FY 2016–2017
Denver Health
412 Independent Audit Report

June 2017

This report was produced by Health Services Advisory Group, Inc., for the Colorado Department of Health Care Policy & Financing.

HSAG HEALTH SERVICES ADVISORY GROUP

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Background

Beginning in Fiscal Year (FY) 2015–2016, the Colorado Department of Health Care Policy & Financing (the Department) contracted Health Services Advisory Group, Inc. (HSAG), to conduct an encounter data validation for one of the Department's contracted physical health organizations, a health maintenance organization (HMO), as an optional External Quality Review (EQR) task under the Centers for Medicare & Medicaid Services (CMS) Medicaid Guidelines.[1] The FY 2016–2017 study focuses on encounters submitted by the Denver Health Medicaid Choice managed care plan (Denver Health, or the HMO). To assess the HMO's data validation capacity, the study aims to evaluate Denver Health's compliance with State standards regarding encounter data submission as well as the consistency and accuracy with which Denver Health audits encounter data through the use of medical record review. To facilitate this assessment, the Department randomly selected 103 final, adjudicated physical health encounters from four distinct service categories (i.e., a total of 412 encounters) to be audited by Denver Health. These service categories included encounters with services rendered in federally qualified health centers (FQHCs), as well as in inpatient, outpatient, and professional settings. Denver Health submitted the internal audit results and an encounter data quality report to HSAG and the Department.

To further improve the quality of encounter data submitted by Denver Health, the Department developed and implemented the HMO Encounter Data Record Review Guidelines (guidelines). The guidelines include file format and reporting requirements as well as a specific timeline to guide Denver Health in conducting its internal audit and using the audit results to prepare the Encounter Data Submission Quality Report and Service Coding Accuracy Report.

The Department contracted HSAG to evaluate Denver Health's capacity to internally audit encounters through an independent assessment of the HMO's service coding accuracy results. Specifically, the Department requested HSAG to complete the following tasks during FY 2016–2017:

1. Conduct a desk review of Denver Health's audit process, including any audit documentation submitted by the HMO.
2. Conduct a review of medical records for cases randomly selected from each service category's 103 sample list, which was generated by the Department.
3. Produce an aggregate report with findings specific to each service category, including a statement regarding HSAG's assessment of the accuracy of Denver Health's internal audit results.

[1] Department of Health and Human Services, Centers for Medicare & Medicaid Services. *EQR Protocol 4: Validation of Encounter Data Reports by the MCO: A Voluntary Protocol for External Quality Review (EQR)*. Version 2.0. September 2012. Available at https://www.medicaid.gov/medicaid/quality-of-care/medicaid-managed-care/external-quality-review/index.html. Accessed on: June 1, 2017.

Methodology

HSAG's independent audit consisted primarily of an assessment of Denver Health's internal audit results through an over-read of medical records for a sample of randomly selected encounters. A sampling strategy was recommended to the Department to ensure that cases were generated randomly from a representative base of encounters eligible for inclusion in this study. HSAG's review of the Department's sampling protocol was limited to an assessment of sampling methodology documentation provided by the Department.

The second component of HSAG's independent audit was to evaluate whether or not Denver Health's internal audit of the sampled encounters against members' medical records was accurate and consistent with standard coding manuals. HSAG received a response file containing Denver Health's internal audit results for the 412 cases sampled by the Department. HSAG then generated an over-read sample of 20 cases (80 cases overall) for each of the four service categories. The evaluation process included the following steps:

1. Generation of Over-Read Samples

The Department submitted a flat file containing a sample of final adjudicated Denver Health encounters paid between October 1, 2015, and September 30, 2016, for four physical health service categories.[2] The Department submitted the sample lists to Denver Health and HSAG in January 2017, and Denver Health conducted its internal audit on the sampled encounters. HSAG used the flat file to generate an over-read sample, and the data layout specifications are presented in Appendix A. The process included the random selection of 20 unique individuals for each of four service categories, and the selection of a single encounter line for each of the 20 individuals, resulting in a list of 20 randomly selected encounter lines per service category (80 cases overall). Since a single health event could result in a member having encounters for Inpatient Services and Professional Services categories, HSAG assessed the service category lists to determine whether or not unique members were included in multiple service categories. Despite potential crossover between service categories, HSAG assessed the lists of sample cases to ensure that a single individual did not have multiple encounter lines in the sample with the same date of service.

2. Audit Tool Development

Denver Health submitted its response file containing internal audit results of all 412 sampled cases to HSAG in mid-March 2017. HSAG designed a web-based data collection tool and tool instructions based on the guidelines as well as standard national coding manuals. Separate data collection screens were used for the unique fields assessed and coding standards considered for inpatient encounters versus those used when considering ambulatory-type encounters (i.e., FQHC, outpatient, and professional). A control

[2] Service categories were identified using the cat_serv field assigned to each encounter by the Department. Cat_serv values of "0" identified Professional Services, "1" identified Inpatient Services, "4" identified services rendered at an FQHC, and "5" identified Outpatient Services. Claims are assigned to service categories according to a hierarchy, and each claim may be assigned to only a single category.

file containing select fields from the Department's encounter data flat file and Denver Health's corresponding internal audit values for sampled cases was uploaded into the tool, permitting pre-population of encounter and audit information for each case. Pre-populated information could not be altered, and HSAG's reviewers were required to actively select an over-read response for each data element. Corresponding medical records procured by Denver Health were linked to cases within the tool. The web-based tool allowed the HSAG analyst to extract MS Excel files containing encounter data, HMO audit responses, and HSAG reviewer responses specific to each encounter type.

3. HSAG's Over-Read Process

HSAG evaluated the accuracy of the HMO's audit findings in April 2017. More specifically, the HSAG reviewers validated the HMO's accuracy in auditing the providers' submitted encounter data in accordance with the national code sets: International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM or ICD-10-CM); International Classification of Diseases, Procedural Modification (ICD-9-PM or ICD-10-PM); Current Procedural Terminology (CPT); Healthcare Common Procedure Coding System (HCPCS); and the 1995 Evaluation and Management (E&M) documentation guidelines. HSAG's over-read did not evaluate the quality of the medical record documentation or the provider's accuracy in submitting encounter data, only whether the HMO's audit responses were accurate based on the review of the supporting medical record documentation submitted by the HMO. All over-read results were entered into the HSAG audit tool.

Three HSAG certified coders were trained to conduct the over-read. During the over-read of the outpatient claim types, the coders located the selected date of service in the submitted medical records to determine whether the CPT, HCPCS, and ICD-9-CM and/or ICD-10-CM codes pre-populated in the audit tool from the encounter data flat file were supported by the submitted medical record documentation and in alignment with the criteria outlined in the review and code set guidelines. During the over-read of the inpatient claim types the coders located the selected date of service in the submitted medical records to determine whether or not the ICD-9-PM or ICD-10-PM and the ICD-9-CM and/or ICD-10-CM codes pre-populated in the audit tool from the encounter data flat file were supported by the submitted medical record documentation and in alignment with the criteria outlined in the review and code set guidelines. The HSAG coders then determined whether or not the HMO agreed or disagreed with the accuracy of the codes submitted by the provider. If the HSAG coder agreed with the HMO's response, an agreement response was recorded in the tool. If the HSAG coder disagreed with the HMO's response, a disagreement response was recorded in the tool. The findings of this over-read were based on HSAG's percent of agreement or disagreement with the HMO's responses.

Prior to beginning abstraction, coders participated in an interrater reliability (IRR) assessment using training cases. To proceed with abstraction on study cases, coders were required to score 95 percent or higher on the post-training IRR. If this threshold was not met, the nurse manager provided re-training, including abstraction of additional test cases.

During the over-read period, HSAG conducted an ongoing IRR assessment by randomly selecting a minimum of 10 percent of cases per claim type and comparing the over-read results to those from a second reviewer. For cases in which over-read discrepancies were identified between the first and

second reviewers, a third "Gold Standard" review was conducted by a nurse manager and provided a final determination regarding the appropriate over-read result. Any IRR result that fell below 95 percent required further evaluation by the nurse manager and possible re-training of the reviewer(s).

4. Analysis Process

Following completion of the over-read, the HSAG analyst exported results from the over-read tool for each service category. Because data elements varied by claim type, results were not aggregated across the service categories. The coders' over-read notes were reviewed by the analyst, and notes requiring further information were addressed with the nurse manager.

The HSAG analyst assessed the over-read results to determine the percentage of records per service category for which the HSAG reviewer agreed with the internal audit response from Denver Health. Results were displayed by service category for data elements that were audited by Denver Health and overread by HSAG. Over-read analysis results were independently verified by a second HSAG analyst.

Results

Desk Review

Sampling Methodology

The Department provided a brief description of the process used to randomly select Denver Health encounters for Denver Health to audit. The Department's documentation listed the criteria by which encounters are assigned to service categories, and noted that the sample was restricted to final adjudicated encounters paid within the study period. The Department also detailed its two-stage random sampling process for identifying 103 unique encounters per service category, and how a single encounter line was randomly selected from each unique encounter; encounters were defined based on the claim number data field.

HSAG reviewed the sample list provided by the Department, the sampling process description, as well as a portion of the sampling code used to generate the sample. Sample selection was performed in SAS using the "SURVEYSELECT" procedure to obtain a random sample of claim numbers from each service category, and to then select a random encounter line for each of the encounters selected during the first stage of sampling.

Denver Health's Internal Audit Methodology

To help provide context for Denver Health's Encounter Data Submission Quality Report and Service Coding Accuracy Report, the Department requested Denver Health's internal audit methodology documentation as a component of the Service Coding Accuracy Report. HSAG's review of Denver Health's internal audit methodology documentation verified the presence of:

- The coding guidelines used for its auditing process.
- A description of the record procurement and audit process, including the use of a company subsidiary (i.e., Denver Health Enterprise Compliance Services within the Denver Health and Hospital Authority) for select audit tasks.
- A brief description of the audit tool, including steps taken to ensure data integrity and consistency.
- The credentials, training, and experience of all reviewers.
- The rater reliability testing process for audit validation.

Over-Read of Sample Cases by Service Category

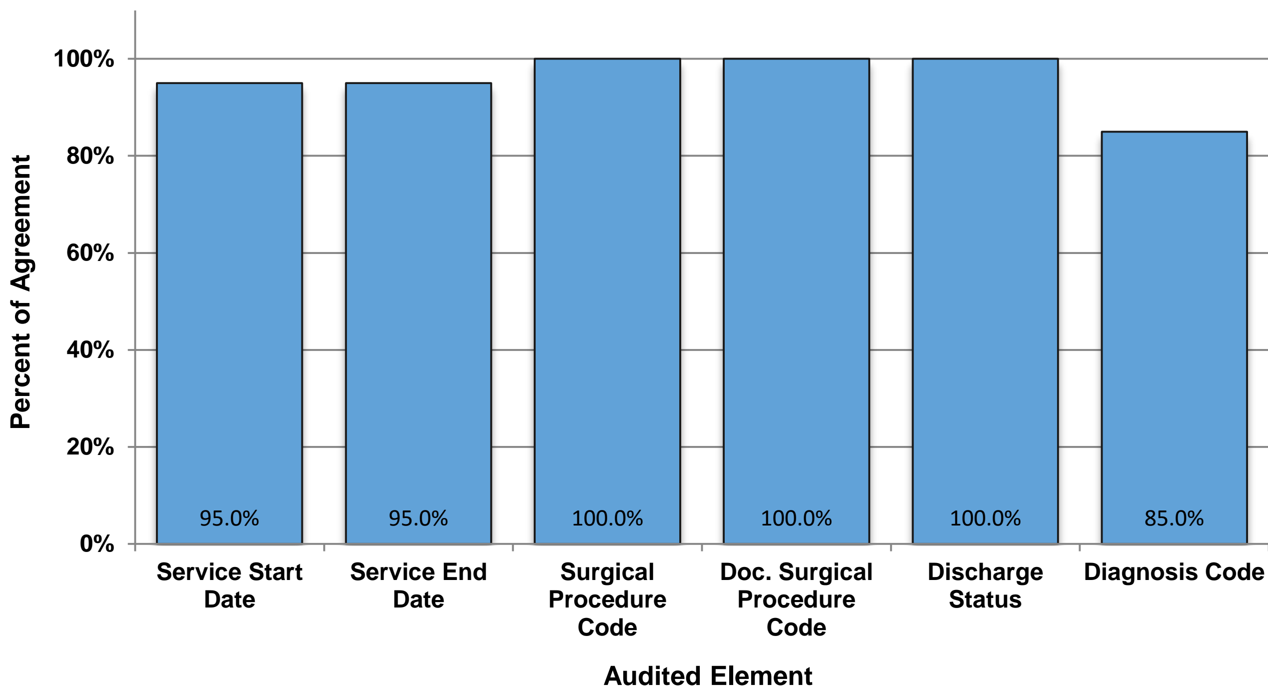
The audit response file submitted by Denver Health contained all required audit fields and aligned with the audit response file layout required by the Department and outlined in the guidelines. The audit response data layout is presented in Appendix B. HSAG noted negative over-read findings for one case in the Professional Services category having no supporting medical records and one case in the FQHC service category having medical records insufficient for Denver Health's audit. The remainder of this section details HSAG's over-read findings by service category. For reference, Appendix C presents Denver Health's internal audit results by service category from its Service Coding Accuracy Report.

In addition to the results presented in this report, HSAG has provided the Department with supplemental spreadsheets detailing, by claim type, the nature of the disagreement for any data element about which HSAG's reviewer disagreed with Denver Health's audit determination. This MS Excel workbook is referenced in the remainder of the report as the Case-Level Disagreement List.

Inpatient Cases

Figure 1 presents the aggregate results from HSAG's over-read of the 20 inpatient cases. Agreement values range from 85.0 percent to 100 percent for individual elements, where 100 percent represents complete agreement between Denver Health's internal audit results and HSAG's over-read results, and 0 percent represents complete disagreement.

Figure 1—Aggregated Percent of Agreement Between HSAG's Over-Read and Denver Health's Internal Audit Findings, by Data Element Inpatient Services



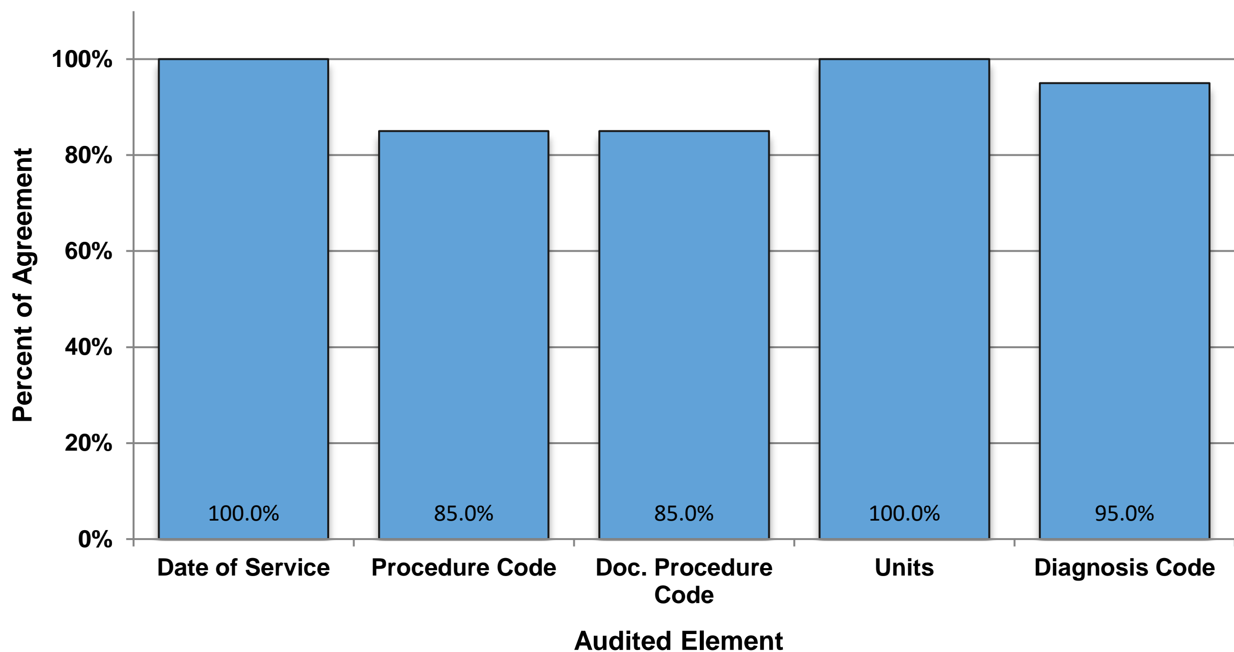
Complete agreement occurred when HSAG's over-read results indicated agreement with Denver Health's audit response for each of the six individual data elements assessed for a sampled inpatient encounter. Of the 20 sampled inpatient encounters, over-read results demonstrated complete agreement for 16 cases, producing an aggregate agreement rate of 80.0 percent. Agreement rates ranged from 85.0 percent to 100 percent for individual data elements, with 100 percent agreement rates observed for *Surgical Procedure Code*, *Documented Surgical Procedure Code*, and *Discharge Status*. The lowest agreement rate (85.0 percent) was observed for *Diagnosis Code*.

As noted in the Case-Level Disagreement List for Inpatient Services, HSAG's reviewers determined that medical record documentation was present for all five data elements for which Denver Health's audit results failed to align with HSAG's over-read results.

Outpatient Cases

Figure 2 presents the aggregate results from HSAG's over-read of the 20 outpatient cases. Agreement values range from 85.0 percent to 100 percent for individual elements, where 100 percent represents complete agreement between Denver Health's internal audit results and HSAG's over-read results, and 0 percent represents complete disagreement.

Figure 2—Aggregated Percent of Agreement Between HSAG's Over-Read and Denver Health's Internal Audit Findings, by Data Element Outpatient Services



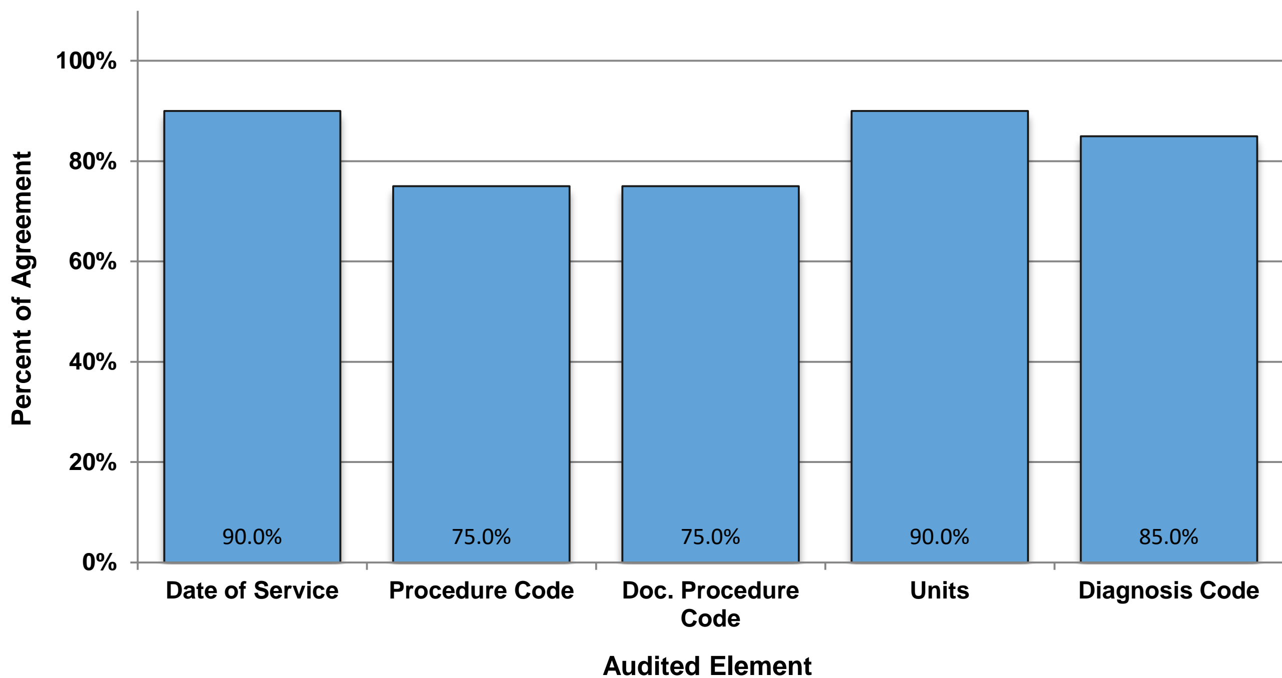
Complete agreement occurred when HSAG's over-read results indicated agreement with Denver Health's audit response for each of the five individual data elements assessed for a sampled outpatient encounter. Of the 20 sampled outpatient encounters, over-read results demonstrated complete agreement for 15 cases, producing an aggregate agreement rate of 75.0 percent. Agreement rates ranged from 85.0 percent to 100 percent, with 100 percent agreement rates observed for *Date of Service* and *Units*. The lowest agreement rates, at 85.0 percent, were observed for *Procedure Code* and *Documented Procedure Code*.

As noted in the Case-Level Disagreement List for Outpatient Services, HSAG's reviewers determined that insufficient or missing medical record documentation contributed to the disagreement for one of the seven data elements for which Denver Health's audit results failed to align with HSAG's over-read results.

Professional Cases

Figure 3 presents the aggregate results from HSAG's over-read of the 20 professional cases. Agreement values range from 75.0 percent to 90.0 percent for individual elements, where 100 percent represents complete agreement between Denver Health's internal audit results and HSAG's over-read results, and 0 percent represents complete disagreement.

Figure 3—Aggregated Percent of Agreement Between HSAG's Over-Read and Denver Health's Internal Audit Findings, by Data Element Professional Services



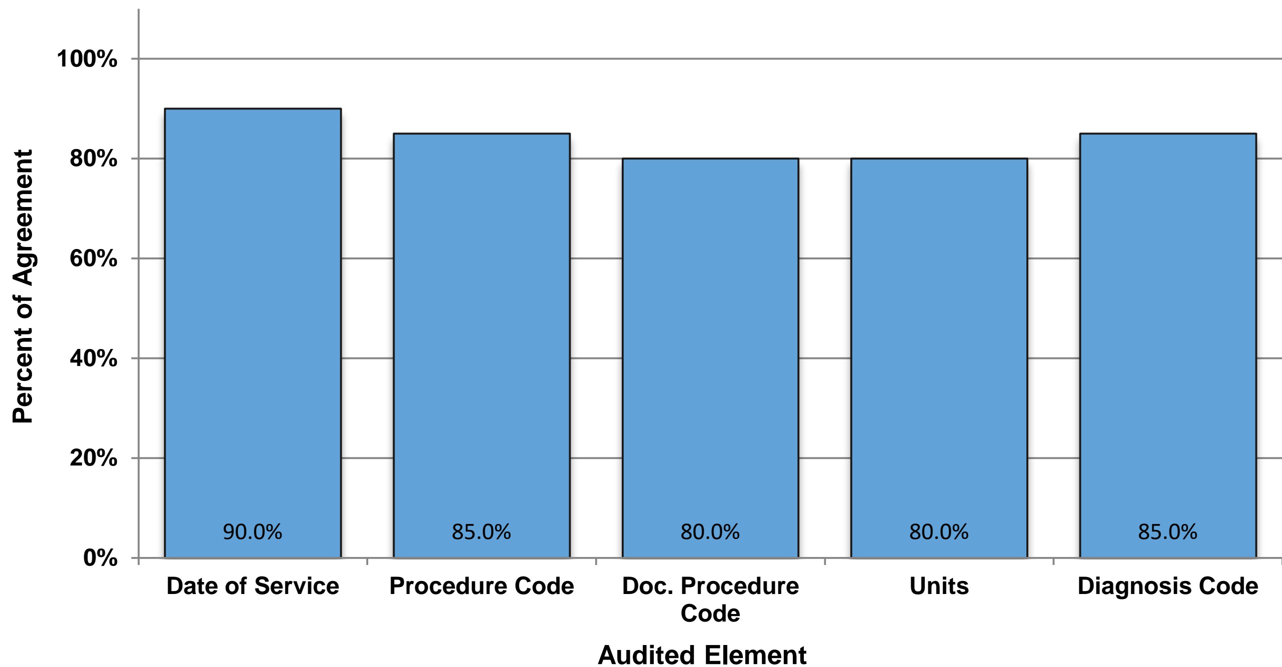
Complete agreement occurred when HSAG's over-read results indicated agreement with Denver Health's audit response for each of the five individual data elements assessed for a sampled professional encounter. Of the 20 sampled professional encounters, over-read results demonstrated complete agreement for 12 cases, producing an aggregate agreement rate of 60.0 percent. By data element, agreement rates ranged from 75.0 percent to 90.0 percent, with the highest rates observed for *Date of Service* and *Units*. The lowest agreement rates, at 75.0 percent, were observed for *Procedure Code* and *Documented Procedure Code*.

As noted in the Case-Level Disagreement List for Professional Services, HSAG's reviewers determined that insufficient or missing medical record documentation contributed to the disagreement for seven of the 17 data elements for which Denver Health's audit results failed to align with HSAG's over-read results. Five of the seven data elements were related to a single sampled over-read case in which medical records were provided by Denver Health but did not contain information necessary for the audit.

FQHC Cases

Figure 4 presents the aggregate results from HSAG's over-read of the 20 FQHC cases. Agreement values range from 80.0 percent to 90.0 percent for individual elements, where 100 percent represents complete agreement between Denver Health's internal audit results and HSAG's over-read results, and 0 percent represents complete disagreement.

Figure 4—Aggregated Percent of Agreement Between HSAG's Over-Read and Denver Health's Internal Audit Findings, by Data Element FQHC Services



Complete agreement occurred when HSAG's over-read results indicated agreement with Denver Health's audit response for each of the five individual data elements assessed for a sampled FQHC encounter. Of the 20 sampled FQHC encounters, over-read results demonstrated complete agreement for 10 cases, producing an aggregate agreement rate of 50.0 percent. Agreement rates ranged from 80.0 percent to 90.0 percent by data element, with the highest agreement observed for *Date of Service*. The lowest agreement rates, at 80.0 percent, were observed for *Documented Procedure Code* and *Units*.

As noted in the Case-Level Disagreement List for FQHC Services, HSAG's reviewers determined that insufficient or missing medical record documentation contributed to the disagreement for four of the 16 data elements for which Denver Health's audit results failed to align with HSAG's over-read results. Three of the four data elements were related to a single sampled over-read case in which medical records were provided by Denver Health but did not contain information necessary for the audit.

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Conclusions

HSAG performed a desk review of the Department's sampling methodology, assessing documentation that outlined key steps in the 412 sample generation. This review confirmed that the Department took steps to select a random sample of unique encounters from the four service categories of interest, within the specified study time frame. A three-month data run-out period was permitted, but no further details regarding the adequacy of this interval were reported.

Sampling logic provided by the Department detailed its process for identifying the appropriate number of random claim numbers for each service category, as well as the methods by which a single encounter line was randomly selected from all encounter lines associated with each sampled claim number. While HSAG's review of the sample lists confirmed the absence of multiple encounter lines per claim number, encounters with the same date of service were identified for five members across multiple service categories. For example, one member had one encounter line sampled with the Inpatient Services category and one encounter line sampled with the Professional Services category for a date of service within the inpatient stay. These cases did not affect overall sample integrity.

HSAG's over-read results indicated complete agreement with Denver Health's internal audit results for all over-read data elements for 53 of the 80 sampled encounters, resulting in an aggregate agreement rate of 66.3 percent. Among individual service categories, aggregate agreement rates ranged from 50.0 percent (FQHC cases) to 80.0 percent (inpatient cases). Agreement rate variation was observed across service categories for common data elements (e.g., *Diagnosis Code*); therefore, no single audited element was responsible for the relatively low overall record agreement rate. For example, an aggregate agreement rate of 87.5 percent was observed for *Diagnosis Code* across all 80 over-read sample cases, while *Diagnosis Code* agreement rates specific to each service category ranged from 85.0 percent (FQHC, inpatient, and professional cases) to 95.0 percent (outpatient cases).

As previously noted, HSAG observed variation in agreement for almost all individual data elements assessed in the over-read. *Date of Service* had consistently high agreement rates across service categories, with an overall rate of 93.8 percent and rates ranging from 90.0 percent to 100 percent among the service categories. Similarly, *Units* ranged from 80.0 percent to 100 percent among the three service categories in which this element was overread. Other elements had lower overall agreement rates, with the lowest rates observed for *Documented Procedure Code* among the three service categories in which this element was overread.

Overall, HSAG coders' notes indicated lack of supporting documentation as a contributing reason for disparate results. Denver Health's reviewers noted that one case selected for the over-read did not have supporting medical records available and that medical records submitted for another case did not contain the information required for the audit. Denver Health noted disagreement across all data elements for these cases as a result of insufficient medical record documentation, and HSAG reviewers' agreed with these audit determinations. This finding could be indicative of issues in the medical record procurement process, or in the providers' medical record documentation standards.

Results from HSAG's FY 2016–2017 HMO over-read suggest a moderate level of confidence that Denver Health's audit findings accurately reflect its encounter data quality. Denver Health's service coding accuracy results further suggest varying levels of medical record documentation supporting encounter data across service categories. Inpatient cases audited by Denver Health had appropriate medical record documentation of 93.0 percent or more for each audited element. In contrast, no data elements audited for professional encounters had more than 87.4 percent of cases with supporting medical record documentation.

Recommendations

HSAG recommends that findings associated with this independent audit be used only for the Department's information and not for performance measurement or compliance monitoring purposes. HSAG requested that the Department provide feedback to HSAG regarding quality improvement actions resulting from recommendations in the FY 2015–2016 study; the Department indicated that the following steps have been or will be taken:

- The Department will apply appropriate statistical methods to prevent the inclusion of encounter lines from individuals with same-day services across service categories.
- When asked regarding the moderately low data quality among submitted encounters, Denver Health argued that the low rate of agreement resulted partially from the way in which it reviewed the data. To address concerns by Denver Health regarding biased results due to the report layout, the Department re-designed the format of the Service Coding Accuracy Report.

The Department intends to use Denver Health's FY 2016–2017 Service Coding Accuracy Report results to assess the impact of the modified report layout as well as to determine additional quality improvement actions in support of improved encounter data quality.

The impact of actions related to recommendations from the FY 2015–2016 study may not yet be readily identified from the FY 2016–17 study results. While the current over-read results show progress by Denver Health, it is important to note that similar recommendations from last year's study are still relevant. As such, HSAG offers the following recommendations to improve the quality of Denver Health's encounter data.

- The Department may benefit from further review of its encounter data sampling process with respect to the overall goal of the audit and over-read. Although the current methodology ensured that unique claim numbers and encounter lines were obtained for each service category, it did not prevent the inclusion of encounter lines from individuals with same-day services across service categories.
- Denver Health's Service Coding Accuracy Report provided detailed information on medical record procurement and the coding standards considered by its reviewers. However, descriptions of the audit tool, including Denver Health's methods for pre-populating the tool with encounter data values and maintaining data integrity, were limited. In support of its service coding accuracy findings, Denver Health should include greater detail regarding its audit data collection processes.

- Denver Health demonstrated moderate data quality for submitted encounters based on results reported in its Service Coding Accuracy Report. However, HSAG's reviewers indicated that insufficient documentation affected agreement rates across the assessed data elements. Denver Health may benefit from technical assistance sessions covering encounter data quality, to include discussions with the Department regarding best practices or barriers related to medical record procurement.
- Denver Health should provide training or corrective actions to address providers' encounter submission errors. If Denver Health is currently offering these services, the Department should request copies of training and/or corrective action procedures and materials. The Department's review of these documents may identify best practices or opportunities for standardization.

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Appendix A. Physical Health Encounter Data Flat File Specifications

Column headings have been aligned with the Department's encounter data layout.

Data Element (Field)		Status*	Length	Valid Value
0	Record No	R	3(0)	Sequential number
1	Year_Month	C	X(6)	Encounter data
2	Claim_Type	R	X(1)	Encounter data
3	Member_ID	R	X(9)	Encounter data
4	Subscriber_ID	R	X(7)	Encounter data
5	Rate_Code	C	X(6)	Encounter data
6	Eligibility_Sequence	C	X(9)	Encounter data
7	Member_DOB	R	X(8)	Encounter data
8	Member_Age	C	9(3)	Encounter data
9	Client Last Name	R	X(20)	Encounter data
10	Client First Name	R	X(20)	Encounter data
11	Client Middle Initial	C	X(1)	Encounter data
12	Claim_Number	R	X(20)	Encounter data
13	Line_Number	R	9(3)	Encounter data
14	Rev_Code	R	X(5)	Encounter data
15	Rev_Description	R	X(35)	Encounter data
16	Proc_Code	R	X(8)	Encounter data
17	Proc_Code_Modifier	R	X(2)	Encounter data
18	Proc_Code_Desc	R	X(35)	Encounter data
19	HCPCS_Proc_Code	R	X(8)	Encounter data
20	HCPCS_Desc	R	X(35)	Encounter data
21	ICD_Version	R	X(2)	Encounter data
22	Diag_Code_1	R	X(6)	Encounter data
23	Diag_Code_2	R	X(6)	Encounter data
24	Diag_Code_3	R	X(6)	Encounter data
25	Diag_Code_4	R	X(6)	Encounter data
26	Diag_Code_5	C	X(6)	Encounter data
27	Diag_Code_6	C	X(6)	Encounter data
28	Diag_Code_7	C	X(6)	Encounter data
29	Diag_Code_8	C	X(6)	Encounter data
30	Diag_Code_9	C	X(6)	Encounter data
31	Diag_Code_Desc_1	R	X(25)	Encounter data
32	Diag_Code_Desc_2	R	X(25)	Encounter data
33	Diag_Code_Desc_3	R	X(25)	Encounter data
34	Diag_Code_Desc_4	R	X(25)	Encounter data
35	Diag_Code_Desc_5	C	X(25)	Encounter data

Data Element (Field)		Status*	Length	Valid Value
36	Diag_Code_Desc_6	C	X(25)	Encounter data
37	Diag_Code_Desc_7	C	X(25)	Encounter data
38	Diag_Code_Desc_8	C	X(25)	Encounter data
39	Diag_Code_Desc_9	C	X(25)	Encounter data
40	SurgicalProcedure1	R	X(6)	Encounter data
41	Surgical_Proc_Code1_Desc	R	X(30)	Encounter data
42	SurgicalProcedure2	R	X(6)	Encounter data
43	Surgical_Proc_Code2_Desc	R	X(30)	Encounter data
44	SurgicalProcedure3	R	X(6)	Encounter data
45	Surgical_Proc_Code3_Desc	R	X(30)	Encounter data
46	SurgicalProcedure4	R	X(6)	Encounter data
47	Surgical_Proc_Code4_Desc	R	X(30)	Encounter data
48	SurgicalProcedure5	R	X(6)	Encounter data
49	Surgical_Proc_Code5_Desc	R	X(30)	Encounter data
50	SurgicalProcedure6	R	X(6)	Encounter data
51	Surgical_Proc_Code6_Desc	R	X(30)	Encounter data
52	DRG	R	X(4)	Encounter data
53	Service_Date	R	X(8)	Encounter data
54	Thru_Date	R	X(8)	Encounter data
55	Discharge_Status	R	X(3)	Encounter data
56	Date_Received	R	X(8)	Encounter data
57	Post_Date	R	X(8)	Encounter data
58	Check_Date	R	X(8)	Encounter data
59	Quantity	R	9(15)	Encounter data
60	Place_of_Service	R	X(5)	Encounter data
61	Place_of_Service_Desc	R	X(25)	Encounter data
62	Billed_Amount	R	9(18,2)	Encounter data
63	Allowed_Amount	R	9(18,2)	Encounter data
64	Not_Covered_Amount	R	9(18,2)	Encounter data
65	Copay_Amount	R	9(18,2)	Encounter data
66	Deductible_Amount	R	9(18,2)	Encounter data
67	Other_Carrier_Amount	R	9(18,2)	Encounter data
68	Withhold_Amount	R	9(18,2)	Encounter data
69	Net_Amount	R	9(18,2)	Encounter data
70	Paid_Net	R	9(18,2)	Encounter data
71	Claim_Status	R	X(1)	Encounter data
72	Claimline_Status	R	X(1)	Encounter data
73	Vendor_Type	R	X(6)	Encounter data
74	Provider_ID	R	X(15)	Encounter data
75	Provider_Type	R	X(10)	Encounter data
76	Provider_Spec	R	X(10)	Encounter data

Data Element (Field)		Status*	Length	Valid Value
77	Provider_Name	R	X(30)	Encounter data
78	Provider_MedicaidID	R	X(15)	Encounter data
79	Provider_NPI	R	X(15)	Encounter data
80	Provider_Tax_ID	R	X(10)	Encounter data
81	Provider_Zip_Code	R	X(5)	Encounter data
82	AttProvider_ID	R	X(15)	Encounter data
83	AttProvider_Type	R	X(10)	Encounter data
84	AttProvider_Spec	R	X(10)	Encounter data
85	AttProvider_Name	R	X(30)	Encounter data
86	AttProvider_MedicaidID	R	X(15)	Encounter data
87	AttProvider_NPI	R	X(15)	Encounter data
88	AttProvider_Tax_ID	R	X(10)	Encounter data
89	Vendor_Tax_ID	R	X(15)	Encounter data
90	Detail_Service_Begin_Date	R	X(8)	Encounter data
91	Detail_Service_End_Date	R	X(8)	Encounter data

*R = Required, C = Conditional

Appendix B. Response Data Layout for Encounter Quality Audit

Please note that HSAG made minimal edits for readability in the table below.

	Data Element (Field)	Data Description	Format	Length
0	Record_No	Sequential number for each of 412 records	X	integer
1	Encounter_Procedure_Code	0 = No or insufficient documentation, incorrect code utilized for procedure performed; 1 = Correct code; 9 = If data element does not pertain to encounter service type *Required for Professional, Outpatient, and FQHC encounters*	X	1
2	Encounter_Procedure_Code_ Modifier	0 = No or insufficient documentation, incorrect code modifier utilized for procedure performed; 1 = Correct code modifier; 9 = If data element does not pertain to encounter service type *Required for Professional, Outpatient, and FQHC encounters*	X	1
3	Encounter_Surgical_Procedure_ Code	0 = No or insufficient documentation, incorrect code utilized for surgical procedure performed; 1 = Correct code; 9 = If data element does not pertain to encounter service type *Required for Inpatient encounters*	X	1
4	Encounter_Primary_Diagnosis_ Code	0 = No or insufficient documentation, assignment of incorrect primary diagnosis code, diagnosis not treated during encounter; 1 = Correct code *Required for Inpatient, Professional, Outpatient, and FQHC encounters*	X	1
5	Encounter_Units	0 = No or insufficient documentation, incorrect units; 1 = Correct units; 9 = Data element does not pertain to encounter service type *Required for Professional, Outpatient, and FQHC encounters*	X	1
6	Encounter_Service_Date	0 = No or insufficient documentation, incorrect service start date; 1 = Correct service start date; 9 = If data element does not pertain to encounter service type *Required for Inpatient, Professional, Outpatient, and FQHC encounters*	X	2
7	Encounter_Thru_Date	0 = No or insufficient documentation, incorrect service end date; 1 = Correct service end date; 9 = If data element does not pertain to encounter service type *Required for Inpatient encounters*	X	2
8	Encounter_Discharge_Status	0 = No or insufficient documentation, incorrect discharge status; 1 = Correct discharge status; 9 = If data element does not pertain to encounter service type *Required for Inpatient encounters*	X	2
9	Doc_Procedure_Code	Enter correct procedure code if present the supporting documentation; Enter 'No Doc' if no or insufficient documentation of correct procedure code;	X	7

Data Element (Field)		Data Description	Format	Length
		Enter 'NA' if data element does not pertain to encounter service type *Required for Professional, Outpatient, and FQHC encounters*		
10	Doc_Procedure_Code_Modifier	Enter correct procedure code modifier if present in the supporting documentation; Enter 'No Doc' if no or insufficient documentation of correct procedure code modifier; Enter 'NA' if data element does not pertain to encounter service type *Required for Professional, Outpatient, and FQHC encounters*	X	7
11	Doc_Surgical_Code	Enter correct surgical procedure code if present in supporting documentation; Enter 'No Doc' if no or insufficient documentation of correct surgical procedure code; Enter 'NA' if data element does not pertain to encounter service type *Required for Inpatient encounters*	X	7
12	Doc_Diag	Enter correct primary diagnosis code if present in the supporting documentation; Enter 'No Doc' if no or insufficient documentation of correct diagnosis code	X	7
13	Doc_Units	Enter correct units if present in the supporting documentation; Enter 'No Doc' if no or insufficient documentation of correct units *Required for Professional, Outpatient, and FQHC encounters*	X	integer
14	Doc_Service_Date	Enter correct start date if present in supporting documentation; Enter 'No Doc' if no or insufficient documentation of correct start date *Required for Inpatient, Professional, Outpatient, and FQHC encounters*	X	8
15	Doc_Thru_Date	Enter correct end date if present in supporting documentation; Enter 'No Doc' if no or insufficient documentation of correct end date; Enter 'NA' if data element does not pertain to encounter service type *Required for Inpatient encounters*	X	8
16	Doc_Encounter_Discharge_Status	Enter correct discharge status if present in supporting documentation; Enter 'No Doc' if no or insufficient documentation of correct discharge status; Enter 'NA' if data element does not pertain to encounter service type *Required for Inpatient encounters*	X	8
17	E&M Guidelines Version	1 = 1995 version of Evaluation and Management Services Documentation Guidelines 2 = 1997 version of Evaluation and Management Services Documentation Guidelines 9 = Does Not Apply	X	1
18	Comments (optional)	Any comments, for example 'no documentation received from provider'	X	flexible

Appendix C. Denver Health Service Coding Accuracy Results

Table C-1—Inpatient Encounters Service Coding Accuracy Summary

Requirement	HMO Name	Numerator	Excluded/ Does Not Apply	Total Denominator	Modified Denominator	Overall Percent	Modified Percent
Date of Service	Denver Health Medicaid Choice	100	0	103	103	97.09%	97.09%
Through Date	Denver Health Medicaid Choice	102	0	103	103	99.03%	99.03%
Diagnosis Code	Denver Health Medicaid Choice	96	0	103	103	93.20%	93.20%
Surgical Procedure Code	Denver Health Medicaid Choice	102	0	103	103	99.03%	99.03%
Discharge Status	Denver Health Medicaid Choice	98	0	103	103	95.15%	95.15%

Table C-2—Outpatient Encounters Service Coding Accuracy Summary

Requirement	HMO Name	Numerator	Excluded/ Does Not Apply	Total Denominator	Modified Denominator	Overall Percent	Modified Percent
Date of Service	Denver Health Medicaid Choice	98	0	103	103	95.15%	95.15%
Diagnosis Code	Denver Health Medicaid Choice	94	0	103	103	91.26%	91.26%
Procedure Code	Denver Health Medicaid Choice	65	0	103	103	63.11%	63.11%
Procedure Code Modifier	Denver Health Medicaid Choice	73	0	103	103	70.87%	70.87%
Units	Denver Health Medicaid Choice	73	0	103	103	70.87%	70.87%

Table C-3—Professional Encounters Service Coding Accuracy Summary

Requirement	HMO Name	Numerator	Excluded/ Does Not Apply	Total Denominator	Modified Denominator	Overall Percent	Modified Percent
Date of Service	Denver Health Medicaid Choice	90	0	103	103	87.38%	87.38%
Diagnosis Code	Denver Health Medicaid Choice	75	0	103	103	72.82%	72.82%
Procedure Code	Denver Health Medicaid Choice	80	1	103	102	77.67%	78.43%
Procedure Code Modifier	Denver Health Medicaid Choice	89	0	103	103	86.41%	86.41%
Units	Denver Health Medicaid Choice	87	0	103	103	84.47%	84.47%

Table C-4—FQHC Encounters Service Coding Accuracy Summary

Requirement	HMO Name	Numerator	Excluded/ Does Not Apply	Total Denominator	Modified Denominator	Overall Percent	Modified Percent
Date of Service	Denver Health Medicaid Choice	93	0	103	103	90.29%	90.29%
Diagnosis Code	Denver Health Medicaid Choice	81	0	103	103	78.64%	78.64%
Procedure Code	Denver Health Medicaid Choice	74	0	103	103	71.84%	71.84%
Procedure Code Modifier	Denver Health Medicaid Choice	83	0	103	103	80.58%	80.58%
Units	Denver Health Medicaid Choice	86	0	103	103	83.50%	83.50%