FY 2015–2016
BEHAVIORAL HEALTH ORGANIZATION
411 INDEPENDENT AUDIT REPORT

for

Behavioral Healthcare, Inc.

June 2016

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

HSAG HEALTH SERVICES ADVISORY GROUP

CONTENTS

Background

In Fiscal Year (FY) 2008–2009, the Colorado Department of Health Care Policy & Financing (the Department) contracted Health Services Advisory Group, Inc. (HSAG), to conduct an encounter data validation study for the Department's five contracted behavioral health organizations (BHOs).[1] Based on the study findings, HSAG recommended that the Department develop guidelines for BHOs to perform ongoing reviews of encounter data quality. The Department has continued working with the BHOs to assist them with their internal encounter data quality audits. Annually, the BHOs were required to randomly select a sample of 411 valid cases from their encounter flat files and conduct an internal audit on this sample, using behavioral health record review to evaluate the quality of the encounter data. For FY 2015–2016, the Department randomly selected the sample of 411 cases for each BHO. The BHOs then submitted their audit results and an encounter data quality report for the Department's review.

To further improve the quality of behavioral health encounter data submitted by the BHOs, the Department developed and implemented the Annual BHO Encounter Data Quality Review Guidelines (guidelines) beginning in Calendar Year (CY) 2011. The guidelines include specific timeline and file format requirements to guide each BHO in preparing its annual Encounter Data Submission Quality Report and the Service Coding Accuracy Report, which are based on the BHOs' internal encounter data audits.

The guidelines also stipulate that an independent evaluation of the service coding accuracy results will be conducted by HSAG to verify the quality of internal audits performed by the BHOs. In contracting with HSAG in FY 2015–2016, the Department requested the following tasks:

1. Conduct a desk review of the Department's sampling protocol and code, as well as a review of each BHO's audit process, including any submitted audit documentation.
2. Conduct a review of behavioral health records for sample cases randomly selected from each BHO's 411 sample list.
3. Produce an aggregate report with BHO-specific findings, including a statement regarding HSAG's level of confidence in each BHO's audit results.

This report presents HSAG's validation findings of the BHOs' internal audit efforts as they pertain to the desk review (task #1 above) and behavioral health records review (task #2 above).

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[1] All five BHOs contracted by the Department in FY 2015-2016 participated in this independent audit: Access Behavioral Care–Denver (ABC-D), Access Behavioral Care–Northeast (ABC-NE), Behavioral Healthcare, Inc. (BHI), Colorado Health Partnerships, LLC (CHP), and Foothills Behavioral Health Partners, LLC (FBHP).

Methodology

HSAG's independent audit consisted of two components: (1) a desk review of the Department's sampling protocol and each BHO's audit documentation, and (2) an over-read of the BHOs' internal audit results. The first component, the desk review, aimed to ensure that the samples generated for the BHOs for their internal audits followed standard sampling principles. More specifically, the desk review evaluated the extent to which the resulting 411 audit samples were generated randomly from a collection of encounters eligible for this study and were representative of those encounters.

The Department submitted its sampling methodology and the SQL code used to randomly select encounters to HSAG in January 2016. The BHOs submitted audit documentation to HSAG between March and April 2016. HSAG conducted a desk review of these internal audit methodology documents in May 2016.

The second component of HSAG's independent audit was to evaluate whether the BHOs' internal audit of behavioral health encounters against the members' records was accurate and consistent with the Uniform Service Coding Standards (USCS) manual. HSAG received the BHOs' response files containing their internal audit results and over-read a sample of 30 cases for each BHO to accomplish this evaluation. Several steps were involved in this process:

1. Generation of Over-Read Samples

The Department submitted BHO-specific lists of sampled encounters[2] and corresponding encounter data flat file information to HSAG in January 2016. Each list contained the sample of final, adjudicated behavioral health encounters paid between October 1, 2014, and September 30, 2015, from which each BHO would conduct its internal audit. The data layout of the encounter data flat file can be found in Appendix A. From the 411 sample lists, HSAG employed a two-stage sampling methodology to randomly select 10 individual members for each of the three program service categories outlined in the Department's 411 Audit Guidelines.[3] A single encounter was then selected for each member. Member lists for each of the three groups were cross-referenced to ensure that a single member was only sampled in one category. These 30 cases constituted the over-read samples for HSAG.

2. Audit Tool Development

Each BHO submitted the response file for its internal 411 audit to HSAG in mid-March 2016. The response file contained all required audited fields and the BHOs' validation results. The data layout of the response file is located in Appendix B. HSAG designed a data collection tool and corresponding tool instructions in alignment with the guidelines and the 2014 and 2015 USCS manuals. HSAG created a separate tool for each BHO, and each tool was then pre-populated with the selected date of service and data values from the BHO's encounter data file and audit results from the response file.

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[2] The Department sampled 411 paid encounters from each BHO, stratified across three service categories (i.e., Prevention/Early Intervention, Club House or Drop-In Center Services, and Residential Services).

[3] Program service categories were identified using the service category modifier or procedure code fields for each encounter. Service category modifier "HT" identified Prevention/Early Intervention Services, and service category modifier "HB" identified Club House or Drop-In Center Services. Encounters with procedure code values of "H0017," "H0018," or "H0019" were identified as Residential Services.

The tool was constructed such that pre-populated fields were locked to ensure data integrity, and all over-read results required an active response from the HSAG reviewer from a drop-down response menu. Once the tool was finalized prior to the audit, HSAG made no changes to the tool's format or layout.

3. HSAG's Over-Read Process

HSAG evaluated the accuracy of the BHOs' audit findings in April 2016. More specifically, the HSAG reviewer validated the BHOs' accuracy in auditing the providers' submitted encounter data in accordance with the USCS manuals. HSAG's over-read did not evaluate the quality of behavioral health record documentation or the providers' accuracy in submitting encounter data, only whether the BHOs' audit responses were accurate based on the review of the supporting behavioral health record documentation submitted by the BHOs. HSAG used the same standards for acceptable record evidence originally established by the Department for the purpose of the FY 2011–2012 independent audit. All of HSAG's over-read results were entered into the HSAG audit tool.

One HSAG clinical reviewer was trained to conduct the over-read. During the over-read, the reviewer located the selected date of service in the submitted behavioral health record to determine whether the Current Procedural Terminology (CPT) and International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes pre-populated in the audit tool from the encounter data flat file were supported by the submitted behavioral health record documentation and in alignment with the criteria outlined in the USCS manuals. Next, the HSAG reviewer assessed the audit response of the BHO in regards to the accuracy of the codes submitted by the provider. If the HSAG reviewer agreed with the BHO's response, a code for agreement was entered into the tool. If the HSAG reviewer disagreed with the BHO's response, a code for disagreement was entered into the tool. The findings of this audit were based on HSAG's percent of agreement or disagreement with the BHO's responses.

During the over-read, HSAG conducted ongoing interrater reliability (IRR) by randomly selecting at least 20 percent of completed cases and comparing the over-read results to those of a second reviewer. For cases in which over-read discrepancies were identified between the first and second reviewers, a third "Gold Standard" reviewer provided a final determination regarding the appropriate over-read result. Any IRR results that fell below 95 percent required further evaluation by the manager and possible retraining of the reviewer.

4. Analysis Process

Upon completion of the over-read, an HSAG analyst exported the results from the audit tool and aggregated them for each BHO. The analyst also consulted with the lead clinical reviewer as needed for clarification on noted observations entered in the audit tool during the over-read. Results generated from the over-read files were validated independently by a second HSAG analyst.

Results

Desk Review

Sampling Methodology

The Department provided a description of the process used to select the sample encounters for each BHO. The Department described the program service category criteria by which the sample was stratified and listed the service dates and paid dates used to restrict the encounters. The documentation briefly described how the Department restricted the sample to final, paid claims and that voided or denied claims were removed from the sample frame.

The Department included a limited section of source code to show the exact process used to select records; however, no comprehensive SQL code detailing the Department's method for assembling the sample frame was provided to HSAG. Nonetheless, the Department's narrative description was sufficiently detailed to show an understanding of the data selection protocol. The Department included a sample of SQL code showing the use of the "RND" function as a method to create a random variable based on the length of the service recipient's Medicaid Client Identification Number. Encounters matching the criteria for BHO and service category were sorted in ascending order by this new random variable, and the first 137 records were retained as the sampled cases.

The Department's sampling methodology also allowed three months between the end of the study period and the time at which encounters were selected for review (i.e., the run-out period). The data run-out period allows time for corrections to be applied to the original encounter record, minimizing the likelihood of auditing encounters voided or adjusted after the sample was selected.

BHOs' Internal Audit Methodology

As a result of the FY 2011 BHO 411 Independent Audit, subsequent BHO 411 Audit Guidelines have requested each BHO's internal audit methodology documentation. This information was requested as a component of each BHO's Service Coding Accuracy Report to help provide context for the service coding accuracy findings. As a component of the CY 2015 Service Coding Accuracy Report, each BHO provided internal audit methodology information. Since the internal audit documentation is unique to each BHO, documents were not provided in a standardized format and comparisons between BHOs were conducted for informational purposes only. HSAG identified the findings listed below from the BHOs' internal audit methodology documents. It is important to note that select findings are similar to those reported in previous years.

♦ Similarities existed in the descriptions of the tool development and audit processes among the BHOs. In previous 411 audits, the documents provided by each BHO included information on contractual relationships between BHOs that played a role in the audit processes (e.g., one BHO contracted another BHO to conduct its 411 audit). Despite similarities in the content and wording within the BHOs' CY 2015 Service Coding Accuracy Reports, enough differences existed between the BHOs' reports to conclude that BHI, CHP, and FBHP each conducted their own independent audit. As ABC-D and ABC-NE are both part of Access Behavioral Care (ABC), it is neither a positive nor a negative finding that these BHOs shared processes and resources to conduct their audits.

♦ Each BHO described the development of its audit tools, subsequent auditor training/auditor professional experience, and any reliability testing. At least two auditors conducted each BHO's audit, and all auditors scored at least 90.0 percent agreement when assessing auditor reliability using IRR or similar techniques.

♦ Each BHO described steps taken to review and validate audit results, and provided descriptions of auditing instructions. One BHO provided a copy of the instructions given to auditors responsible for reviewing the behavioral health records.

♦ For low-scoring providers, each BHO described implementing corrective action plans (CAP) or training/education that addressed deficiencies identified during the audit.

Over-Read of Sample Cases: All Service Types

Overall Agreement Rate

Figure 1 presents the aggregate results from HSAG's over-read of the 150 cases (30 cases from each BHO). Agreement values range from 0 percent to 100 percent, where 100 percent represents perfect agreement between the BHOs' audit results and HSAG's over-read results, and 0 percent represents complete disagreement. Based on each BHO's results, HSAG also calculated an aggregate validation rate for each audit element and repeated these calculations for each of the three program service categories examined during HSAG's FY 2016 411 over-read. To determine the percentage of cases in agreement for key validation elements, HSAG identified cases in which the over-read results agreed with the BHO's audit findings for the *Procedure Code*, *Diagnosis Code*, and *Units* elements; this result is identified in Figure 1 as *Validation Elements*. Of the 150 cases which HSAG overread, HSAG agreed with the BHO auditors' determination for all 11 elements in 114 cases (76.0 percent).

**Figure 1—Aggregated Percentage of Agreement Between
HSAG's Over-Read and the BHOs' Internal Audit Findings by Data Element**
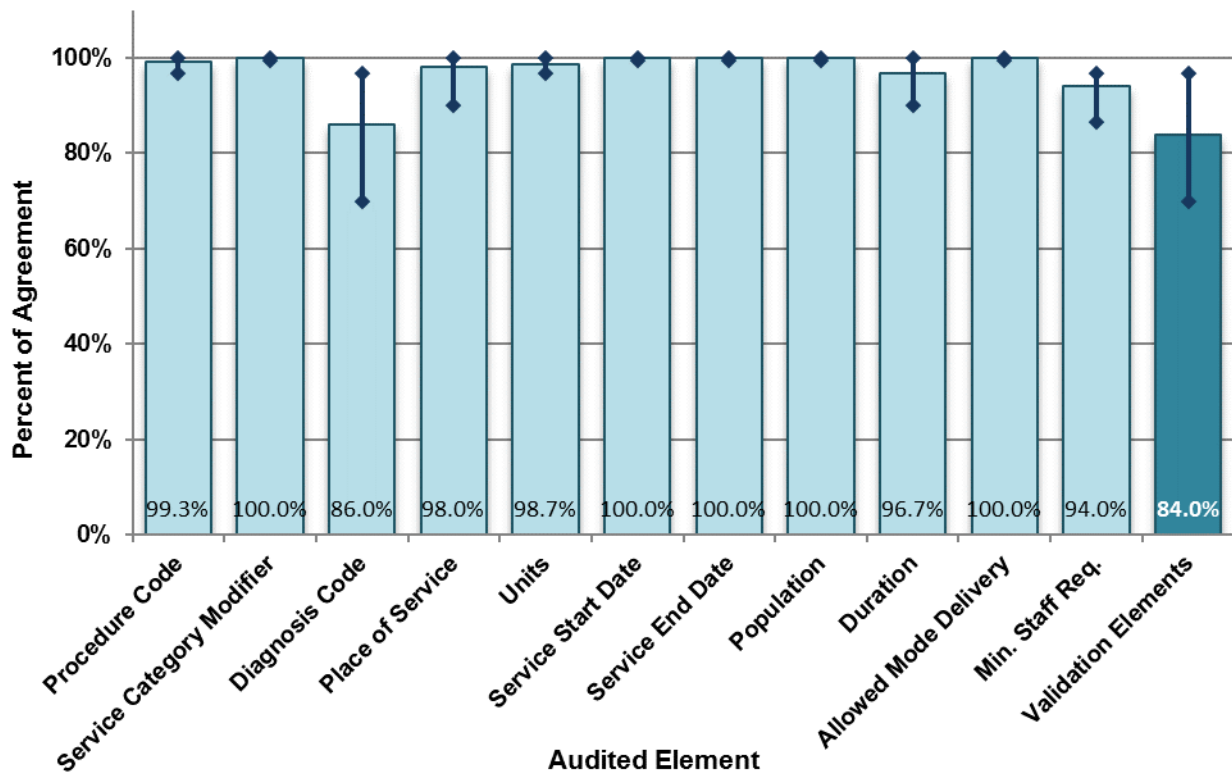
Note: The upper and lower diamonds represent the highest and lowest agreement rates among the BHOs.

Figure 1 illustrates HSAG's agreement with the BHOs' audit results for a composite of selected validation fields (*Procedure Code*, *Diagnosis Code*, and *Units*) as 84.0 percent of the 150 over-read cases (*Validation Elements*, 126 of 150 cases). At the BHO level, the agreement rate for *Validation Elements* ranged from 70.0 percent to 96.7 percent.
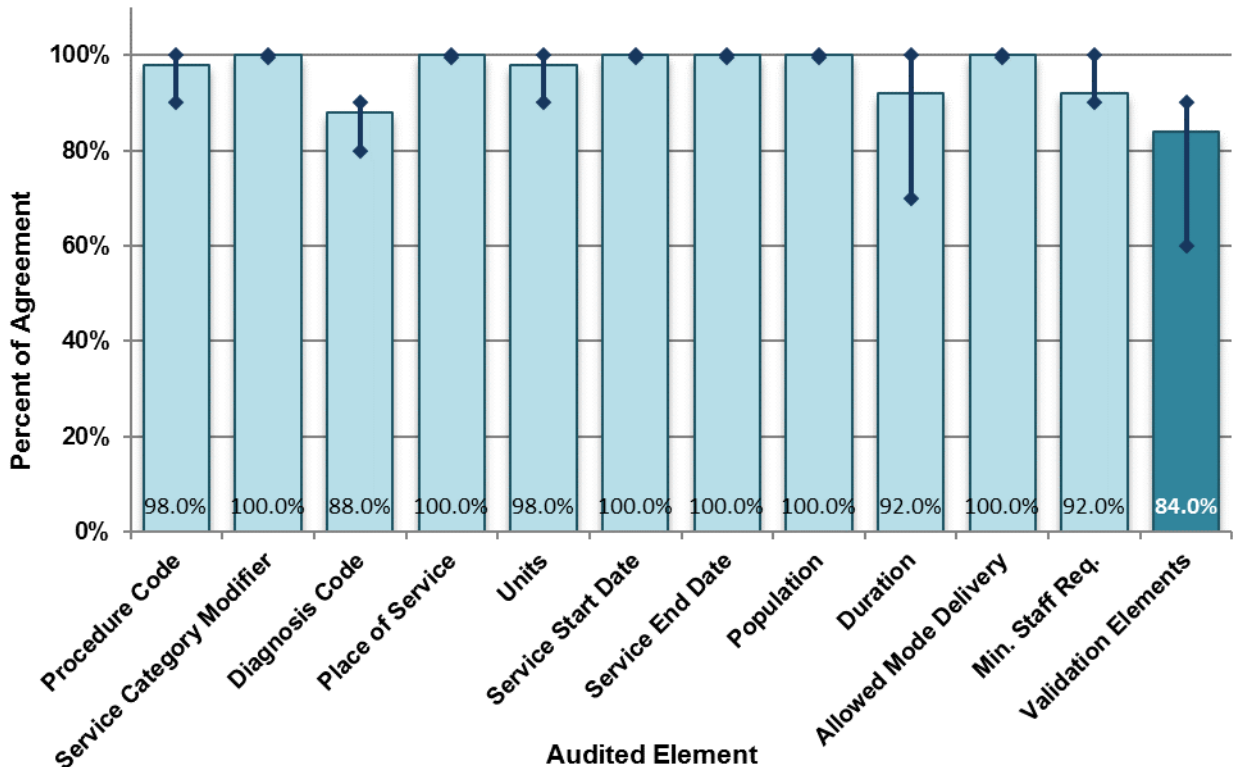
Field-Specific Agreement Rate

The 11 audited elements achieved aggregate agreement rates ranging from 86.0 to 100 percent. *Diagnosis Code* had the lowest aggregate agreement rate for any element (86.0 percent), and the lowest agreement rate among the individual BHOs (70.0 percent). The relatively low aggregate agreement rate for the *Diagnosis Code* element was largely driven by two BHOs with agreement rates below 77.0 percent. The *Service Start Date*, *Service End Date*, *Population*, and *Allowed Mode Delivery* elements had agreement rates of 100 percent for each BHO.

Over-Read of Sample Cases: Prevention/Early Intervention Services

Overall Agreement Rate

Figure 2 presents the aggregate results from HSAG's over-read of the 50 cases with Prevention/Early Intervention Services (10 cases per BHO).

**Figure 2—Aggregated Percentage of Agreement Between
HSAG's Over-Read and the BHOs' Internal Audit Findings by Data Element
Prevention/Early Intervention Services**

Note: The upper and lower diamonds represent the highest and lowest agreement rates among the BHOs for Prevention/Early Intervention Services.

As seen in Figure 2, HSAG agreed with the BHOs' audit results for a composite of selected validation fields for 84.0 percent of the 50 over-read cases with Prevention/Early Intervention Services. At the BHO level, the agreement rate for *Validation Elements* ranged from 60.0 to 90.0 percent, with only one BHO having a validation rate less than 90.0 percent.

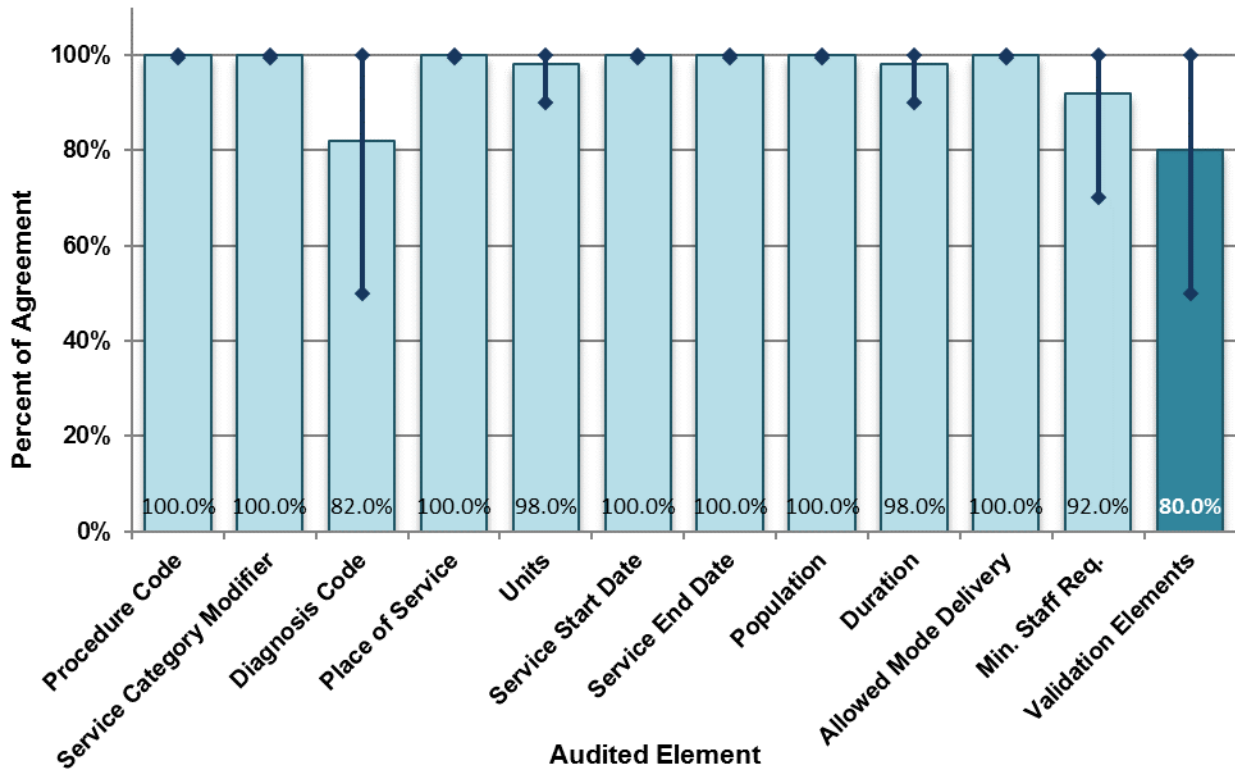### Field-Specific Agreement Rate

All audited elements achieved an aggregate agreement rate of at least 88.0 percent. At 88.0 percent, the *Diagnosis Code* element had the lowest overall aggregate agreement rate. The *Service Category Modifier*, *Place of Service*, *Service Start Date*, *Service End Date*, *Population*, and *Allowed Mode Delivery* elements had agreement rates of 100 percent for each BHO.

Over-Read of Sample Cases: Club House or Drop-In Center Services

Overall Agreement Rate

Figure 3 presents the aggregate results from HSAG's over-read of the 50 cases with Club House or Drop-in Center Services (10 cases per BHO).

**Figure 3—Aggregated Percentage of Agreement Between
HSAG's Over-Read and the BHOs' Internal Audit Findings by Data Element
Club House or Drop-In Center Services**

Note: The upper and lower diamonds represent the highest and lowest agreement rates among the BHOs for Club House/Drop-In Center Services.

As seen in Figure 3, HSAG agreed with the BHOs' audit results for a composite of selected validation fields for 80.0 percent of the 50 over-read cases with Club House or Drop-In Center Services. At the BHO level, the agreement rate for *Validation Elements* ranged from 50.0 to 100 percent, with two BHOs having results less than 90.0 percent.
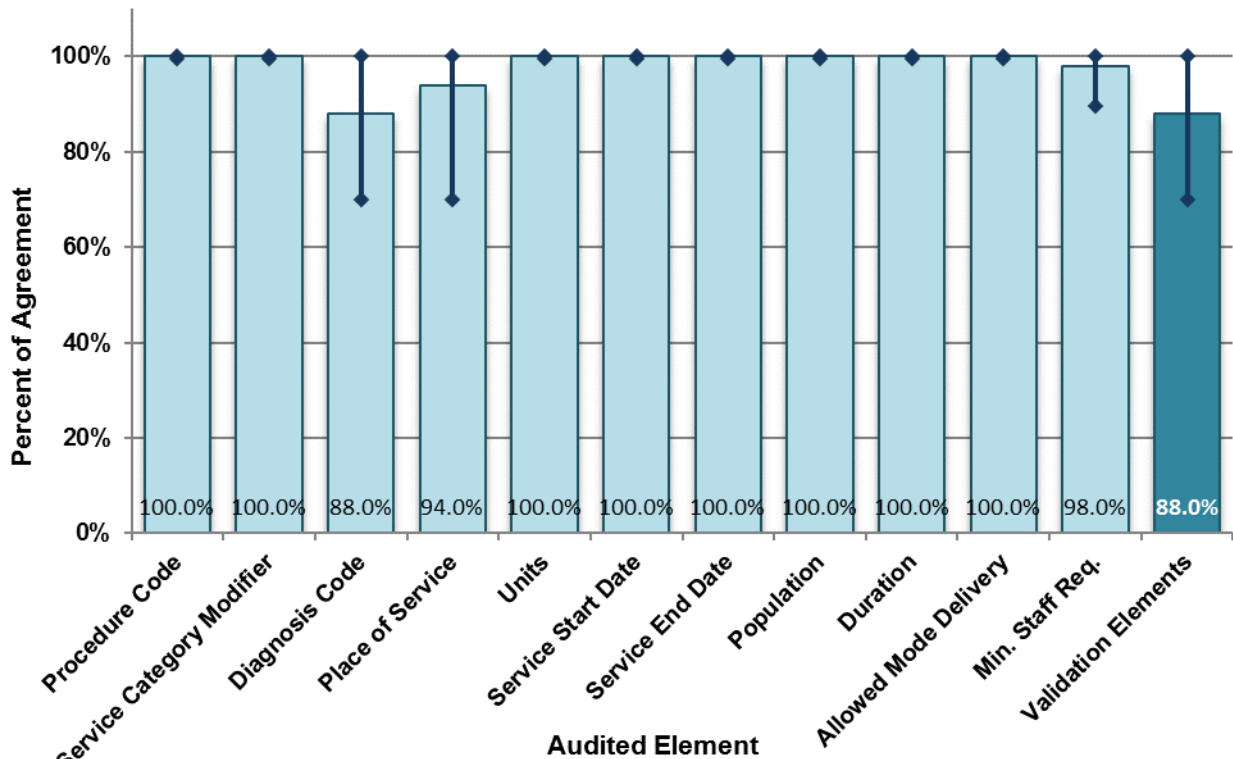
Field-Specific Agreement Rate

All audited elements achieved an aggregate agreement rate of at least 82.0 percent. At 82.0 percent, the *Diagnosis Code* element had the lowest overall aggregate agreement rate. Two of the five BHOs had *Diagnosis Code* agreement rates at or below 70.0 percent, while the remaining BHOs had agreement rates between 90.0 and 100.0 percent for this element. The *Procedure Code*, *Service Category Modifier*, *Place of Service*, *Service Start Date*, *Service End Date*, *Population*, and *Allowed Mode Delivery* elements had agreement rates of 100 percent for each BHO.

Over-Read of Sample Cases: Residential Services

Overall Agreement Rate

Figure 4 presents the aggregate results from HSAG's over-read of the 50 cases with Residential Services (10 cases per BHO).

**Figure 4—Aggregated Percentage of Agreement Between
HSAG's Over-Read and the BHOs' Internal Audit Findings by Data Element
Residential Services**

Note: The upper and lower diamonds represent the highest and lowest agreement rates among the BHOs for Residential Services.

As seen in Figure 4, HSAG agreed with the BHOs' audit results for a composite of selected validation fields for 88.0 percent of the 50 over-read cases with Residential Services. At the BHO level, the agreement rate for *Validation Elements* ranged from 70.0 to 100 percent.

Field-Specific Agreement Rate

All audited elements achieved an aggregate agreement rate of at least 88.0 percent. At 88.0 percent, the *Diagnosis Code* element had the lowest aggregate agreement rate, with values ranging from 70.0 to 100 percent among the individual BHOs. The *Procedure Code*, *Service Category Modifier*, *Units*, *Service Start Date*, *Service End Date*, *Population*, *Duration*, and *Allowed Mode Delivery* elements had agreement rates of 100 percent for each BHO.

Conclusions

HSAG's desk review of the Department's sampling methodology reflected careful consideration in randomly selecting only final, paid encounters specific to the study period and stratified by service category. The sampling methodology provided a three-month data run-out period, but no further details regarding the adequacy of this interval were reported.

While the sampling logic seems appropriate for randomly selecting encounters from each of the three service categories, HSAG saw no evidence of consideration for assessing and removing duplicate encounter records in which one line of the encounter was coded to one service category while another line of the same encounter was coded to another service category. Similarly, coding logic which would prevent the same member or provider from being selected more than once for the audit sample was not provided. This type of multi-stage sampling approach would allow the Department to assess encounter data accuracy across a potentially wider range of providers. While this finding persists from the SFY 2014–2015 study, the Department's current approach grants equal weight to each encounter in the sample frame, meeting the overall intent of this study.

The Department continued to act as the central source for the randomly selected encounter samples, providing a means by which all BHOs have encounter data selected using the same process and logic. This approach reduces the likelihood of plan-specific biases that may occur in case selection when each BHO is responsible for generating its own sample list. This approach also ensures that sampled cases are present in the Department's encounter data (i.e., the encounters were submitted to the Department by each BHO, rather than existing in the BHOs' encounter data repositories without submission to the Department).

Of the 150 cases which HSAG overread, HSAG agreed with the BHO auditors' determination for all 11 elements in 114 cases (76.0 percent). HSAG completely agreed with the BHO auditors' determinations for the *Service Category Modifier*, *Service Start Date*, *Service End Date*, *Population*, and *Allowed Mode Delivery* elements.

HSAG's over-read results showed an aggregate agreement rate of 84.0 percent for *Validation Elements*, with significant variation in the agreement rate among the BHOs (ranging from 70.0 percent to 96.7 percent). Over-read results for *Validation Elements* resulted primarily from the variance in the *Diagnosis Code* element, with a range across the BHOs of 70.0 to 96.7 percent agreement between the BHO auditors' determination and HSAG's over-read results, with specific disagreement related to the BHO auditors' determination regarding the level of diagnosis code specificity between the behavioral health record and the encounter data among two BHOs. For example, the BHO may have agreed with a four-digit ICD-9-CM diagnosis code in a case where a more specific five-digit diagnosis code was reflected in the behavioral health record; as such, HSAG disagreed with the BHO auditors' determination.

Residential Services had the highest aggregate agreement rate for *Validation Elements* (88.0 percent), and HSAG agreed with the BHO auditors' determination for all 11 elements in 10 cases (20.0 percent of the 50 cases). At the BHO level, one BHO showed complete agreement (100 percent) for all data elements across both Residential Services and Club House or Drop-In Services. Two of the five BHOs had agreement rates of at least 90 percent for all data elements, including *Validation Elements*, at both the aggregate level and when stratified by service category.

While some of the BHOs had high agreement rates, the results show targeted decreases from last year's over-read results. This decrease was a result of disagreements between HSAG over-read results and the BHO auditors' determination for individual data elements, including the issue previously discussed regarding the *Diagnosis Code* element. Based on the BHOs' desk review materials and HSAG's over-read results, BHO performance on the FY 2015–2016 audit exhibited sustained performance from the prior year's results. Such performance suggests a continued level of confidence that the BHOs' audit findings accurately reflect the quality of their encounter data.

In general, despite the decrease in selected agreement rates, the audit documentation provided by the BHOs indicated a continued investment in auditor training, process development and documentation, and the use of audit results for continued improvement of encounter data quality.

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. Additionally, HSAG offers the following recommendations to improve the quality of future BHO internal audits. While the current over-read results show progress by the BHOs, it is important to note that similar recommendations from prior over-reads remain relevant.

♦ The Department may benefit from further review of its process for selecting encounter records for inclusion in the 411 audit. While the Department's methods for stratifying record selection and for randomly selecting records for inclusion are adequate, no indication suggests that encounter record duplications are intentionally prevented in the encounter selection process. While the Department provided a section of SQL source code used in randomized sampling, it would be beneficial to review the complete source code to assess the Department's methodology for data extraction and sample frame generation that affect the integrity of the randomized sample.

♦ The BHOs demonstrated a decrease in performance from the results of the FY 2014–2015 411 audit over-read; however, this trend is largely due to HSAG's disagreement with two of the BHO auditors' determinations for the *Diagnosis Code* element. The BHOs should ensure their internal audit training and oversight materials require that diagnosis and procedure codes are assessed for accuracy and completeness, including an appropriate level of specificity in the code selected for the service documented in the behavioral health record.

♦ As noted in prior over-read findings, each BHO's audit documentation reported the use of training or corrective actions to address providers' encounter submission errors, and the Department should assess the BHOs' training and/or corrective action procedures and materials. The Department's review of these documents and procedures may identify best practices or opportunities for continued standardization across BHOs.

	Data Element (Field)	Status*	Format	Length	Valid Value
0	Record No	R	X	Integer	Sequential number
1	Transaction Header	R	X	1	Encounter data
2	Transaction Date	R	X	8	Encounter data
3	Submitter Organization Name	R	X	Flexible	Encounter data
4	Submitter Contact Number	C	9	10	Encounter data
5	Billing Provider Name	R	X	Flexible	Encounter data
6	Billing Provider Identification	R	X	8	Encounter data
7	Client Last Name	C	X	Flexible	Encounter data
8	Client First Name	C	X	Flexible	Encounter data
9	Client Medicaid Identification	R	X	7	Encounter data
10	Client ZIP Code	R	X	Flexible	Encounter data
11	Client Date of Birth	C	X	8	Encounter data
12	Client Gender	C	X	1	Encounter data
13	Claim Number	R	X	Flexible	Encounter data
14	Claim Version	R	X	1	Encounter data
15	Primary Diagnosis Code	R	X	5	Encounter data
16	Second Diagnosis Code	C	X	5	Encounter data
17	Third Diagnosis Code	C	X	5	Encounter data
18	Fourth Diagnosis Code	C	X	5	Encounter data
19	POS/Bill Type	R	X	2	Encounter data
20	Approved Amount	C	Number	Double	Encounter data
21	Paid Amount	C	Number	Double	Encounter data
22	Service Line Number	R	Number	Integer	Encounter data
23	Line Paid Amount	C	Number	Double	Encounter data
24	Procedure Code	R	X	5	Encounter data
25	Service/Program Category (Procedure Modifier 1)	R	X	2	Encounter data
26	Procedure Modifier 2	C	X	2	Encounter data
27	Procedure Modifier 3	C	X	2	Encounter data
28	Procedure Modifier 4	C	X	2	Encounter data
29	Procedure Description	C	X	Flexible	Encounter data
30	Revenue code	R	X	Flexible	Encounter data
31	Units	R	Number	Integer	Encounter data
32	Service Start Date	R	X	8	Encounter data
33	Service End Date	C	X	8	Encounter data
34	BHO Name	R	X	Flexible	Encounter data
35	BHO Medicaid ID	R	X	8	Encounter data
36	FCLN	R	Number	Integer	Encounter data
37	Payment Date	R	X	8	Encounter data
38	Rendering Provider ID	R	X	Flexible	Encounter data

* R = Required, C = Conditional

	Data Element (Field)	Data Description	Format	Length
0	Record No	Sequential number for each of 411 records; should align with the *Record No* in the flat file (Appendix I)	X	Integer
1	Encounter Procedure Code	0=No supporting doc, or not consistent w the doc, or not in the USCS, or not comply with the service description in USCS*; 1=yes, consistent with the supporting doc and comply with USCS; *all of the information under the headings of "procedure code description," "service description," "notes," "minimum documentation requirements," and "example activities" should be taken into account when they are applicable.	X	1
2	Encounter Diagnosis code	0=No doc, or not consistent w the supporting doc, or not comply w the diagnosis code requirement in USCS; 1=yes, comply and consistent	X	1
3	Encounter POS	0=No doc, or not consistent w the supporting doc, or not comply w USCS; 1=yes, comply		
4	Encounter Service Cat/Program Category (Procedure Modifier 1)	0=Not comply with the program category requirement in the USCS for the encounter procedure code; 1=yes, comply	X	1
5	Encounter Units	0=No supporting doc, or not consistent w the doc or not within the duration allowed by USCS; 1=yes, comply	X	1
6	Encounter Service Start Date	0=Start date is not comply w the supporting doc; 1= comply	X	1
7	Encounter Service End Date	0=End date is not comply w the supporting doc; 1= comply	X	1
8	Doc_population	0=No doc or not comply w USCS; 1=yes, comply	X	1
9	Doc_duration	0=No doc or not comply w USCS; 1=yes, comply	X	1
10	Doc_allowed_mode_delivery	0=No doc or not comply w USCS; 1=yes, comply	X	1
11	Doc_Staff_req	0=No doc or not comply w USCS; 1=yes, comply	X	1
12	Doc_Procedure Code	Procedure Code in the supporting doc; 'NA' if there is no document or unable to determine service based on documentation	X	5
13	Doc_diag	Diagnosis code in the supporting doc; 'NA' if there is no document	X	5
14	Doc_POS	Place of Service in the supporting doc; 'NA' if there is no document	X	2
15	Doc_Units	Max of the units comply w USCS; 'NA' if there is no document	X	Integer
16	Doc_Service Start Date	Start Date in the doc; 'NA' if there is no doc	X	8
17	Doc_Service End Date	End Date in the doc; 'NA' if there is no doc	X	8
18	USCS version used	1=2014 version, 2=2015 version	X	1
19	Comments (optional)	Any comments, for example 'no documentation received from provider'	X	Flexible

Figure C-1 presents aggregate results from HSAG's 30-case over-read of BHI's 411 sample. Agreement values range from 0 percent to 100 percent, where 100 percent represents complete agreement between BHI's audit results and HSAG's over-read results and 0 percent represents complete disagreement.

**Figure C-1—Aggregated Percentage of Agreement Between
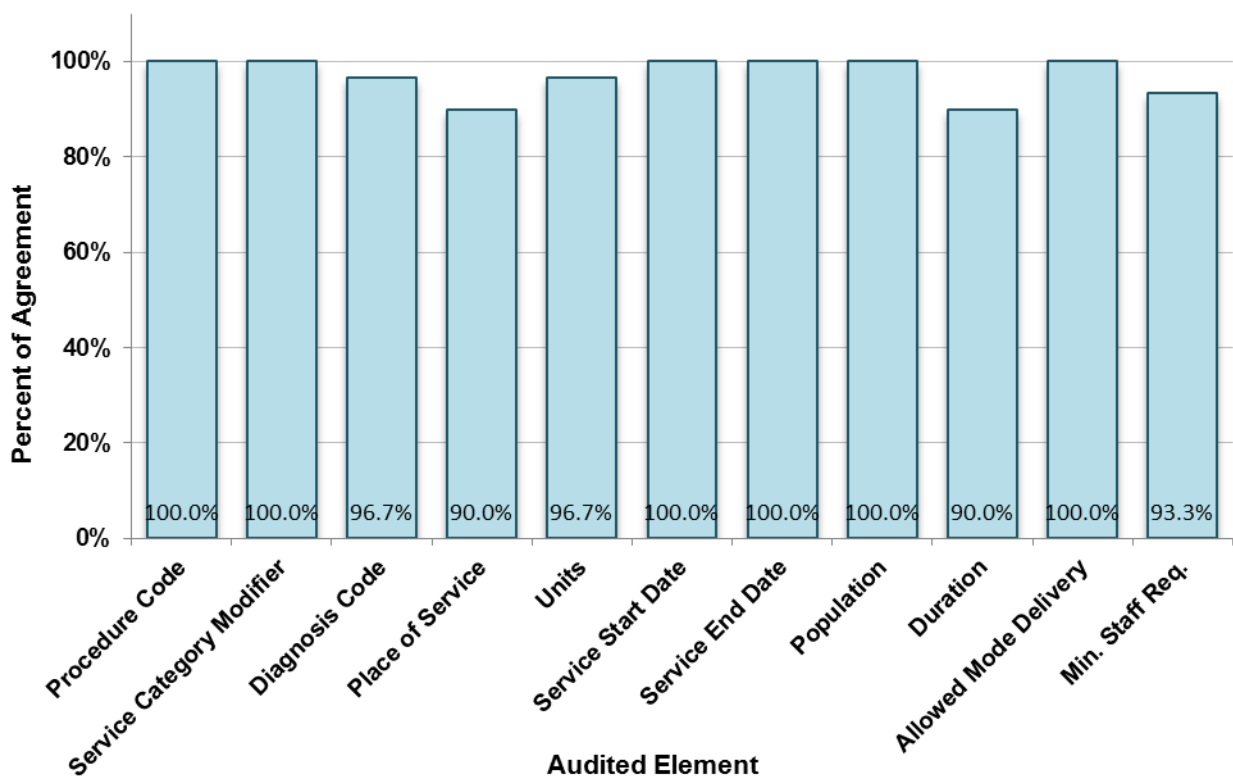HSAG's Over-Read and BHI's Internal Audit Findings by Data Element**

Figure C-1 shows that six of the 11 audited elements were in agreement with HSAG for 100 percent of the over-read cases. At 90.0 percent, the *Place of Service* and *Duration* elements had the lowest agreement between BHI's audit results and HSAG's over-read results.

The following figures present aggregate results from HSAG's over-read of the 10 sampled cases associated with Prevention/Early Intervention Services, Club House or Drop-In Center Services, and Residential Services, respectively.

**Figure C-2—Aggregated Percentage of Agreement Between
HSAG's Over-Read and BHI's Internal Audit Findings by Data Element
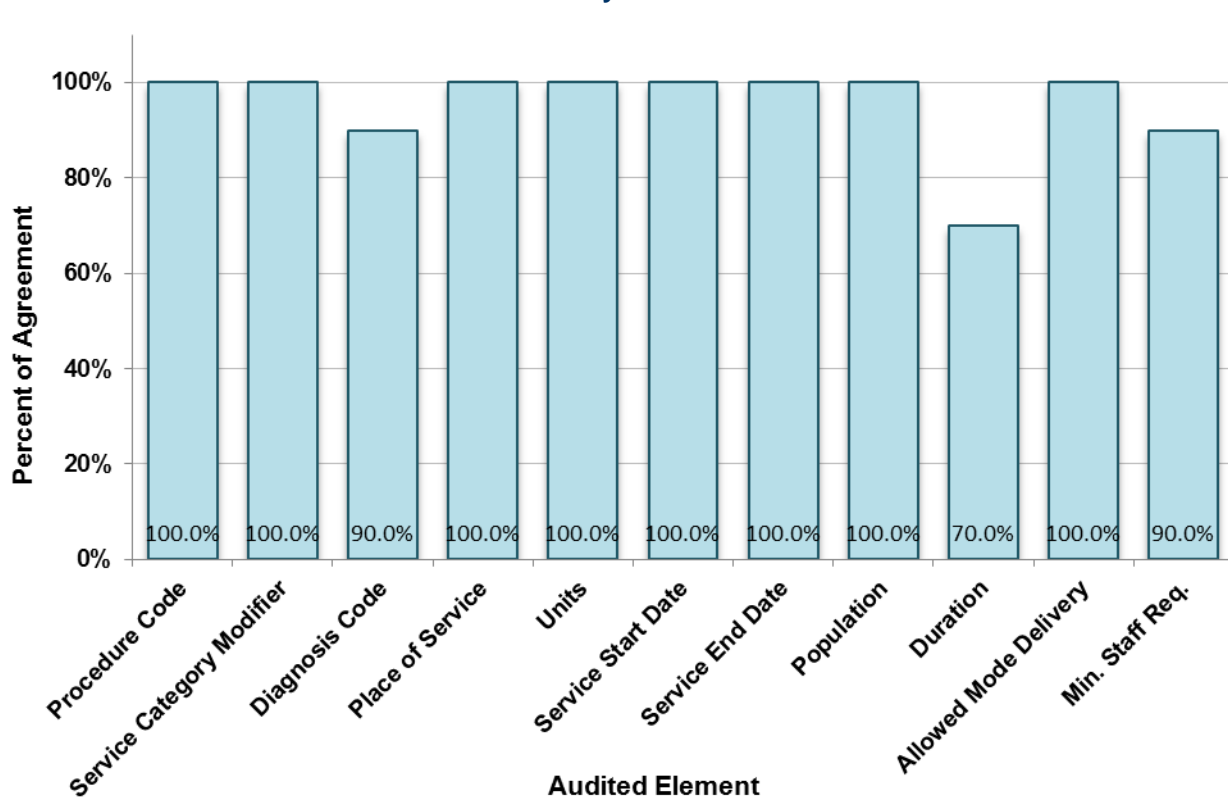Prevention/Early Intervention Services**

**Figure C-3—Aggregated Percentage of Agreement Between
HSAG's Over-Read and BHI's Internal Audit Findings by Data Element
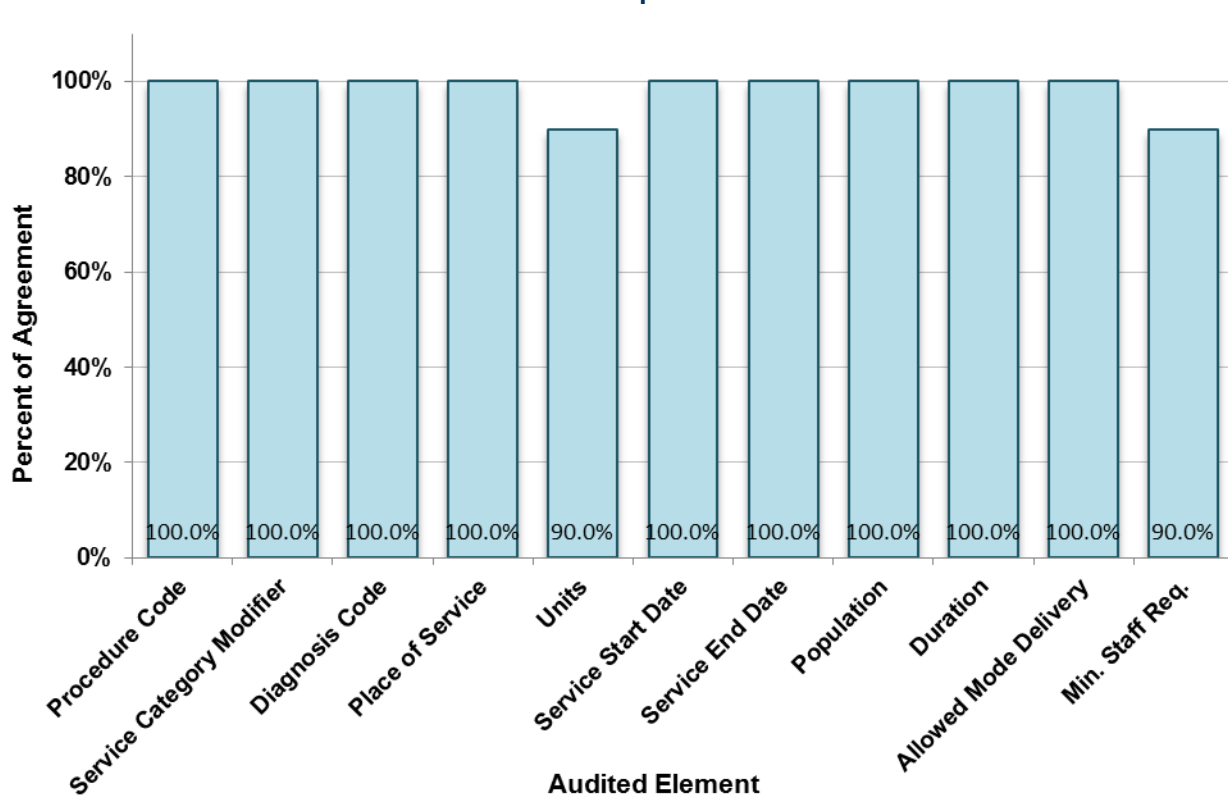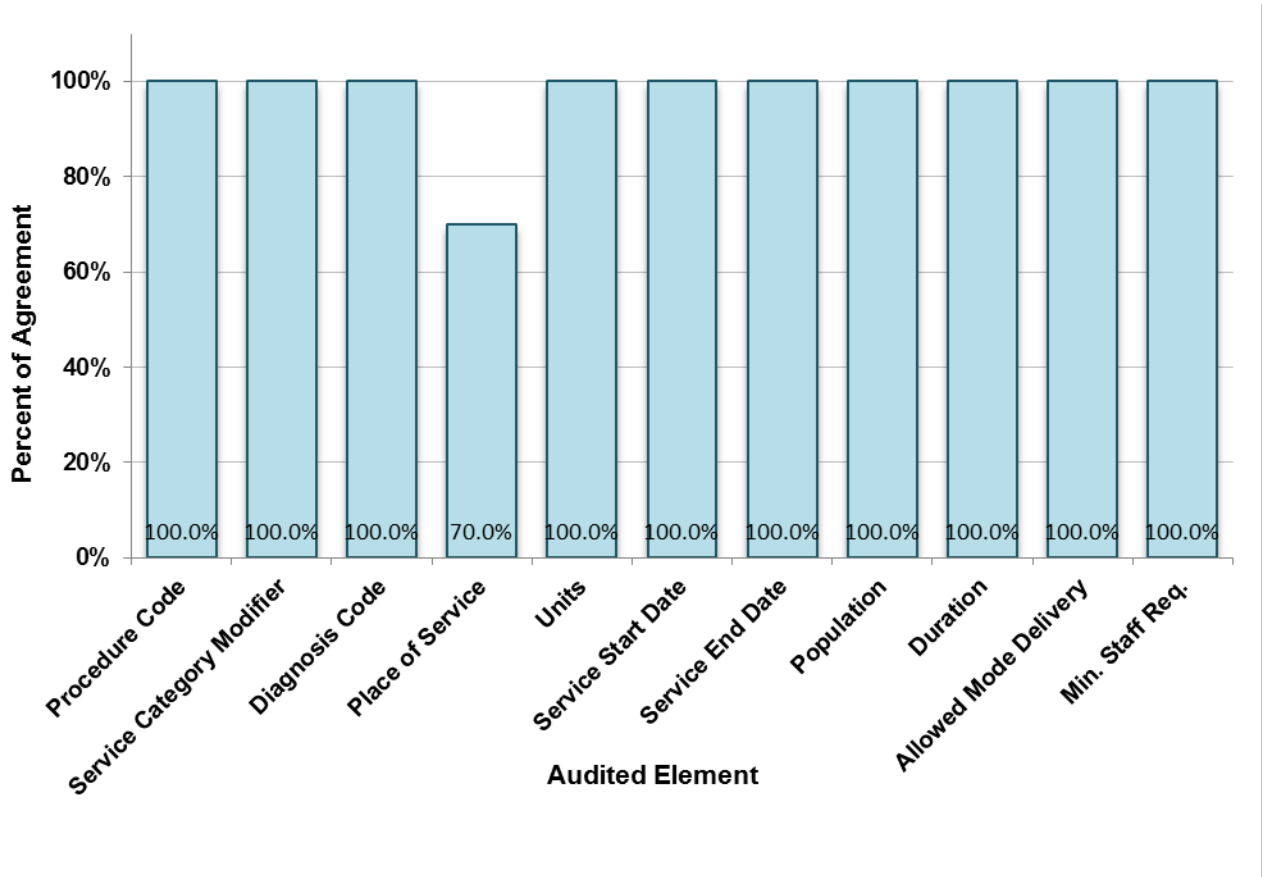Club House or Drop-In Center Services**

**Figure C-4—Aggregated Percentage of Agreement Between
HSAG's Over-Read and BHI's Internal Audit Findings by Data Element
Residential Services**

All elements had 100 percent agreement for Prevention/Early Intervention Services with the exception of *Diagnosis Code* (90.0 percent), *Duration* (70.0 percent), and *Min. Staff Req.* (90.0 percent). HSAG's over-read results among the Club House or Drop-In Center Services showed 10.0 percent disagreement with BHI's audit results for both the *Units* and *Min. Staff Req.* elements; however, complete agreement was observed among the remaining data elements for this service category. Among the Residential Services over-read cases, all elements except the *Place of Service* element had complete agreement between HSAG's over-read and BHI's audit results.