable health care professionals to effectively respond to payment policy requirements established by other entities. The modifiers are essential tools in the coding process to clarify how services should be paid, and further explain or qualify a procedure code. The procedure code modifiers, also referred to as Level I modifiers, are used to supplement information or adjust care descriptions to provide additional details concerning a procedure or service provided by a physician. Coding modifiers help to further describe a procedure code without changing its definition. The relatively high medical record omission and encounter data omission rates may suggest that many of the providers are not well trained in appropriate modifier usage.

[3] MCPs under the TPM or GMC model were to submit encounter data as required in *Encounter Data Element Dictionary for Managed Care Plans, Version 1.5* (July 2006), prepared by the Payment Systems Division under the Office of Medi-Cal Payment Systems, Management Information/Decision Support System. Note: Version 2.0 was published in April 2013, but was not in use for the encounter data submitted for this study.

[4] COHS MCPs are to submit encounter data according to the requirements of *Paid Claims and Encounters Standard 35C-File—Data Element Dictionary, Version 1.9* (Revised June 2012), prepared by DHCS's Information Technology Services Division, Medi-Cal Applications Support Section. CalOptima, however, submits medical, hospital, and long-term care data according to the Encounter Data Element Dictionary.

Table 3.17 and Table 3.18 illustrate detailed information on the completeness of data element *Procedure Code Modifier* by MCP and population type.

Table 3.17—Medical Record Omission for Procedure Code Modifier by MCP

	Non-SPD		SPD		Overall	
MCP	Number of Modifiers Identified in Electronic Encounter Data	Rate*	Number of Modifiers Identified in Electronic Encounter Data	Rate*	Rate*	Percentile Ranking
AAH	53	67.9%	9	NA	**72.3%**	**<10th**
AHF	2	NA	35	65.7%	**66.5%**	**25th–75th**
Anthem	401	67.4%	78	76.5%	**70.2%**	**10th–25th**
CCAH	89	21.8%	58	32.8%	**26.6%**	**≥90th**
CCHP	59	57.6%	18	NA	**56.8%**	**25th–75th**
CHG	28	NA	9	NA	**71.7%**	**10th–25th**
CalOptima	15	NA	2	NA	**NA**	**NA**
CalViva	181	72.2%	21	NA	**68.6%**	**25th–75th**
Care1st	18	NA	19	NA	**19.2%**	**≥90th**
CenCal	63	42.7%	96	62.3%	**52.4%**	**25th–75th**
Gold Coast	41	53.7%	22	NA	**65.5%**	**25th–75th**
HPSJ	25	NA	7	NA	**47.9%**	**25th–75th**
HPSM	37	91.9%	23	NA	**65.8%**	**25th–75th**
Health Net	273	60.7%	59	79.4%	**65.9%**	**25th–75th**
IEHP	49	48.9%	8	NA	**48.8%**	**25th–75th**
KFHC	112	47.3%	11	NA	**39.3%**	**75th–90th**
Kaiser North	0	NA	0	NA	**NA**	**NA**
Kaiser South	0	NA	0	NA	**NA**	**NA**
L.A. Care	30	63.3%	6	NA	**70.1%**	**10th–25th**
Molina	141	49.5%	32	35.0%	**44.5%**	**75th–90th**
Partnership	90	44.7%	92	49.5%	**47.3%**	**75th–90th**
SCAN	—	—	82	65.3%	**65.3%**	**25th–75th**
SCFHP	31	58.1%	8	NA	**66.6%**	**25th–75th**
SFHP	28	NA	2	NA	**71.9%**	**10th–25th**
Statewide Total	**1,766**	**57.7%**	**697**	**60.2%**	**58.5%**	**25th–75th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Table 3.18—Encounter Data Omission for Procedure Code Modifier by MCP

	Non-SPD		SPD		Overall	
MCP	Number of Modifiers Identified in Medical Records	Rate*	Number of Modifiers Identified in Medical Records	Rate*	Rate*	Percentile Ranking
AAH	28	NA	8	NA	**55.2%**	**10th–25th**
AHF	1	NA	16	NA	**NA**	**NA**
Anthem	204	41.9%	24	NA	**40.0%**	**25th–75th**
CCAH	108	34.6%	46	16.1%	**26.6%**	**75th–90th**
CCHP	38	34.2%	9	NA	**25.2%**	**75th–90th**
CHG	35	71.4%	5	NA	**74.0%**	**10th–25th**
CalOptima	20	NA	5	NA	**NA**	**NA**
CalViva	106	45.9%	16	NA	**44.5%**	**25th–75th**
Care1st	26	NA	18	NA	**29.8%**	**25th–75th**
CenCal	63	41.2%	36	12.2%	**26.8%**	**75th–90th**
Gold Coast	32	40.6%	6	NA	**44.0%**	**25th–75th**
HPSJ	24	NA	4	NA	**NA**	**NA**
HPSM	15	NA	13	NA	**NA**	**NA**
Health Net	161	36.0%	18	NA	**35.1%**	**25th–75th**
IEHP	38	48.4%	7	NA	**47.4%**	**25th–75th**
KFHC	80	26.3%	9	NA	**19.0%**	**≥90th**
Kaiser North	8	NA	0	NA	**NA**	**NA**
Kaiser South	8	NA	3	NA	**NA**	**NA**
L.A. Care	17	NA	2	NA	**NA**	**NA**
Molina	111	44.0%	27	NA	**39.4%**	**25th–75th**
Partnership	99	51.8%	79	47.6%	**49.6%**	**25th–75th**
SCAN	—	—	45	29.9%	**29.9%**	**25th–75th**
SCFHP	28	NA	4	NA	**59.8%**	**10th–25th**
SFHP	35	60.0%	4	NA	**77.6%**	**<10th**
Statewide Total	**1,285**	**45.0%**	**404**	**48.5%**	**46.0%**	**25th–75th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Rendering Provider Name Completeness

Table 3.19 displays the statewide medical record and encounter data omission rates for the data element *Rendering Provider Name* by population type. Because *Rendering Provider Name* was not a data element in the DHCS encounter data, HSAG joined the DHCS encounter data, which contain rendering provider identification numbers, with the DHCS provider data to identify the rendering provider name(s) associated with each sampled case. For certain dates of service, the rendering provider number may have been linked to multiple rendering provider names based on the provider data from DHCS. However, a date of service contributes to only one name when calculating the "Number of Names Identified in DHCS Data System" in Table 3.20.

Table 3.19—Rendering Provider Name Completeness

	Medical Record Omission Rate		Encounter Data Omission Rate	
Population Type	**Statewide Rate**	**MCP Range**	**Statewide Rate**	**MCP Range**
Non-SPD	23.7%	6.3%–77.0%	65.8%	9.6%–100.0%
SPD	28.5%	14.8%–48.7%	73.3%	27.0%–100.0%
Overall	**25.0%**	**7.2%–79.0%**	**68.1%**	**17.5%–100.0%**

Key findings for medical record omission rates:

- For the overall population, 25.0 percent of the rendering provider names associated with the electronic encounter data were not found in members' medical records (i.e., medical record omission). The primary reason for the omission of rendering provider names from the medical records was that the medical records could not be located. In the analysis, when a medical record was not submitted for a sampled date of service, the rendering provider name associated with that date of service was treated as a medical record omission.
- The statewide medical record omission rates for the non-SPD and SPD populations differed from the overall population by 3.5 percentage points or less.
- For the overall population, 11 MCPs did not have denominators large enough (less than 30) to report rates, including seven MCPs where none of the dates of service had rendering provider names identified in the DHCS data system. The medical record omission rates for the remaining 13 MCPs ranged from 7.2 percent (SFHP) to 79.0 percent (Anthem).

Key findings for encounter data omission rates:

- For the overall population, 68.1 percent of the rendering provider names in the medical records were not in the DHCS data system (i.e., encounter data omission), with individual MCP rates ranging from 17.5 percent (SCFHP) to 100.0 percent (AHF, HPSJ, HPSM, Kaiser North, Kaiser South, Partnership, and SCAN).

- The statewide encounter data omission rate for the SPD population was 7.5 percentage points higher than the non-SPD population's rate.
- When the billing provider names were in the encounter data but the rendering provider names were not identified in the DHCS data system, only 16.5 percent of the omitted rendering provider names were the same as the billing provider names based on the documentation in the medical records. This indicated that the billing provider names in the encounter data could not be used as the replacements for the missing rendering provider names for most of the scenarios.
- The potential contributors for *Rendering Provider Name* encounter data omissions were:
  - Dates of service were omitted from the encounter data; therefore, all rendering provider names associated with that date of service were treated as encounter data omissions.
  - MCPs did not populate the rendering provider identification number field or populated the field with an invalid rendering provider identification number when submitting data to DHCS; therefore, the rendering provider names were not identifiable in the DHCS data system.
  - The provider files submitted to DHCS by the MCPs were not complete or accurate; therefore, the rendering provider names were not identifiable in the DHCS data system although the rendering provider identification numbers in the encounter data were valid.
  - DHCS only retains the most current year of provider data from the MCPs.

Table 3.20 and Table 3.21 illustrate detailed information on the completeness of the data element *Rendering Provider Name* by MCP and population type.

Table 3.20—Medical Record Omission for Rendering Provider Name by MCP

	Non-SPD		SPD		Overall	
MCP	Number of Names Identified in DHCS Data System	Rate*	Number of Names Identified in DHCS Data System	Rate*	Rate*	Percentile Ranking
AAH	78	17.9%	28	NA	**19.5%**	**25th–75th**
AHF	0	NA	0	NA	**NA**	**NA**
Anthem	33	77.0%	9	NA	**79.0%**	**<10th**
CCAH	5	NA	7	NA	**NA**	**NA**
CCHP	31	35.5%	12	NA	**34.6%**	**10th–25th**
CHG	22	NA	6	NA	**NA**	**NA**
CalOptima	69	23.2%	9	NA	**23.0%**	**25th–75th**
CalViva	42	37.4%	7	NA	**31.1%**	**25th–75th**
Care1st	51	23.5%	35	17.1%	**20.1%**	**25th–75th**
CenCal	4	NA	0	NA	**NA**	**NA**
Gold Coast	97	32.0%	25	NA	**37.7%**	**10th–25th**
HPSJ	0	NA	0	NA	**NA**	**NA**
HPSM	0	NA	0	NA	**NA**	**NA**
Health Net	139	23.9%	40	48.7%	**30.9%**	**25th–75th**
IEHP	14	NA	6	NA	**NA**	**NA**
KFHC	47	12.8%	7	NA	**25.0%**	**25th–75th**
Kaiser North	0	NA	0	NA	**NA**	**NA**
Kaiser South	0	NA	0	NA	**NA**	**NA**
L.A. Care	78	15.4%	13	NA	**16.8%**	**75th–90th**
Molina	323	21.0%	69	14.8%	**18.9%**	**75th–90th**
Partnership	0	NA	0	NA	**NA**	**NA**
SCAN	—	—	0	NA	**NA**	**NA**
SCFHP	90	26.7%	19	NA	**23.5%**	**25th–75th**
SFHP	64	6.3%	12	NA	**7.2%**	**≥90th**
Statewide Total	**1,187**	**23.7%**	**304**	**28.5%**	**25.0%**	**25th–75th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Table 3.21—Encounter Data Omission for Rendering Provider Name by MCP

	Non-SPD		SPD		Overall	
MCP	Number of Names Identified in Medical Records	Rate*	Number of Names Identified in Medical Records	Rate*	Rate	Percentile Ranking
AAH	94	31.9%	31	29.0%	**30.6%**	**75th–90th**
AHF	3	NA	97	100.0%	**100.0%**	**0–≤25th**
Anthem	535	97.7%	123	97.9%	**97.7%**	**>25th–<75th**
CCAH	303	98.7%	112	94.4%	**96.8%**	**>25th–<75th**
CCHP	66	69.7%	28	NA	**70.4%**	**>25th–<75th**
CHG	114	90.4%	21	NA	**89.0%**	**>25th–<75th**
CalOptima	95	44.2%	16	NA	**47.1%**	**>25th–<75th**
CalViva	256	89.5%	39	84.7%	**88.4%**	**>25th–<75th**
Care1st	69	43.5%	40	27.5%	**35.0%**	**75th–90th**
CenCal	142	98.4%	76	100.0%	**99.2%**	**>25th–<75th**
Gold Coast	73	9.6%	21	NA	**19.9%**	**≥90th**
HPSJ	95	100.0%	23	NA	**100.0%**	**0–≤25th**
HPSM	72	100.0%	54	100.0%	**100.0%**	**0–≤25th**
Health Net	487	78.2%	113	83.9%	**79.8%**	**>25th–<75th**
IEHP	165	91.4%	33	81.6%	**88.8%**	**>25th–<75th**
KFHC	111	63.1%	14	NA	**67.4%**	**>25th–<75th**
Kaiser North	75	100.0%	22	NA	**100.0%**	**0–≤25th**
Kaiser South	86	100.0%	30	100.0%	**100.0%**	**0–≤25th**
L.A. Care	96	31.3%	15	NA	**31.6%**	**75th–90th**
Molina	353	24.4%	85	27.0%	**25.3%**	**75th–90th**
Partnership	461	100.0%	263	100.0%	**100.0%**	**0–≤25th**
SCAN	—	—	365	100.0%	**100.0%**	**0–≤25th**
SCFHP	79	16.5%	20	NA	**17.5%**	**≥90th**
SFHP	107	43.9%	40	72.5%	**56.5%**	**>25th–<75th**
Statewide Total	**3,937**	**65.8%**	**1,681**	**73.3%**	**68.1%**	**>25th–<75th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Billing Provider Name Completeness

Table 3.22 displays the statewide medical record and encounter data omission rates for the data element *Billing Provider Name* by population type. For certain dates of service, the billing provider number may have been linked to multiple billing provider names based on the encounter data from DHCS. However, a date of service only contributes to one name when calculating "Number of Names Identified in Electronic Encounter Data" in Table 3.23.

Table 3.22—Billing Provider Name Completeness

	Medical Record Omission Rate		Encounter Data Omission Rate	
Population Type	**Statewide Rate**	**MCP Range**	**Statewide Rate**	**MCP Range**
Non-SPD	36.2%	14.4%–62.4%	8.8%	0.0%–20.4%
SPD	32.3%	19.7%–61.5%	8.2%	0.0%–20.6%
Overall	**35.0%**	**18.0%–62.1%**	**8.6%**	**0.0%–19.3%**

Key findings for medical record omission rates:

- For the overall population, 35.0 percent of the billing provider names in the electronic encounter data were not found in members' medical records (i.e., medical record omission).
- The primary reason for the billing provider names omitted from the medical records was that the medical records could not be located. In the analysis, when no medical record was submitted for a sampled date of service, the billing provider name associated with that date of service was treated as a medical record omission. In addition, billing provider names are typically not included in medical records, which contributed to the medical record omissions for the *Billing Provider Name* data element.
- The statewide medical record omission rates for the non-SPD and SPD populations were similar to the rate from the overall population, though each population showed a wide range of results. Kaiser North had the lowest overall medical record omission rate (18.0 percent), and Anthem had the highest overall medical record omission rate (62.1 percent).

Key findings for encounter data omission rates:

- For the overall population, 8.6 percent of the billing provider names in the medical records were not in the electronic encounter data (i.e., encounter data omission), with individual MCP rates ranging from 0.0 percent (Kaiser North and Kaiser South) to 19.3 percent (CHG).
- The statewide encounter data omission rates for the non-SPD and SPD populations differed from the overall population by 0.4 percentage point or less.
- Billing provider names were fully populated in the DHCS encounter data. Therefore, all billing provider names omitted from the electronic encounter data were because the corresponding dates of service were omitted from the encounter data.

Table 3.23 and Table 3.24 illustrate detailed information on the completeness of the *Billing Provider Name* data element by MCP and population type.

Table 3.23—Medical Record Omission for Billing Provider Name by MCP

	Non-SPD		SPD		Overall	
MCP	Number of Names Identified in Electronic Encounter Data	Rate*	Number of Names Identified in Electronic Encounter Data	Rate*	Rate	Percentile Ranking
AAH	112	31.3%	41	24.4%	**28.2%**	**25th–75th**
AHF	4	NA	128	32.0%	**32.4%**	**25th–75th**
Anthem	927	62.4%	224	61.5%	**62.1%**	**<10th**
CCAH	306	18.4%	116	19.7%	**19.0%**	**≥90th**
CCHP	99	37.4%	33	30.3%	**34.6%**	**10th–25th**
CHG	120	25.8%	22	NA	**27.6%**	**75th–90th**
CalOptima	112	31.3%	19	NA	**31.3%**	**25th–75th**
CalViva	358	35.6%	53	20.6%	**32.3%**	**25th–75th**
Care1st	83	28.9%	48	20.8%	**24.6%**	**75th–90th**
CenCal	168	33.8%	98	26.9%	**30.4%**	**25th–75th**
Gold Coast	98	34.7%	33	42.4%	**37.5%**	**10th–25th**
HPSJ	106	27.4%	27	NA	**24.7%**	**75th–90th**
HPSM	80	46.3%	61	26.2%	**33.1%**	**25th–75th**
Health Net	665	45.9%	161	44.1%	**45.4%**	**10th–25th**
IEHP	223	35.3%	44	31.9%	**34.4%**	**10th–25th**
KFHC	116	24.1%	19	NA	**29.1%**	**25th–75th**
Kaiser North	90	14.4%	30	23.3%	**18.0%**	**≥90th**
Kaiser South	89	43.8%	31	54.8%	**48.2%**	**<10th**
L.A. Care	119	34.5%	17	NA	**33.5%**	**25th–75th**
Molina	432	28.2%	105	28.6%	**28.4%**	**25th–75th**
Partnership	510	20.2%	285	20.0%	**20.1%**	**75th–90th**
SCAN	—	—	418	32.5%	**32.5%**	**25th–75th**
SCFHP	111	33.3%	27	NA	**30.1%**	**25th–75th**
SFHP	106	27.4%	44	38.6%	**32.3%**	**25th–75th**
Statewide Total	**5,034**	**36.2%**	**2,084**	**32.3%**	**35.0%**	**10th–25th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Table 3.24—Encounter Data Omission for Billing Provider Name by MCP

	Non-SPD		SPD		Overall	
MCP	Number of Names Identified in Medical Records	Rate*	Number of Names Identified in Medical Records	Rate*	Rate	Percentile Ranking
AAH	80	3.8%	33	6.1%	**4.8%**	**75th–90th**
AHF	3	NA	95	8.4%	**9.0%**	**25th–75th**
Anthem	462	13.8%	120	16.6%	**14.7%**	**10th–25th**
CCAH	273	9.4%	98	6.2%	**8.0%**	**25th–75th**
CCHP	68	8.8%	24	NA	**7.0%**	**25th–75th**
CHG	107	16.8%	20	NA	**19.3%**	**<10th**
CalOptima	85	9.4%	15	NA	**10.3%**	**25th–75th**
CalViva	237	4.9%	37	2.5%	**4.4%**	**75th–90th**
Care1st	68	13.2%	39	2.6%	**7.6%**	**25th–75th**
CenCal	125	10.4%	75	14.1%	**12.3%**	**10th–25th**
Gold Coast	70	8.6%	21	NA	**8.9%**	**25th–75th**
HPSJ	87	11.5%	22	NA	**8.1%**	**25th–75th**
HPSM	54	20.4%	49	8.2%	**12.4%**	**10th–25th**
Health Net	390	6.2%	95	1.9%	**5.0%**	**75th–90th**
IEHP	156	7.6%	30	0.0%	**5.5%**	**25th–75th**
KFHC	105	16.2%	14	NA	**17.6%**	**10th–25th**
Kaiser North	77	0.0%	23	NA	**0.0%**	**≥90th**
Kaiser South	50	0.0%	14	NA	**0.0%**	**≥90th**
L.A. Care	86	9.3%	14	NA	**10.2%**	**25th–75th**
Molina	338	10.7%	78	8.2%	**9.8%**	**25th–75th**
Partnership	433	5.3%	247	8.9%	**7.2%**	**25th–75th**
SCAN	—	—	313	11.3%	**11.3%**	**25th–75th**
SCFHP	77	3.9%	22	NA	**4.1%**	**75th–90th**
SFHP	93	17.2%	34	20.6%	**18.7%**	**<10th**
Statewide Total	**3,524**	**8.8%**	**1,532**	**8.2%**	**8.6%**	**25th–75th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Encounter Data Accuracy

Encounter data accuracy was evaluated for dates of services that existed in both the electronic encounter data and the medical records and had values present in both data sources for the evaluated data element. HSAG considered the encounter data elements (i.e., *Diagnosis Code* and *Procedure Code*) accurate if documentation in the medical record supported the values contained in the electronic encounter data. Higher accuracy rates for each data element indicate better performance.

Diagnosis Code Accuracy

Table 3.25 displays the statewide accuracy rates for the data element *Diagnosis Code* by population type. In addition, errors found in the diagnosis coding were separated into two categories: specificity errors and inaccurate codes. Specificity errors occur when the documentation supports a more specific code than was listed in the DHCS encounter data (i.e., abdominal pain unspecified [789.00] when the provider noted during the exam that the abdominal pain was in the right lower quadrant [789.03]). Specificity errors also include diagnosis codes that do not have the required fourth or fifth digit. An inaccurate code occurs when the diagnosis code submitted by the provider should have been selected from a different family of codes based on the documentation in the medical record (i.e., 784.0 [headache] versus the documentation supporting 346.90 [Migraine]). Inaccurate and specificity error codes were collectively considered as the denominator for the error type rates in Table 3.27.

Table 3.25—Diagnosis Code Accuracy

	Accuracy Results		Error Types	
Population Type	**Statewide Rate**	**MCP Range**	**Percent from Inaccurate Code**	**Percent from Specificity Error**
Non-SPD	85.4%	73.0%–92.9%	88.0%	12.0%
SPD	79.6%	61.3%–93.1%	84.6%	15.4%
Overall	83.6%	67.8%–93.7%	87.0%	13.0%

Key findings for accuracy rates:

- For the overall population, 83.6 percent of the diagnosis codes were accurate when the diagnosis codes were present in both the electronic encounter data and the medical record, with MCP rates varying from 67.8 percent (HPSM) to 93.7 percent (CHG).
- The statewide accuracy rate for the SPD population was 5.8 percentage points lower than the non-SPD population.
- For diagnosis coding, the majority of errors were associated with discrepancies between submitted codes and national coding standards rather than specificity errors (87.0 percent versus 13.0 percent from Table 3.25). In general, accuracy errors resulted from inadequate documentation in the medical record to support a given diagnosis code.

Table 3.26 and Table 3.27 illustrate detailed information on the accuracy and error types of the *Diagnosis Code* data element by MCP and population type.

Table 3.26—Accuracy Results for Diagnosis Code by MCP

	Non-SPD		SPD		Overall	
MCP	Number of Diagnoses Present in Both Sources	Rate*	Number of Diagnoses Present in Both Sources	Rate*	Rate	Percentile Ranking
AAH	126	73.0%	45	66.7%	**70.2%**	**<10th**
AHF	3	NA	155	83.9%	**84.2%**	**25th–75th**
Anthem	600	83.3%	137	77.2%	**81.4%**	**10th–25th**
CCAH	377	90.1%	168	83.2%	**87.1%**	**25th–75th**
CCHP	83	85.5%	38	86.8%	**86.1%**	**25th–75th**
CHG	140	92.9%	23	NA	**93.7%**	**≥90th**
CalOptima	122	86.1%	24	NA	**86.4%**	**25th–75th**
CalViva	364	85.0%	61	79.5%	**83.7%**	**25th–75th**
Care1st	86	90.7%	58	93.1%	**92.0%**	**≥90th**
CenCal	167	82.6%	99	86.4%	**84.5%**	**25th–75th**
Gold Coast	84	81.0%	31	87.1%	**83.2%**	**25th–75th**
HPSJ	97	79.4%	36	77.8%	**78.9%**	**10th–25th**
HPSM	81	80.2%	80	61.3%	**67.8%**	**<10th**
Health Net	578	87.0%	150	78.5%	**84.6%**	**25th–75th**
IEHP	187	85.4%	56	75.3%	**82.7%**	**25th–75th**
KFHC	136	87.5%	17	NA	**89.3%**	**75th–90th**
Kaiser North	110	80.9%	41	82.9%	**81.7%**	**10th–25th**
Kaiser South	118	83.9%	45	84.4%	**84.1%**	**25th–75th**
L.A. Care	111	84.7%	19	NA	**81.7%**	**10th–25th**
Molina	431	86.5%	119	90.1%	**87.7%**	**75th–90th**
Partnership	598	88.6%	391	88.1%	**88.3%**	**75th–90th**
SCAN	—	—	523	82.2%	**82.2%**	**25th–75th**
SCFHP	107	88.8%	33	75.8%	**85.0%**	**25th–75th**
SFHP	128	91.4%	42	85.7%	**88.9%**	**75th–90th**
Statewide Total	**4,834**	**85.4%**	**2,391**	**79.6%**	**83.6%**	**25th–75th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Table 3.27—Error Types for Diagnosis Code by MCP

	Non-SPD*		SPD*		Overall*	
MCP	Percent from Inaccurate Code	Percent from Specificity Error	Percent from Inaccurate Code	Percent from Specificity Error	Percent from Inaccurate Code	Percent from Specificity Error
AAH	64.7%	35.3%	NA	NA	**71.5%**	**28.5%**
AHF	NA	NA	NA	NA	**NA**	**NA**
Anthem	91.1%	8.9%	NA	NA	**90.0%**	**10.0%**
CCAH	89.7%	10.3%	NA	NA	**88.6%**	**11.4%**
CCHP	NA	NA	NA	NA	**NA**	**NA**
CHG	NA	NA	NA	NA	**NA**	**NA**
CalOptima	NA	NA	NA	NA	**NA**	**NA**
CalViva	94.4%	5.6%	NA	NA	**95.2%**	**4.8%**
Care1st	NA	NA	NA	NA	**NA**	**NA**
CenCal	NA	NA	NA	NA	**98.7%**	**1.3%**
Gold Coast	NA	NA	NA	NA	**NA**	**NA**
HPSJ	NA	NA	NA	NA	**NA**	**NA**
HPSM	NA	NA	61.3%	38.7%	**66.0%**	**34.0%**
Health Net	89.4%	10.6%	NA	NA	**84.4%**	**15.6%**
IEHP	NA	NA	NA	NA	**80.2%**	**19.8%**
KFHC	NA	NA	NA	NA	**NA**	**NA**
Kaiser North	NA	NA	NA	NA	**NA**	**NA**
Kaiser South	NA	NA	NA	NA	**NA**	**NA**
L.A. Care	NA	NA	NA	NA	**NA**	**NA**
Molina	100.0%	0.0%	NA	NA	**98.8%**	**1.2%**
Partnership	95.0%	5.0%	90.6%	9.4%	**92.7%**	**7.3%**
SCAN	—	—	83.4%	16.6%	**83.4%**	**16.6%**
SCFHP	NA	NA	NA	NA	**NA**	**NA**
SFHP	NA	NA	NA	NA	**NA**	**NA**
Statewide Total	**88.0%**	**12.0%**	**84.6%**	**15.4%**	**87.0%**	**13.0%**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Procedure Code Accuracy

Table 3.28 displays the statewide accuracy rates for the data element *Procedure Code* by population type. In addition, the errors in the procedure codes were categorized into the following three types:

- Higher level of services in medical records: Evaluation and management (E&M) codes documented in the medical records reflected a higher level of service performed by the provider than the E&M code submitted in the encounter. For example, a patient went to the doctor for a follow-up appointment on an earache which was worsening, and all key elements were

documented in the patient note. The physician also changed the patient's medication during this visit. The encounter submitted showed a procedure code of 99212 (established patient self-limited or minor problem). With all key elements documented and a worsening condition, this visit level should have been coded as a higher level of service, or 99213 (established patient low to moderate severity).

- Lower level of services in medical records: E&M codes documented in the medical records reflected a lower level of service than the E&M code submitted in the encounter. For example, a provider's notes were missing or were lacking critical documentation elements of the E&M service, or the problem treated did not warrant a high-level visit. For example, a patient went to the doctor for a follow-up appointment on an earache that was improving and required no further treatment, and no other problems were noted during this visit. The encounter submitted showed a procedure code of 99213 (established patient low to moderate severity). With an improving condition, the medical record reflected a lower level of service provided, or 99212 (established patient self-limited or minor problem).
- Inaccurate codes: The documentation in the medical records did not support the procedure codes billed, or an incorrect procedure code was used in the encounter for scenarios other than the two mentioned above.

Inaccurate codes and codes with higher/lower level of services in medical records were collectively considered as the denominator for the error type rates in Table 3.30.

Table 3.28—Procedure Code Accuracy

	Accuracy Results		Error Types		
Population Type	Statewide Rate	MCP Range	Percent from Inaccurate Code	Percent from Higher Level of Services in Medical Records	Percent from Lower Level of Services in Medical Records
Non-SPD	77.7%	57.5%–93.3%	40.5%	16.6%	42.9%
SPD	77.1%	59.4%–97.3%	24.9%	26.1%	49.0%
Overall	**77.6%**	**58.6%–95.4%**	**35.8%**	**19.4%**	**44.8%**

Key findings for accuracy rates:

- For the overall population, 77.6 percent of the procedure codes were accurate when the procedure codes were present in both the electronic encounter data and the medical record, with MCP rates varying from 58.6 percent (Kaiser North) to 95.4 percent (Care1st).
- The statewide accuracy rates for the non-SPD and SPD populations differed from the overall population by 0.5 percentage points or less.
- For procedure coding, 44.8 percent of the identified errors resulted from providers submitting a higher-level procedure code for services performed than was supported and documented in the medical records (i.e., the procedure code was considered an error due to a lower level of service having been documented in the medical record). Of the remaining errors identified among

procedure codes, 35.8 percent of the identified errors were associated with the use of inaccurate codes, where the reported codes were not supported by national coding standards; and 19.4 percent of the errors were associated with providers submitting codes for a lower level of service than was documented in the member's medical record (i.e., the procedure code was considered an error due to a higher-level procedure code having been documented in the medical record).

Table 3.29 and Table 3.30 illustrate detailed information on the accuracy and error types of the *Procedure Code* data element by MCP and population type.

Table 3.29—Accuracy Results for Procedure Code by MCP

	Non-SPD		SPD		Overall	
MCP	Number of Procedures Present in Both Sources	Rate*	Number of Procedures Present in Both Sources	Rate*	Rate	Percentile Ranking
AAH	125	74.4%	32	59.4%	**67.7%**	**10th–25th**
AHF	3	NA	89	71.9%	**71.0%**	**25th–75th**
Anthem	854	81.6%	133	85.8%	**82.9%**	**25th–75th**
CCAH	327	86.5%	142	80.2%	**83.7%**	**25th–75th**
CCHP	107	79.4%	34	91.2%	**84.0%**	**25th–75th**
CHG	165	89.7%	17	NA	**85.7%**	**75th–90th**
CalOptima	161	81.4%	17	NA	**81.6%**	**25th–75th**
CalViva	430	92.9%	56	92.5%	**92.8%**	**≥90th**
Care1st	104	93.3%	73	97.3%	**95.4%**	**≥90th**
CenCal	160	90.0%	90	85.8%	**88.0%**	**75th–90th**
Gold Coast	78	85.9%	24	NA	**82.0%**	**25th–75th**
HPSJ	148	84.5%	39	89.7%	**86.0%**	**75th–90th**
HPSM	112	61.6%	66	75.8%	**70.9%**	**25th–75th**
Health Net	818	80.4%	144	77.1%	**79.5%**	**25th–75th**
IEHP	187	60.5%	36	71.0%	**63.4%**	**10th–25th**
KFHC	202	87.1%	14	NA	**88.7%**	**75th–90th**
Kaiser North	78	61.5%	24	NA	**58.6%**	**<10th**
Kaiser South	80	57.5%	26	NA	**59.1%**	**<10th**
L.A. Care	135	74.8%	16	NA	**73.7%**	**25th–75th**
Molina	461	78.9%	111	82.6%	**80.2%**	**25th–75th**
Partnership	395	68.5%	301	69.3%	**68.9%**	**10th–25th**
SCAN	—	—	457	78.1%	**78.1%**	**25th–75th**
SCFHP	82	84.1%	24	NA	**85.1%**	**25th–75th**
SFHP	183	82.0%	31	74.2%	**78.6%**	**25th–75th**
Statewide Total	**5,395**	**77.7%**	**1,996**	**77.1%**	**77.6%**	**25th–75th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Table 3.30—Error Type for Procedure Code by MCP

	Non-SPD*			SPD*		
MCP	Percent from Inaccurate Code	Percent from Higher Level of Services in Medical Records	Percent from Lower Level of Services in Medical Records	Percent from Inaccurate Code	Percent from Higher Level of Services in Medical Records	Percent from Lower Level of Services in Medical Records
AAH	37.5%	15.6%	46.9%	NA	NA	NA
AHF	NA	NA	NA	NA	NA	NA
Anthem	52.3%	19.8%	27.9%	NA	NA	NA
CCAH	5.6%	39.7%	54.7%	NA	NA	NA
CCHP	NA	NA	NA	NA	NA	NA
CHG	NA	NA	NA	NA	NA	NA
CalOptima	53.3%	6.7%	40.0%	NA	NA	NA
CalViva	39.2%	10.9%	50.0%	NA	NA	NA
Care1st	NA	NA	NA	NA	NA	NA
CenCal	NA	NA	NA	NA	NA	NA
Gold Coast	NA	NA	NA	NA	NA	NA
HPSJ	NA	NA	NA	NA	NA	NA
HPSM	55.8%	0.0%	44.2%	NA	NA	NA
Health Net	29.4%	9.4%	61.2%	NA	NA	NA
IEHP	35.5%	18.4%	46.1%	NA	NA	NA
KFHC	NA	NA	NA	NA	NA	NA
Kaiser North	6.7%	56.7%	36.7%	NA	NA	NA
Kaiser South	52.9%	14.7%	32.4%	NA	NA	NA
L.A. Care	50.0%	14.7%	35.3%	NA	NA	NA
Molina	29.8%	31.6%	38.6%	NA	NA	NA
Partnership	19.0%	35.1%	45.8%	32.0%	28.4%	39.7%
SCAN	—	—	—	11.2%	15.7%	73.1%
SCFHP	NA	NA	NA	NA	NA	NA
SFHP	63.6%	18.2%	18.2%	NA	NA	NA
Statewide Total	**40.5%**	**16.6%**	**42.9%**	**24.9%**	**26.1%**	**49.0%**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

MCP	Overall*		
	Percent from Inaccurate Code	Percent from Higher Level of Services in Medical Records	Percent from Lower Level of Services in Medical Records
AAH	**20.8%**	**15.5%**	**63.7%**
AHF	**NA**	**NA**	**NA**
Anthem	**55.2%**	**23.1%**	**21.6%**
CCAH	**9.5%**	**45.4%**	**45.1%**
CCHP	**NA**	**NA**	**NA**
CHG	**NA**	**NA**	**NA**
CalOptima	**48.6%**	**5.1%**	**46.3%**
CalViva	**40.4%**	**18.0%**	**41.6%**
Care1st	**NA**	**NA**	**NA**
CenCal	**NA**	**NA**	**NA**
Gold Coast	**NA**	**NA**	**NA**
HPSJ	**NA**	**NA**	**NA**
HPSM	**19.2%**	**0.0%**	**80.8%**
Health Net	**25.1%**	**11.3%**	**63.6%**
IEHP	**30.1%**	**16.2%**	**53.6%**
KFHC	**NA**	**NA**	**NA**
Kaiser North	**14.9%**	**59.5%**	**25.6%**
Kaiser South	**43.8%**	**20.8%**	**35.4%**
L.A. Care	**44.5%**	**19.4%**	**36.2%**
Molina	**24.6%**	**35.0%**	**40.4%**
Partnership	**25.9%**	**31.5%**	**42.5%**
SCAN	**11.2%**	**15.7%**	**73.1%**
SCFHP	**NA**	**NA**	**NA**
SFHP	**52.2%**	**26.7%**	**21.2%**
Statewide Total	**35.8%**	**19.4%**	**44.8%**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Procedure Code Modifier Accuracy

Table 3.31 displays the statewide accuracy rate for the data element *Procedure Code Modifier* by population type. The errors for this data element could not be separated into subcategories and therefore are not presented in Table 3.32.

Table 3.31—Procedure Modifier Accuracy

Population Type	Accuracy Results	
	Statewide Rate	MCP Range
Non-SPD	99.7%	95.9%–100.0%
SPD	98.8%	88.4%–100.0%
Overall	**99.5%**	**94.2%–100.0%**

Key findings for accuracy rates:

- For the overall population, 99.5 percent of the procedure code modifiers were accurate when the procedure code modifiers were present in both the electronic encounter data and medical record.
- In total, 13 MCPs did not have denominators large enough (less than 30) to report rates for the overall population. The remaining MCP rates had relatively small variations ranging from 94.2 percent (CenCal) to 100.0 percent (CalViva, Care1st, Health Net, KFHC, Partnership, and SCAN).
- The statewide accuracy rates for the non-SPD and SPD populations differed from the overall population by 0.7 percentage points or less.

Table 3.32 illustrates detailed information on the accuracy rate of the *Procedure Code Modifier* data element by MCP and population type.

Table 3.32—Accuracy Results for Procedure Code Modifier by MCP

	Non-SPD		SPD		Overall	
MCP	Number of Modifiers Present in Both Sources	Rate*	Number of Modifiers Present in Both Sources	Rate*	Rate*	Percentile Ranking
AAH	17	NA	2	NA	**NA**	**NA**
AHF	0	NA	12	NA	**NA**	**NA**
Anthem	107	100.0%	14	NA	**99.5%**	**25th–75th**
CCAH	70	95.9%	39	100.0%	**97.7%**	**25th–75th**
CCHP	25	NA	8	NA	**95.1%**	**10th–25th**
CHG	10	NA	1	NA	**NA**	**NA**
CalOptima	6	NA	2	NA	**NA**	**NA**
CalViva	66	100.0%	10	NA	**100.0%**	**≥75th**
Care1st	16	NA	14	NA	**100.0%**	**≥75th**
CenCal	39	100.0%	32	88.4%	**94.2%**	**<10th**
Gold Coast	19	NA	3	NA	**NA**	**NA**
HPSJ	14	NA	3	NA	**NA**	**NA**
HPSM	3	NA	11	NA	**NA**	**NA**
Health Net	94	100.0%	12	NA	**100.0%**	**≥75th**
IEHP	20	NA	4	NA	**NA**	**NA**
KFHC	59	100.0%	9	NA	**100.0%**	**≥75th**
Kaiser North	0	NA	0	NA	**NA**	**NA**
Kaiser South	0	NA	0	NA	**NA**	**NA**
L.A. Care	11	NA	0	NA	**NA**	**NA**
Molina	65	100.0%	20	NA	**95.8%**	**25th–75th**
Partnership	44	100.0%	50	100.0%	**100.0%**	**≥75th**
SCAN	—	—	30	100.0%	**100.0%**	**≥75th**
SCFHP	13	NA	1	NA	**NA**	**NA**
SFHP	14	NA	0	NA	**NA**	**NA**
Statewide Total	**712**	**99.7%**	**277**	**98.8%**	**99.5%**	**25th–75th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Rendering Provider Name Accuracy

Table 3.33 displays the statewide accuracy rate for the data element *Rendering Provider Name* by population type. For certain dates of service, the rendering provider number in the DHCS encounter data may have been linked to multiple rendering provider names in the provider data from DHCS. If one of the rendering provider names from the DHCS data approximately matched the name in the medical records (i.e., a typographical error), HSAG considered the names from both sources as a match.

Table 3.33—Rendering Provider Name Accuracy

	Accuracy Results		Error Types	
Population Type	**Statewide Rate**	**MCP Range**	**Percent from Incorrect Names**	**Percent from Illegible Names in Medical Records**
Non-SPD	56.4%	41.5%–96.8%	75.1%	24.9%
SPD	80.6%	76.8%–76.8%	84.6%	15.4%
Overall	**63.0%**	**48.6%–97.4%**	**76.8%**	**23.2%**

Key findings for accuracy rates:

- For the overall population, 63.0 percent of the rendering provider names were accurate when the rendering provider names were present in both the DHCS data system and the medical record.
- In total, 13 MCPs did not have denominators large enough (less than 30) to report rates for the overall population. The remaining MCP rates had wide variations ranging from 48.6 percent (CalOptima) to 97.4 percent (CalViva).
- The statewide accuracy rate for the SPD population was 24.2 percentage points higher than the non-SPD population's rate.
- The majority of errors (76.8 percent) were associated with discrepancies between the name in the medical record and the name in the DHCS data system. The remaining errors (23.2 percent) were due to the illegible names in the medical records.

Table 3.34 and Table 3.35 illustrate detailed information on the accuracy and error types of the *Rendering Provider Name* data element by MCP and population type. Cases with incorrect or illegible names were collectively considered as the denominators for the error type rates in Table 3.35.

Table 3.34—Accuracy Results for Rendering Provider Name by MCP

	Non-SPD		SPD		Overall	
MCP	Number of Names Present in Both Sources	Rate*	Number of Names Present in Both Sources	Rate*	Rate*	Percentile Ranking*
AAH	64	50.0%	22	NA	52.0%	10th–25th
AHF	0	NA	0	NA	NA	NA
Anthem	16	NA	2	NA	NA	NA
CCAH	4	NA	7	NA	NA	NA
CCHP	20	NA	8	NA	NA	NA
CHG	11	NA	3	NA	NA	NA
CalOptima	53	41.5%	7	NA	48.6%	<10th
CalViva	31	96.8%	4	NA	97.4%	≥90th
Care1st	39	56.4%	29	NA	66.7%	25th–75th
CenCal	3	NA	0	NA	NA	NA
Gold Coast	66	81.8%	13	NA	88.4%	75th–90th
HPSJ	0	NA	0	NA	NA	NA
HPSM	0	NA	0	NA	NA	NA
Health Net	91	49.9%	21	NA	57.5%	25th–75th
IEHP	14	NA	6	NA	NA	NA
KFHC	41	75.6%	3	NA	63.9%	25th–75th
Kaiser North	0	NA	0	NA	NA	NA
Kaiser South	0	NA	0	NA	NA	NA
L.A. Care	66	54.5%	10	NA	57.4%	25th–75th
Molina	254	69.9%	58	76.8%	72.3%	25th–75th
Partnership	0	NA	0	NA	NA	NA
SCAN	—	—	0	NA	NA	NA
SCFHP	66	66.7%	16	NA	72.7%	25th–75th
SFHP	60	76.7%	11	NA	86.9%	75th–90th
Statewide Total	**899**	**56.4%**	**220**	**80.6%**	**63.0%**	**25th–75th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Table 3.35—Error Types for Rendering Provider Name by MCP

	Non-SPD*		SPD*		Overall*	
MCP	Percent from Incorrect Names	Percent from Illegible Names in Medical Records	Percent from Incorrect Names	Percent from Illegible Names in Medical Records	Percent from Incorrect Names	Percent from Illegible Names in Medical Records
AAH	56.3%	43.8%	NA	NA	**57.9%**	**42.1%**
AHF	NA	NA	NA	NA	**NA**	**NA**
Anthem	NA	NA	NA	NA	**NA**	**NA**
CCAH	NA	NA	NA	NA	**NA**	**NA**
CCHP	NA	NA	NA	NA	**NA**	**NA**
CHG	NA	NA	NA	NA	**NA**	**NA**
CalOptima	74.2%	25.8%	NA	NA	**80.3%**	**19.7%**
CalViva	NA	NA	NA	NA	**NA**	**NA**
Care1st	NA	NA	NA	NA	**NA**	**NA**
CenCal	NA	NA	NA	NA	**NA**	**NA**
Gold Coast	NA	NA	NA	NA	**NA**	**NA**
HPSJ	NA	NA	NA	NA	**NA**	**NA**
HPSM	NA	NA	NA	NA	**NA**	**NA**
Health Net	76.2%	23.8%	NA	NA	**75.1%**	**24.9%**
IEHP	NA	NA	NA	NA	**NA**	**NA**
KFHC	NA	NA	NA	NA	**NA**	**NA**
Kaiser North	NA	NA	NA	NA	**NA**	**NA**
Kaiser South	NA	NA	NA	NA	**NA**	**NA**
L.A. Care	76.7%	23.3%	NA	NA	**81.0%**	**19.0%**
Molina	67.9%	32.1%	NA	NA	**69.5%**	**30.5%**
Partnership	NA	NA	NA	NA	**NA**	**NA**
SCAN	—	—	NA	NA	**NA**	**NA**
SCFHP	NA	NA	NA	NA	**NA**	**NA**
SFHP	NA	NA	NA	NA	**NA**	**NA**
Statewide Total	**75.1%**	**24.9%**	**84.6%**	**15.4%**	**76.8%**	**23.2%**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Billing Provider Name Accuracy

Table 3.36 displays the accuracy rate for the data element *Billing Provider Name* by population type. As long as the names in the electronic encounter data and the medical records approximately matched, they were treated as a match (e.g., "Rob Smith" versus "Robert Smith").

Table 3.36—Billing Provider Name Accuracy

	Accuracy Results		Error Types	
Population Type	**Statewide Rate**	**MCP Range**	**Percent from Incorrect Names**	**Percent from Illegible Names in Medical Records**
Non-SPD	67.3%	28.0%–91.0%	94.4%	5.6%
SPD	71.7%	54.5%–90.7%	98.1%	1.9%
Overall	**68.6%**	**31.1%–90.9%**	**95.5%**	**4.5%**

Key findings for accuracy rates:

- For the overall population, 68.6 percent of the billing provider names were accurate when the billing provider names were present in both the electronic encounter data and the medical record, with MCP rates ranging widely from 31.1 percent (Kaiser South) to 90.9 percent (Molina).
- The statewide accuracy rates for the non-SPD and SPD populations differed from the overall population by 3.1 percentage points or less.
- The majority of errors (95.5 percent) were associated with discrepancies between the billing provider name in the medical record and the name in the DHCS data system. The remaining errors (4.5 percent) were due to the illegible names in the medical records.

Table 3.37 and Table 3.38 illustrate detailed information on the accuracy and error types of the *Billing Provider Name* data element by MCP and population type. Cases with incorrect or illegible names were collectively considered as the denominators for the error type rates in Table 3.38.

Table 3.37—Accuracy Results for Billing Provider Name by MCP

	Non-SPD		SPD		Overall	
MCP	Number of Names Present in Both Sources	Rate*	Number of Names Present in Both Sources	Rate*	Rate	Percentile Ranking
AAH	77	55.8%	31	77.4%	**65.5%**	**25th–75th**
AHF	2	NA	87	70.1%	**70.8%**	**25th–75th**
Anthem	408	65.6%	95	77.1%	**69.1%**	**25th–75th**
CCAH	246	73.6%	92	72.8%	**73.2%**	**25th–75th**
CCHP	62	74.2%	23	NA	**77.5%**	**25th–75th**
CHG	89	70.8%	15	NA	**75.5%**	**25th–75th**
CalOptima	77	85.7%	13	NA	**83.6%**	**75th–90th**
CalViva	225	86.3%	34	78.4%	**84.6%**	**75th–90th**
Care1st	59	71.2%	38	71.1%	**71.1%**	**25th–75th**
CenCal	110	69.3%	65	78.2%	**73.7%**	**25th–75th**
Gold Coast	64	68.8%	19	NA	**76.2%**	**25th–75th**
HPSJ	77	59.7%	22	NA	**65.0%**	**10th–25th**
HPSM	43	69.8%	45	55.6%	**60.4%**	**10th–25th**
Health Net	359	41.7%	91	54.5%	**45.3%**	**<10th**
IEHP	144	76.5%	30	79.1%	**77.2%**	**25th–75th**
KFHC	88	65.9%	11	NA	**62.8%**	**10th–25th**
Kaiser North	77	89.6%	23	NA	**90.3%**	**≥90th**
Kaiser South	50	28.0%	14	NA	**31.1%**	**<10th**
L.A. Care	78	60.3%	12	NA	**59.9%**	**10th–25th**
Molina	298	91.0%	71	90.7%	**90.9%**	**≥90th**
Partnership	410	79.1%	229	80.2%	**79.7%**	**75th–90th**
SCAN	—	—	275	85.9%	**85.9%**	**75th–90th**
SCFHP	74	70.3%	21	NA	**69.2%**	**25th–75th**
SFHP	77	79.2%	27	NA	**73.7%**	**25th–75th**
Statewide Total	**3,194**	**67.3%**	**1,383**	**71.7%**	**68.6%**	**25th–75th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Table 3.38—Error Types for Billing Provider Name by MCP

	Non-SPD*		SPD*		Overall*	
MCP	Percent from Incorrect Names	Percent from Illegible Names in Medical Records	Percent from Incorrect Names	Percent from Illegible Names in Medical Records	Percent from Incorrect Names	Percent from Illegible Names in Medical Records
AAH	100.0%	0.0%	NA	NA	**100.0%**	**0.0%**
AHF	NA	NA	NA	NA	**NA**	**NA**
Anthem	98.5%	1.5%	100.0%	0.0%	**98.9%**	**1.1%**
CCAH	100.0%	0.0%	NA	NA	**97.8%**	**2.2%**
CCHP	NA	NA	NA	NA	**NA**	**NA**
CHG	NA	NA	NA	NA	**NA**	**NA**
CalOptima	NA	NA	NA	NA	**NA**	**NA**
CalViva	NA	NA	NA	NA	**92.4%**	**7.6%**
Care1st	NA	NA	NA	NA	**NA**	**NA**
CenCal	93.9%	6.1%	NA	NA	**93.3%**	**6.7%**
Gold Coast	NA	NA	NA	NA	**NA**	**NA**
HPSJ	74.2%	25.8%	NA	NA	**75.9%**	**24.1%**
HPSM	NA	NA	NA	NA	**100.0%**	**0.0%**
Health Net	95.5%	4.5%	100.0%	0.0%	**96.7%**	**3.3%**
IEHP	96.0%	4.0%	NA	NA	**97.1%**	**2.9%**
KFHC	86.7%	13.3%	NA	NA	**84.8%**	**15.2%**
Kaiser North	NA	NA	NA	NA	**NA**	**NA**
Kaiser South	100.0%	0.0%	NA	NA	**100.0%**	**0.0%**
L.A. Care	96.8%	3.2%	NA	NA	**97.4%**	**2.6%**
Molina	NA	NA	NA	NA	**100.0%**	**0.0%**
Partnership	100.0%	0.0%	100.0%	0.0%	**100.0%**	**0.0%**
SCAN	—	—	89.5%	10.5%	**89.5%**	**10.5%**
SCFHP	NA	NA	NA	NA	**NA**	**NA**
SFHP	NA	NA	NA	NA	**NA**	**NA**
Statewide Total	**94.4%**	**5.6%**	**98.1%**	**1.9%**	**95.5%**	**4.5%**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

All-Element Accuracy

Table 3.39 shows the statewide percentage of dates of service present in both the DHCS data warehouse and in the medical records with exactly the same values for all key data elements in Table 2.1 by population type. The denominator is the total number of dates of service that matched in both data sources. The numerator is the total number of dates of service with exactly the same values for all key data elements. Higher all-element accuracy rates indicated that the values populated in the DHCS data warehouse are more complete and accurate for all key data elements when compared to the medical records.

Table 3.39—All-Element Accuracy

	Accuracy Results	
Population Type	**Statewide Rate**	**MCP Range**
Non-SPD	5.1%	0.0%–20.0%
SPD	2.4%	0.0%–17.9%
Overall	**4.3%**	**0.0%–18.9%**

Key findings for accuracy rates:

- For the overall population, 4.3 percent of the dates of services present in both data sources contained accurate values for all five key data elements (i.e., *Diagnosis Code*, *Procedure Code*, *Procedure Code Modifier*, *Rendering Provider Name*, and *Billing Provider Name*). The low statewide all-element accuracy rates were caused by the medical record omission, encounter data omission, and element inaccuracy from all five key data elements, with *Rendering Provider Name* contributing the most and *Procedure Code Modifier* contributing the least to the all-element inaccuracy.
- Individual MCP rates ranged from 0.0 percent (AHF, CenCal, HPSM, Kaiser South, Partnership, and SCAN) to 18.9 percent (Care1st and Gold Coast).
- The statewide accuracy rates for the non-SPD and SPD populations differed from the overall population by 1.9 percentage points or less.

Table 3.40 illustrates detailed information for the all-element accuracy rates by MCP and population type.

Table 3.40—All-Element Accuracy

	Non-SPD		SPD		Overall	
MCP	Number of Dates of Service Present in Both Sources	Rate*	Number of Dates of Service Present in Both Sources	Rate*	Rate	Percentile Ranking
AAH	97	2.1%	31	6.5%	**4.0%**	**>25th–<75th**
AHF	2	NA	89	0.0%	**0.0%**	**0–≤25th**
Anthem	492	0.1%	104	0.0%	**0.1%**	**>25th–<75th**
CCAH	277	0.2%	107	1.9%	**1.0%**	**>25th–<75th**
CCHP	63	6.3%	29	NA	**6.6%**	**>25th–<75th**
CHG	96	1.0%	16	NA	**0.7%**	**>25th–<75th**
CalOptima	93	5.4%	14	NA	**5.8%**	**>25th–<75th**
CalViva	251	6.9%	36	5.6%	**6.6%**	**>25th–<75th**
Care1st	60	20.0%	39	17.9%	**18.9%**	**≥90th**
CenCal	129	0.0%	69	0.0%	**0.0%**	**0–≤25th**
Gold Coast	68	17.6%	19	NA	**18.9%**	**≥90th**
HPSJ	86	1.2%	23	NA	**0.8%**	**>25th–<75th**
HPSM	60	0.0%	48	0.0%	**0.0%**	**0–≤25th**
Health Net	459	1.5%	109	0.0%	**1.1%**	**>25th–<75th**
IEHP	154	0.6%	33	0.0%	**0.4%**	**>25th–<75th**
KFHC	97	4.1%	11	NA	**3.0%**	**>25th–<75th**
Kaiser North	78	1.3%	25	NA	**2.4%**	**>25th–<75th**
Kaiser South	86	0.0%	30	0.0%	**0.0%**	**0–≤25th**
L.A. Care	88	11.4%	13	NA	**9.3%**	**75th–90th**
Molina	325	19.3%	82	14.3%	**17.6%**	**75th–90th**
Partnership	438	0.0%	246	0.0%	**0.0%**	**0–≤25th**
SCAN	—	—	328	0.0%	**0.0%**	**0–≤25th**
SCFHP	82	11.0%	21	NA	**7.8%**	**75th–90th**
SFHP	95	10.5%	32	6.3%	**8.6%**	**75th–90th**
Statewide Total	**3,676**	**5.1%**	**1,554**	**2.4%**	**4.3%**	**>25th–<75th**

*Note: HSAG displayed "NA" when the denominator was less than 30.

**Note: HSAG displayed "—" when the population was not applicable for the MCP.

Conclusions

Encounter Data Completeness

Table 4.1 displays the medical record and encounter data omission rates for each key data element for the overall population.

Table 4.1—Encounter Data Completeness Summary for the Overall Population

	Medical Record Omission Rate		Encounter Data Omission Rate	
Key Data Elements	**Statewide**	**MCP Range**	**Statewide**	**MCP Range**
Date of Service	26.3%	3.3%–55.0%	9.2%	0.0%–18.7%
Diagnosis Code	31.6%	10.8%–55.7%	34.6%	15.8%–62.5%
Procedure Code	43.8%	9.3%–66.9%	22.5%	10.7%–44.7%
Procedure Code Modifier	58.5%	19.2%–72.3%	46.0%	19.0%–77.6%
Rendering Provider Name	25.0%	7.2%–79.0%	68.1%	17.5%–100.0%
Billing Provider Name	35.0%	18.0%–62.1%	8.6%	0.0%–19.3%

Based on the cases sampled for medical record review, HSAG found that the encounters submitted to DHCS were moderately supported by the documentations in members' medical records. Statewide, 26.3 percent of the dates of service identified in the electronic encounter data were not supported by the medical records. Overall, 31.6 percent of diagnosis codes, 43.8 percent of procedure codes, 58.5 percent of procedure code modifiers, 25.0 percent of rendering provider names, and 35.0 percent of billing provider names identified in the electronic encounter data were not found in members' medical records. These findings suggested a moderate level of completeness among key encounter data elements when compared to members' medical records. The variations among MCP medical record omission rates were generally wide, with a difference of more than 33 percentage points between the lowest and highest rates for each of six key data elements.

As determined during this review, the most common reasons for medical record omissions were:

- The medical record could not be located.
- The provider did not document the services performed in the medical record despite submitting a claim/encounter.
- There was a data entry error for one or more elements (e.g., *Date of Service*).
- The provider did not perform the service.

- Due to inclusion of the adjudication history, the DHCS encounter data contained additional services which should not have been included for comparison with the medical records.
- Billing provider names are generally not part of the information included in medical records.

While DHCS encounters had supporting documentation in the medical records at a moderate level, not all services documented in the medical records were submitted to DHCS (encounter data omission). For instance, 9.2 percent of the dates of service documented in the members' medical records were absent from the electronic encounter data. Overall, 34.6 percent of diagnosis codes, 22.5 percent of procedure codes, 46.0 percent of procedure code modifiers, 68.1 percent of the rendering provider names, and 8.6 percent of the billing provider names identified in members' medical records were not found in the DHCS encounter data. An opportunity exists to improve DHCS's electronic encounter data completeness by increasing the percentage of key data elements MCPs submit to DHCS aligning with medical record information. The MCP rates varied considerably (at least 34 percentage points) for all key data elements except the *Date of Service* and *Billing Provider Name* data elements.

The most common reasons for encounter data omissions were:

- The provider's billing office made a coding error.
- DHCS's encounter data systems contained certain restrictions related to encounter submission requirements that affected the processing of some encounters (e.g., number of diagnosis or procedure code modifier fields, DHCS only kept the most current year of provider data from the MCPs).
- A deficiency occurred in the MCPs' encounter data submission processes or a deficiency occurred in the resubmission of denied or rejected encounters to DHCS.
- The provider submitted the non-standard codes instead of the standard procedure codes or procedure code modifiers.
- A lag occurred between the provider's performance of the service and submission of the encounter to the MCPs and/or DHCS.
- MCPs did not populate the rendering provider identification number field or populated it with an invalid rendering provider identification number when submitting data to DHCS, or the provider files MCPs submitted to DHCS were not complete or accurate.

Encounter Data Accuracy

Table 4.2 displays the element accuracy rates for each key data element and the all-element accuracy rate for the overall population.

Table 4.2—Encounter Data Accuracy Summary for Overall Population

Key Data Elements	Statewide	MCP Range	Main Error Type
Diagnosis Code	83.6%	67.8%–93.7%	Inaccurate Code (87.0%)
Procedure Code	77.6%	58.6%–95.4%	Lower Level of Services in Medical Records (44.8%); Inaccurate Code (35.8%)
Procedure Code Modifier	99.5%	94.2%–100.0%	—
Rendering Provider Name	63.0%	48.6%–97.4%	Incorrect Names (76.8%)
Billing Provider Name	68.6%	31.1%–90.9%	Incorrect Names (95.5%)
All-element accuracy	**4.3%**	**0.0%–18.9%**	—

Note: HSAG displayed "—" when the error type analysis was not applicable to a data element.

In general, when key data elements were present in the DHCS data system and the medical records, and evaluated separately for the individual data elements, the key data elements were found to be accurate. Among the data elements that were evaluated, 83.6 percent of diagnosis codes, 77.6 percent of procedure codes, 99.5 percent of procedure code modifiers, 63.0 percent of rendering provider names, and 68.6 percent of billing provider names identified in the electronic encounter data were supported by medical record documentation. These overall findings showed that less than 16 percent of the diagnosis and procedure codes and more than 31 percent of the rendering and billing provider names in the DHCS electronic encounter data were inaccurate statewide. The majority (87.0 percent) of diagnosis-related errors involved discrepancies in the use of inaccurate codes compared to national coding standards instead of specificity errors. Nearly half of the procedure code errors involved providers submitting a higher-level service code than what was supported in the members' medical records, and 35.8 percent of the identified errors were associated with the use of inaccurate codes which were not supported by national coding standards. The majority of rendering or billing provider name errors were associated with name discrepancies between the medical record and the DHCS data system instead of illegible names in medical records. At the MCP level, considerable variations were found for all five key data elements except the *Procedure Code Modifier* data element.

In addition, only 4.3 percent of the dates of service present in both data sources accurately represented all five data elements (i.e., *Diagnosis Code*, *Procedure Code*, *Procedure Code Modifier*, *Rendering Provider Name*, and *Billing Provider Name*) when compared to members' medical records. The overall accuracy findings indicated at least one inaccurate data element for more than 95

percent of the dates of service reviewed in this study. While all five key data elements contributed to the poor statewide all-element accuracy rate, the *Rendering Provider Name* data element contributed the most to the inaccuracy. At the MCP level, the all-element accuracy rate ranged from 0.0 percent (AHF, CenCal, HPSM, Kaiser South, Partnership, and SCAN) to 18.9 percent (Care1st and Gold Coast).

Recommendations

Results from the medical record review suggest that while submitted encounters and key data elements (i.e., *Date of Service*, *Diagnosis Code*, *Procedure Code*, *Procedure Code Modifier*, *Rendering Provider Name*, and *Billing Provider Name*) were moderately supported by members' medical records, opportunities for improvement exist for the submission of complete and accurate encounters to DHCS. Based on the study findings, HSAG recommends the following for DHCS to improve encounter data quality:

- Accurate rendering provider information in the DHCS data system is crucial to locating medical records for future medical record review activities. Therefore, DHCS should consider the following actions:
  - Require the MCPs to submit complete and accurate rendering provider identification numbers in the encounter data.
  - Routinely monitor the percentage of encounter records with missing rendering provider numbers.
  - Add system edits to check whether the rendering provider numbers in the encounters are valid.
  - Maintain at least two years of provider data received from the MCPs.
  - Evaluate the provider data layout and add additional data fields as needed, i.e., provider telephone number.
  - Perform a separate study to audit the completeness and accuracy of the provider data maintained by DHCS.
- Another option to improve the medical record procurement rate would be to request the MCPs to procure the medical records. Based on HSAG's experience, MCPs are generally more successful in identifying the correct rendering provider and contacting them to procure the medical records.
- DHCS should ensure that no system issues affect the acceptance of encounter data submitted by the MCPs. This process includes both file acceptance as well as data element acceptance as listed below:
  - Revise the data submission format so that each encounter may contain more than two diagnosis codes.

  - Revise the data submission format so that each encounter may contain more than one procedure code modifier for the MCPs using the Encounter Data Element Dictionary to submit encounter data to DHCS.
  - Provide guidelines to MCPs on the appropriate use of non-standard procedure codes and procedure code modifiers with the goal of not using these non-standard codes in the near future.
  - Review system edits regularly to ensure that the element-level and file-level edits are appropriate.

- DHCS should consider enhancing current submission requirements to ensure adjusted encounters are submitted to DHCS appropriately, so that DHCS can develop a process to identify the final adjudication records in the DHCS encounter data.
- DHCS may want to consider working with the MCPs to explore the reasons for incomplete encounter data submissions and develop strategies to improve rates. Since maintaining good encounter data quality is a responsibility involving multiple organizational entities—including the State, MCPs, and providers—HSAG recommends that DHCS work with the MCPs to explore reasons for encounter data omissions.
- DHCS may want to consider requiring the MCPs to audit provider encounter submissions for completeness and accuracy. DHCS may want to require the MCPs to develop periodic provider education and training regarding encounter data submissions, medical record documentation, and coding practices. These activities should include a review of both State and national coding requirements and standards, especially for new providers contracted with the MCPs. In addition, HSAG recommends that DHCS consider requiring the MCPs to perform periodic reviews of submitted claims to verify appropriate coding and completeness to ensure encounter data quality. Results from these reviews can be submitted to DHCS and used in its ongoing encounter data monitoring.

Study Limitations

When evaluating the findings presented in this report, it is important to understand the following limitations associated with this study:

- Successful evaluation of members' medical records depends on the ability to locate and collect complete and accurate medical records. Therefore, validation results could have been affected by medical records that could not be located (e.g., missing or wrong provider information resulted in failing to procure the medical records) and medical records that were incomplete (e.g., missing pages).
- Since the study findings relied solely on the documentation contained in members' medical records, results are dependent on the overall quality of physicians' medical records. For example, a physician may have performed a service but did not document it in the member's medical record. As such, HSAG would have counted it as a negative finding. This study was unable to distinguish cases in which a service was not performed versus a service that was performed but not documented in the medical record.
- The findings for the data elements *Billing Provider Name* and *Rendering Provider Name* should be reviewed with caution since rendering provider names and billing provider names are not generally included or legible in members' medical records.
- Certain limitations in the DHCS data warehouse also affected the results. For example, the DHCS data warehouse only stores two data fields for the diagnosis codes, while the medical records may indicate more than two codes. In addition, the DHCS data warehouse only contains the most recent provider data, which may lead to a missing rendering provider name even though the rendering provider identification number was submitted in the encounter data.
- The findings from this study are associated with encounters from calendar year 2012 for the non-SPD population and encounters from the last seven months of calendar year 2012 for the SPD population; as such, the results may not reflect the current quality of DHCS's encounter data.
- The findings from this study are associated with physician visits and may not be applicable to the other claim types.

Study Indicator	Data Element	Number of MCPs with Reportable Rates	P10	P25	P75	P90
Medical record submission	–	24	67.9%	72.6%	87.2%	95.9%
Medical record omission	Date of Service	24	11.8%	17.9%	26.6%	33.0%
	Diagnosis Code	24	16.3%	25.9%	32.9%	40.7%
	Procedure Code	24	21.0%	31.2%	43.8%	61.3%
	Procedure Code Modifier	21	29.1%	47.6%	69.4%	71.9%
	Rendering Provider Name	13	11.0%	19.2%	32.9%	62.5%
	Billing Provider Name	24	19.6%	27.8%	34.2%	46.8%
Encounter data omission	Date of Service	24	1.9%	6.9%	12.0%	17.1%
	Diagnosis Code	24	25.1%	28.9%	39.7%	44.4%
	Procedure Code	24	12.0%	16.3%	27.7%	33.5%
	Procedure Code Modifier	17	24.0%	28.3%	52.4%	74.7%
	Rendering Provider Name	24	22.6%	38.0%	100.0%	100.0%
	Billing Provider Name	24	2.1%	5.1%	12.1%	18.2%
Element accuracy	Diagnosis Code	24	74.6%	81.8%	87.6%	90.7%
	Procedure Code	24	61.3%	70.9%	85.6%	90.8%
	Procedure Code Modifier	11	94.4%	95.8%	100.0%	100.0%
	Rendering Provider Name	11	49.3%	57.4%	86.9%	95.6%
	Billing Provider Name	24	52.6%	65.1%	79.2%	88.1%
All-element accuracy	–	24	0.0%	0.0%	7.5%	18.3%

Note: For the medical record omission and encounter data omission rates, lower rates represent higher performance.
In addition, HSAG displayed "—" when the data element was not applicable to a study indicator.