



# AMERICAN INSTITUTES FOR RESEARCH<sup>®</sup>

## STUDY TO MEASURE THE DELIVERY OF SERVICES IN ACCORDANCE WITH THE INDIVIDUALIZED EDUCATION PROGRAMS OF STUDENTS WITH DISABILITIES:

### YEAR 7 RESULTS (2009-10)

SUBMITTED TO:  
OFFICE OF THE INDEPENDENT MONITOR  
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## Introduction

AIR's report to the Office of the Independent Monitor (OIM) presents the results from the Year 7 (2009-10) study to measure whether the Los Angeles Unified School District (LAUSD) met the goals of Outcome #13 of the Modified Consent Decree (MCD). Established in 2003, the OIM is the oversight agency of LAUSD's special education program and is responsible for determining whether LAUSD meets compliance with the MCD. Outcome #13 of the MCD states that LAUSD must provide evidence that at least 93% of special education services required by students' Individualized Education Programs (IEPs) were delivered. In addition, 85% of the services must meet the frequency and duration specified in the IEPs.

The study addressed the following three questions:

- (1) Was there evidence of at least one incident of service provision for each service specified in the student's IEP over a six month period?
- (2) Were student services meeting the criterion specified in question 1 (i.e., the subset of student services for which there was evidence of at least one incident of valid service provision) provided at the frequency (i.e., how often the service was provided) stated on the IEP?
- (3) Were student services meeting the criterion specified in question 1 provided for the duration (i.e., the amount of time) stated on the IEP?

For the first question, the outcome examines two student groups: all disabilities combined excluding Specific Learning Disability (SLD) and SLD individually.<sup>1</sup> The second and third questions examine all disabilities combined.

Using an electronic log system, providers in LAUSD document the delivery of special education services, including the date, duration, and status of each session, to individual students. This study compares the requirements recorded on the students' IEPs to information on these provider logs to address the above questions. To answer the first question, the study estimated the percentage of services for which at least one valid session was documented on the submitted logs between September 2009 and February 2010.<sup>2</sup> For the frequency and duration questions, the study compared the IEP

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<sup>1</sup> Starting with Year 2, the MCD required LAUSD to disaggregate the evidence of service delivery results for the population excluding SLD and for SLD only. Because students with SLD comprise the majority of the special education population, the OIM considered it important to consider this population separately.

<sup>2</sup> LAUSD's Office of Data and Accountability developed extensive rules for coding the log information, subject to approval by the OIM, to determine if a given service session was considered as valid, thereby constituting evidence of service provision. For example, in addition to sessions in which the service was provided, instances in which services were not provided due to a field trip, school event, school-wide testing, student no show, student absence, student refusing treatment, provider absence due to jury duty, illness, or personal necessity, or the procedure documented as "not needed" are counted as instances of valid service provision. It should also be noted that this is the second year of this outcome study in which the period investigated for evidence of service was six months. In the first five years of the study, the standard was at least one incident of valid provision during a period of eight weeks/two months.

requirements for services showing at least one incident of valid service to the actual frequency and duration shown on the logs over an eight-week/two-month period.<sup>3</sup>

In Year 1 AIR entered information from the sampled logs and IEPs into a database and analyzed the data in accordance with an initial set of coding rules. In Years 2-5, the Office of Data and Accountability compared the IEP-log information by hand, using coding rules that were modified and supplemented by the Office of Data and Accountability in consultation with the OIM. Because the information needed to conduct the analyses were available in electronic form in Years 6 and 7, AIR created a computer program to analyze the data, which attempted to follow as closely as possible the rules used for the hand-coding process in Year 5.

In Year 7, LAUSD's Office of Data and Accountability provided AIR with databases containing IEPs for a sample of 4,851 students in special education in the district and their corresponding provider log information. Using these databases, the final results include 7,704 services for 4,743 of the students in this sample.<sup>4</sup>

Due to school calendars not accommodated by the computer program in Year 7, OIM and the Office of Data and Accountability staff hand-coded 166 service records that did not initially meet the IEP frequency or duration requirements, as determined by the program. For example, 156 of these records were hand-checked to provide proper holiday credit because charter schools set their own calendars and do not consistently have the same standard holidays as non-charter schools. In addition, 10 service records from the 3C e-basis calendar track that did not initially meet frequency and duration through the program analysis were hand-coded across seven weeks instead of eight because that track was not in session for a full eight weeks.<sup>5</sup>

The results of the MCD study are described in Section I of this report. In addition, OIM requested specific analyses of service delivery for all charter students in LAUSD, the results of which are discussed in Section II. To further understand service patterns and help identify areas for possible improvement, AIR also conducted exploratory analyses of MCD service records that did not meet the frequency or duration requirements (Section III).

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<sup>3</sup> The specific eight-week/two-month period used in this study for each student was determined by the student's school track calendar. Services stated as weekly in the IEP were analyzed across eight weeks, while two full months were used for monthly services.

<sup>4</sup> The analytic sample (n = 4,743) is smaller than the sample that LAUSD's Office of Data and Accountability initially drew for this study (n = 4,851). In accordance with the coding rules, 108 students were dropped due to reasons such as the student leaving the district, exiting special education or service, attending a non-public school, being served by the County Office of Education, parents not accessing the service, services provided by a private provider, or school schedules that did not coincide with the study period.

<sup>5</sup> "E-basis" calendars apply to the following services: Adaptive Physical Education, Language and Speech, Occupational Therapy, and Physical Therapy.

## Section I: MCD Study Results

### ***Was there evidence of at least one incident of service provision for each service specified in the student's IEP over a six month period?***

Based on provider logs for the first group of students included in this analysis (i.e., those in the sample with categories of disability other than SLD), we found evidence that 95% of the special education services required by IEPs district-wide<sup>6</sup> during the 2009-10 school year were provided at least once during the six month period of analysis.<sup>7</sup> This population estimate represents services for students in all disability categories (except SLD) district-wide whose IEPs required at least one special education service.<sup>8</sup> For the sample of students with SLD whose IEPs required at least one special education service, we found evidence that 93% of their required services were provided at least once during this six month period. Figure 1 illustrates the percentages of services for which there was evidence of at least one instance of provision by disability category. Figure 2 shows this information by service category across all disability categories combined.

Because these estimates are based on a sample of students and not the entire population, we estimated confidence intervals at the 95% level to specify the precision of the service estimates presented above. For the first group of students specified for this outcome (all special education students excluding SLD), these analyses show that with 95% confidence the true service delivery rate for this sub-population falls between 92.7% and 96.9%. For students with SLD, for which the MCD outcome is also specified at 93%, we can predict with 95% confidence that the true estimate of provision falls between 91.5% and 94.5%. Therefore, for both groups of students, the MCD outcome of 93% falls within the 95% confidence intervals.

Across the individual disability categories, the estimate of service delivery varied from 89% for students with Emotional Disturbance to 99% for students with Visual Impairment. By service category, the percentages ranged from 90% for Non-Public Agency and Pre-School services to 100% for Visual Impairment Itinerant services.

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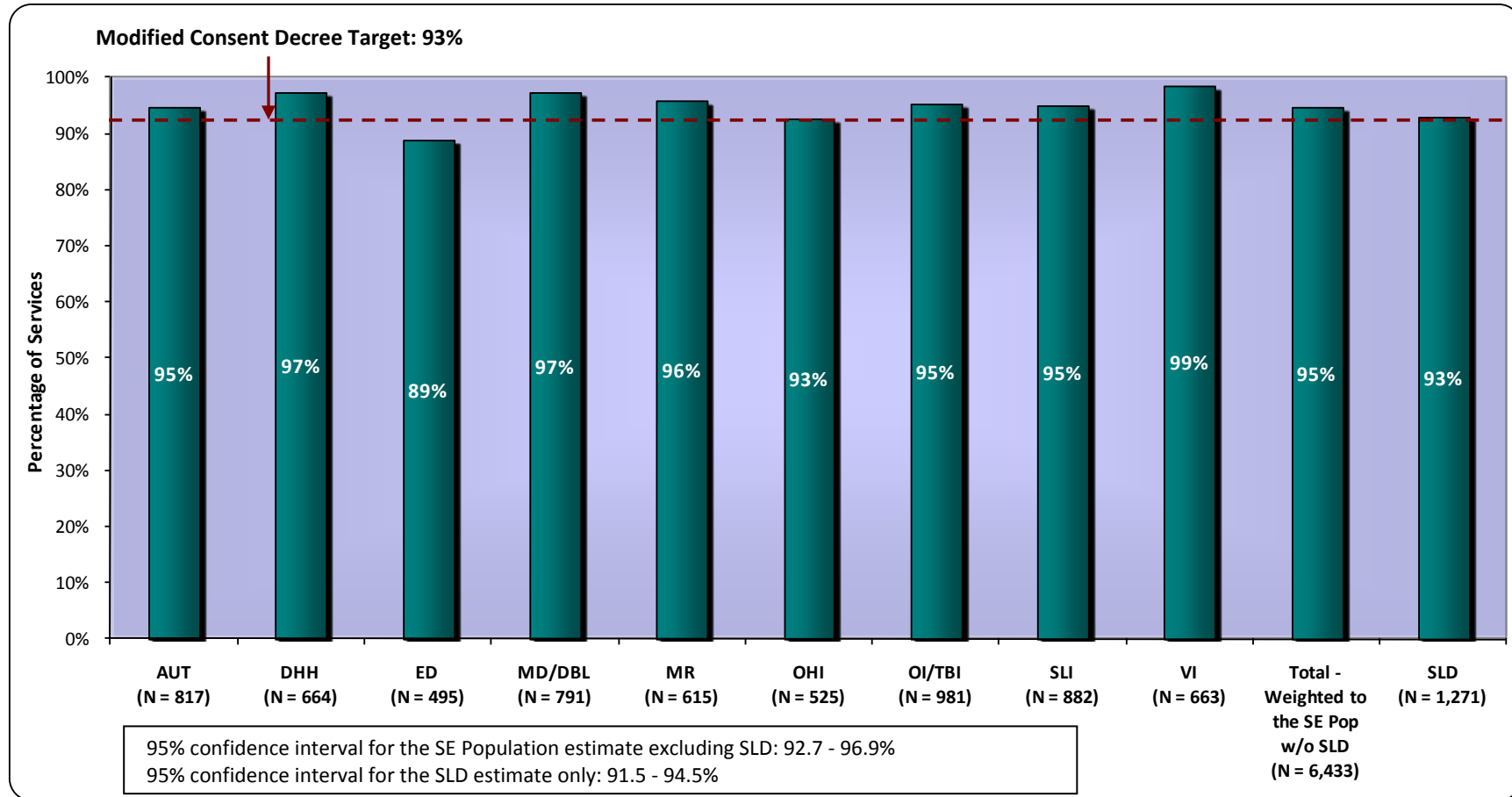
<sup>6</sup> This is a population estimate based on the probability weights for each disability category, excluding SLD. Please see Appendix A for more details. The population estimate represents students whose IEPs required at least one special education service according to the Special Education Student Information System (SIS) database

<sup>7</sup> To be considered as evidence of service provision, the provider log needed to document at least one valid service session between September 2009 and February 2010. See footnote 2 for what defined a valid service session.

<sup>8</sup> According to the Special Education Student Information System (SIS) database used to draw the study sample, approximately 25% of all special education students in the LAUSD did not have a service code listed. The population estimate for evidence of service delivery represents only those students (excluding SLD) who had a service code in the SIS database.

**FIGURE 1**

**Percentages of services for which there was evidence of at least one incident of service provision within the study period, by disability category, 2009-10**



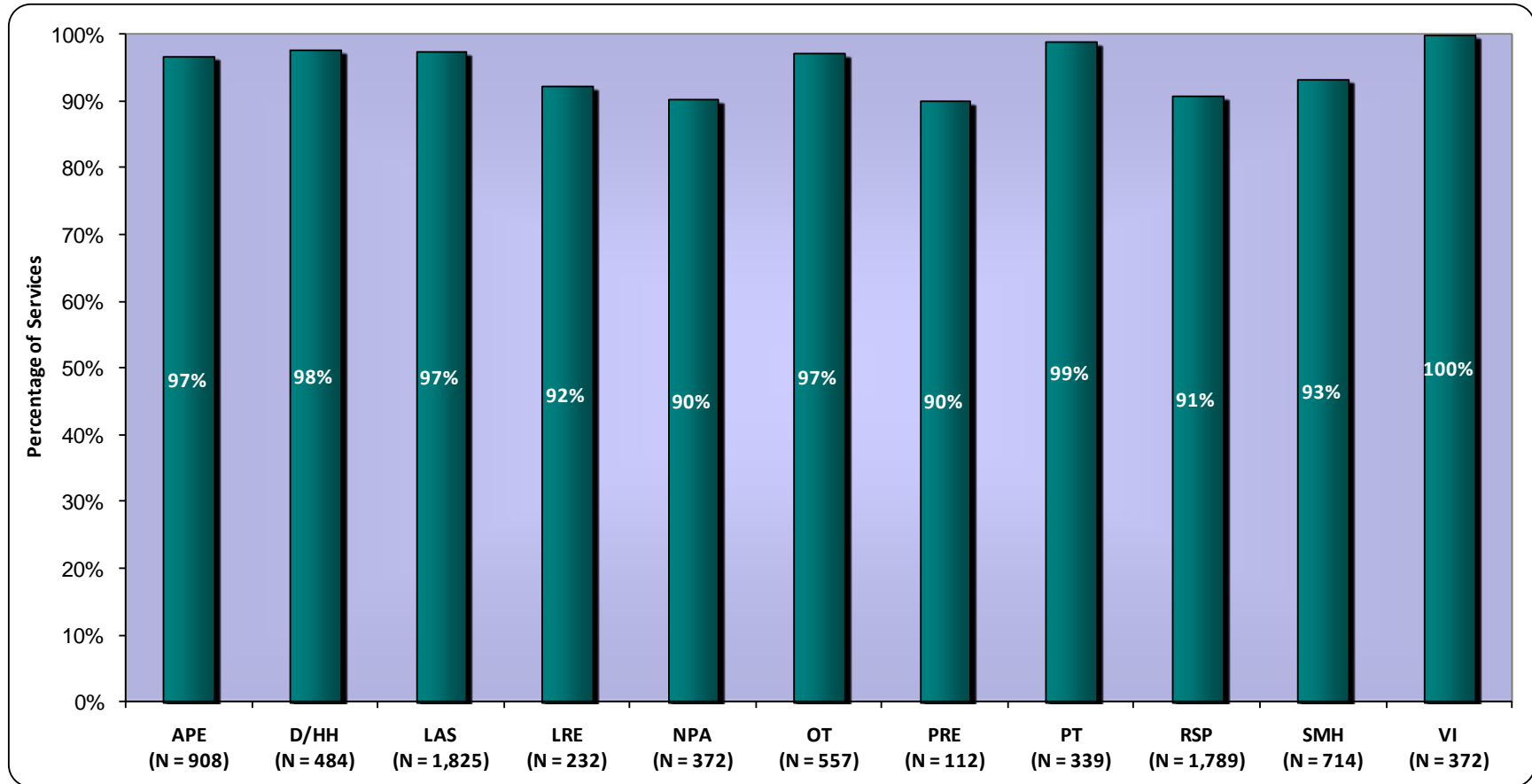
Note 1: The population estimate represents the population of students in special education district-wide (excluding students with Specific Learning Disabilities) whose IEPs required at least one special education service as reported in the Special Education Student Information System (SIS) database.

Note 2: The numbers (n) shown underneath the disability categories represent the total number of services analyzed for that category. For example, we found evidence of service provision for 95% of the 817 services required for the sampled students with Autism.

Abbreviations: AUT (Autism); DHH (Deaf/Hard of Hearing); ED (Emotional Disturbance); MD/DBL (Multiple Disabilities/Deaf-Blindness); MR (Mental Retardation); OHI (Other Health Impairment); OI/TBI (Orthopedic Impairment/Traumatic Brain Injury); SE (Special Education); SLD (Specific Learning Disability); SLI (Speech/Language Impairment); VI (Visual Impairment).

**FIGURE 2**

**Percentages of services for which there was evidence of at least one incident of service provision within the study period, by service category, 2009-10**



Note 1: These percentages include all disability categories receiving those particular services, including students with Specific Learning Disability.

Note 2: The numbers (n) shown underneath the service categories represent the total number of services analyzed for that category. For example, we found evidence of service provision for 97% of the 908 Adapted Physical Education (APE) services required for the sampled students.

Abbreviations: APE (Adapted Physical Education); D/HH (Deaf/Hard of Hearing Itinerant Service); LAS (Language & Speech); LRE (Least Restrictive Environment Itinerant Service); NPA (Non-Public Agency); OT (Occupational Therapy); PRE (Pre-School); PT (Physical Therapy); RSP (Resource Specialist); SMH (School Mental Health); VI (Visual Impairment Itinerant Service).

### ***Were services provided at the frequency and duration required by the IEP?***

A second component of this study examined whether the services for which there was evidence of at least one incident of provision over the six month period used for the analysis corresponding with Question 1 were provided at the frequency (e.g., 2 times a week) and the duration (e.g., 30 minutes per week) documented in the IEPs. As mentioned above, the outcome specifies that 85% of services must meet the frequency and duration stated in the IEPs. For frequency and duration, the outcome examined all disabilities combined, including SLD. Based on the provider log information provided to AIR, we estimate that 74% of services across the population of students in special education with evidence of service (i.e., meeting the criterion specified in Question 1) met the frequency requirements in 2009-10, while 67% met the IEP specifications for duration.<sup>9</sup> For frequency, the confidence interval ranged from 70.6% to 78.4%, and 62.4% to 70.8% for duration.

It is important to note that these percentages are based on the numbers of students for which at least one valid service during the six-month study period was documented on the logs.<sup>10</sup> If we include students for whom no log was provided (and for whom service frequency and/or duration was specified in the IEP), these estimates decrease from 74% to 68% for frequency and from 67% to 61% for duration.<sup>11</sup>

Figure 3 presents the information initially reported above (i.e., only including services with evidence of service provision as specified in Question 1) by disability category. Figure 4 depicts these data by service type.<sup>12</sup> There was considerable variation by individual disability and service categories. Estimates for meeting the IEP frequency ranged from 66% for students with Emotional Disturbance to 82% for students with Visual Impairments. Duration rates ranged from 61% for students with Autism to 75% for students with Visual Impairments. By service category, frequency estimates ranged

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<sup>9</sup> These population estimates represent students whose IEPs required at least one special education service, according to the Special Education Student Information System (SIS) database, and includes students with SLD.

<sup>10</sup> For example, while we analyzed 817 services for students with Autism in the evidence of service analysis, the frequency and duration percentages are based on a smaller number (753 services for frequency and 757 for duration; see Appendix B). These lower numbers are due to not receiving logs for all 817 services, as well as excluding records from the frequency/duration analyses if the IEP did not specify a frequency and/or duration or if LAUSD provided information that indicated the provider would be penalized due to circumstances outside his or her control. In the case of the frequency analysis for Autism, we did not receive logs for 42 services; the IEPs did not state a frequency for 8 services; and 14 services were excluded from the results due to circumstances beyond the providers' control (in accordance with the coding rules).

<sup>11</sup> These alternative percentages do not include students excluded from the evidence of service analysis due to reasons beyond district control, such as the student leaving the district.

<sup>12</sup> The Non-Public Agency (NPA) Services group includes NPA-Speech, NPA-Behavior Intervention Implementation (BII), and NPA-Behavior Intervention Development (BID). When NPA-BII and NPA-BID are re-grouped with School Mental Health (SMH), the evidence of service for SMH remains the same, frequency percentage increases from 60% to 65% while the duration percentage declines from 63% to 60%. When NPA-Speech is grouped with LAS, the results for LAS remain the same.



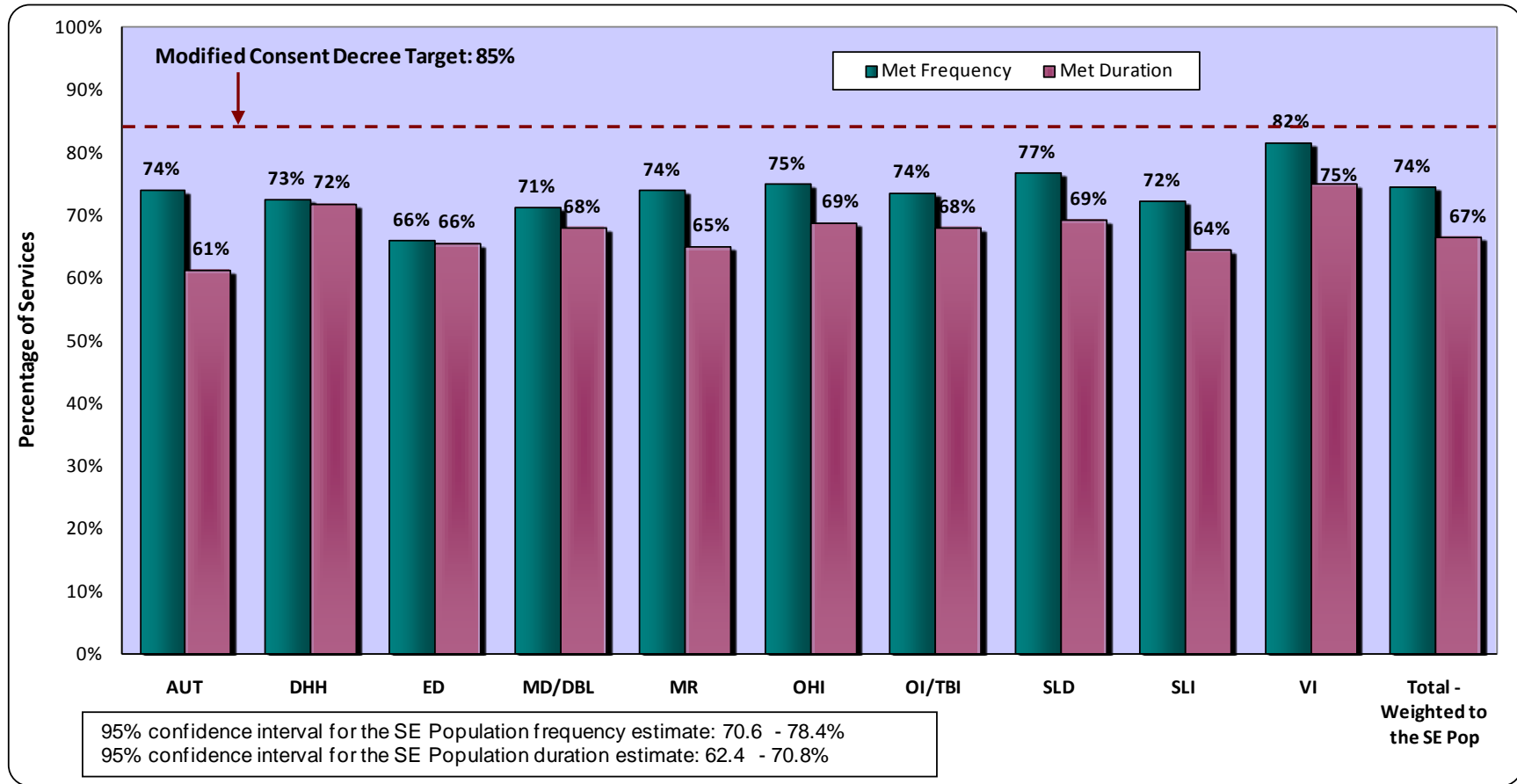
from 60% for School Mental Health to 89% for Pre-School services; duration estimates ranged from 54% for Non-Public Agency to 83% for Physical Therapy.<sup>13</sup>

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<sup>13</sup> Please see Appendix C for the Non-Public Agency (NPA) group disaggregated by specific service. Appendix C also reports population estimates removing NPA services from the sample, as well as comparisons between NPA Speech and Language and Speech services.

**FIGURE 3**

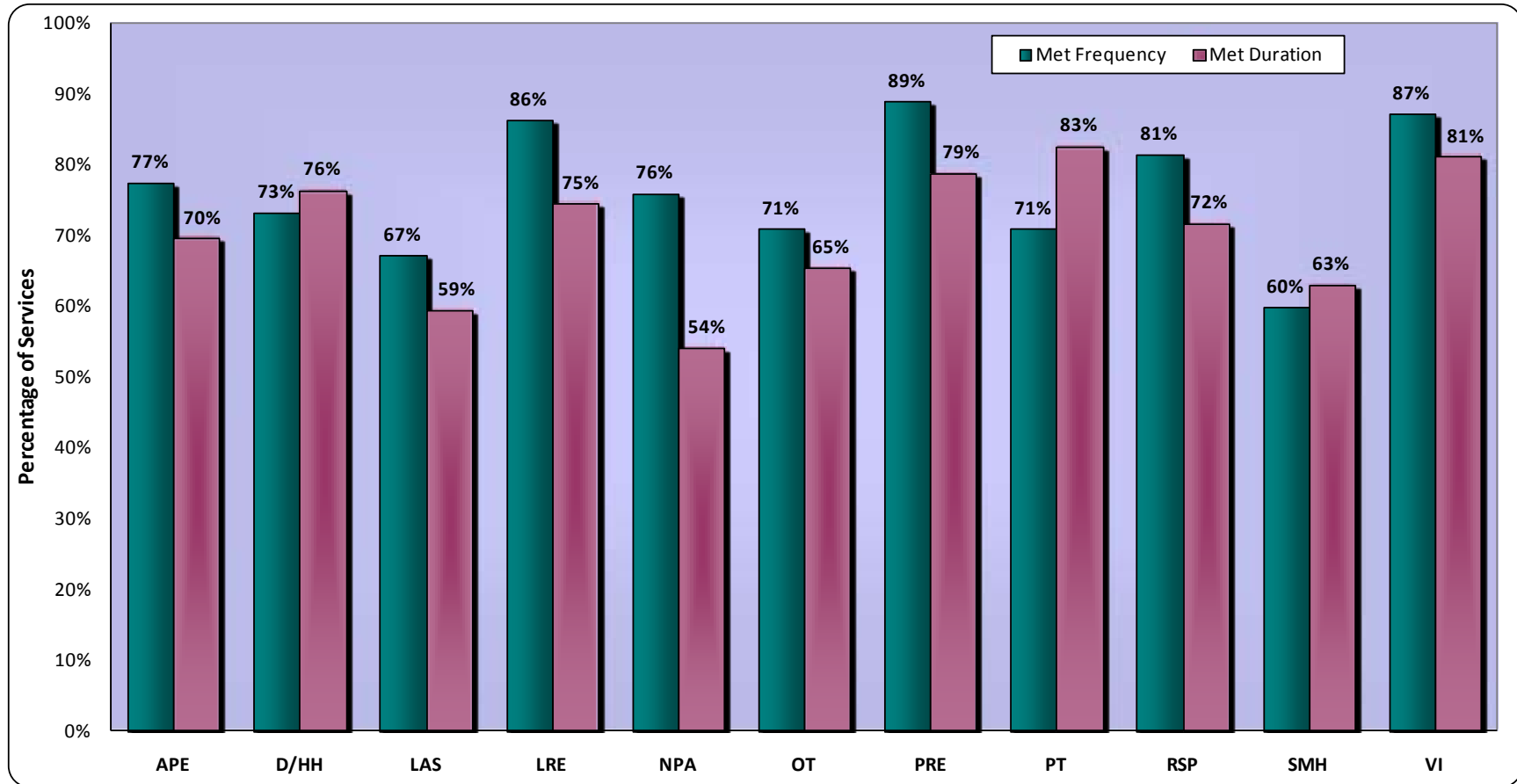
**Percentages of services that met frequency/duration as specified by the IEPs during an eight-week/two-month period, by disability category, 2009-10**



Note: The population estimate represents the population of students in special education district-wide whose IEPs required at least one special education service, according to the Special Education Student Information System (SIS) database, and includes students with Specific Learning Disability. Please see Appendix B for the number of service observations included in the frequency and duration analyses. Abbreviations: AUT (Autism); DHH (Deaf/Hard of Hearing); ED (Emotional Disturbance); MD/DBL (Multiple Disabilities/Deaf-Blindness); MR (Mental Retardation); OHI (Other Health Impairment); OI/TBI (Orthopedic Impairment/Traumatic Brain Injury); SE (Special Education); SLD (Specific Learning Disability); SLI (Speech/Language Impairment); VI (Visual Impairment).

**FIGURE 4**

**Percentages of services that met frequency/duration as specified by the IEPs during an eight-week/two-month period, by service category, 2009-10**



Note: These percentages include all disability categories receiving those particular services, including students with Specific Learning Disability. Please see Appendix B for the number of service observations included in the frequency and duration analyses. Abbreviations: APE (Adapted Physical Education); D/HH (Deaf/Hard of Hearing Itinerant Service); LAS (Language & Speech); LRE (Least Restrictive Environment Itinerant Service); NPA (Non-Public Agency); OT (Occupational Therapy); PRE (Pre-School); PT (Physical Therapy); RSP (Resource Specialist); SMH (School Mental Health); VI (Visual Impairment Itinerant Service).

## Section II: Charter School Results

This year, OIM also requested separate service delivery analyses for charter school students. Thus, in addition to the standard MCD study, which is based on a sample of students in both charters and non-charters, AIR also examined evidence of service delivery for all students attending charter schools in LAUSD. During the 2008-09 school year, the OIM conducted a study that found that less than half of the district’s charter schools were utilizing the Welligent Service tracking feature. This analysis examines the implementation of the Welligent tracking feature and service provision at charters for the 2009-10 school year. Approximately 88% of services required by students in charter schools had evidence of at least one incident of service provision in Welligent during the six-month study time period. As shown in Table 1, nearly 85% of services for charter students with disabilities other than Specific Learning Disability (SLD) had evidence of provision, in comparison to about 90% of services for students with SLD. By category of service, the percentages ranged from 45% for Least Restrictive Environment services to 97% of Deaf/Hard of Hearing services (Table 2).

**Table 1. Percentages of services for charter school students in LAUSD for which there was evidence of at least one incident of service provision within the study period, by disability category, 2009-10**

Disability category	N of services included in the evidence analysis	% of services with evidence of log
Autism	933	89.1%
Deaf/Hard of Hearing	159	91.8%
Emotional Disturbance	75	74.7%
Multiple Disabilities/ Deaf-Blindness / Visual Impairment	93	88.2%
Mental Retardation	214	80.4%
Other Health Impairment	719	85.0%
Orthopedic Impairment/Traumatic Brain Injury	133	81.2%
Speech/Language Impairment	876	86.8%
<i>Non-Specific Learning Disability (above categories combined)</i>	3,202	84.6%
Specific Learning Disability (SLD)	3,216	89.8%
<b>Total (SLD and non-SLD)</b>	<b>6,418</b>	<b>88.1%</b>

Note: Due to a low number of observations, Visual Impairment records were combined with the Multiple Disabilities/Deaf-Blindness disability category.

**Table 2. Percentages of services for which there was evidence of at least one incident of service provision within the study period, by service category, 2009-10**

Service category	N of services included in the evidence analysis	% of services with evidence of log
Adapted Physical Education	162	59.9%
Deaf/Hard of Hearing	107	97.2%
Language and Speech	1,356	88.7%
Least Restrictive Environment	58	44.8%
Non-Public Agency	273	85.3%
Occupational Therapy	377	86.5%
Physical Therapy / Pre-School / Visual Impairment	66	90.9%
School Mental Health	606	75.9%
Resource Specialist Program	3,413	92.1%
<b>Total</b>	<b>6,418</b>	<b>88.1%</b>

Note: Due to low numbers of observations, Physical Therapy, Pre-School, and Visual Impairment services were combined.

As noted earlier in this report, charter schools set their own calendars and consequently do not consistently have the same standard holidays as non-charter schools. However, the effort needed to hand-code the large number of observations in the charter study in order to provide appropriate holiday credit was not possible. As an alternative, AIR weighted the results for the sample of charter students included in the MCD study (for which hand-coded corrections were made) to the overall population of charter students. Due to the low number of observations by disability categories, the estimates were weighted to non-SLD and SLD students in the charter population. As reported in Table 3 below, nearly 69% of services for charter students met the frequency requirements in the IEP during an eight-week/two-month period, whereas 60% of the services met the duration requirements.

**Table 3. Percentages of services for charter school students in LAUSD that met frequency/duration as specified by the IEPs during an eight-week/two-month period, by disability category, 2009-10**

Disability category	N of services	% of services with frequency at least equal to the IEP	N of services	% of services with duration at least equal to the IEP
Non-SLD	231	61.8%	231	57.8%
SLD	92	70.8%	91	61.0%
<b>Charter Student Population Estimate</b>		<b>68.8%</b>		<b>60.3%</b>
<b>95% Confidence Interval</b>		<b>60.2% – 77.4%</b>		<b>51.1% - 69.5%</b>

### Section III: Exploratory Analyses of Records that Missed Frequency and Duration

In each of the seven years of this study, LAUSD has not met the frequency or duration outcome set by the MCD (i.e., 85% of services are provided at the frequency and duration required by the IEPs). The OIM was particularly interested in understanding the extent to which services were missing IEP requirements to help inform and improve future service delivery efforts. Among the 6,907 service records that AIR analyzed for frequency in Year 7, 5,121 met the frequency requirements while 1,786 did not. Among those that did not meet the frequency, 580 (32%) missed the required frequency by one session. By service category, this varied from 8% for RSP to 70% for Visual Impairment services (Table 4). In other words, the majority of all services missed the required frequency by more than one session (68%), rising to 92% for RSP records. The high rate for RSP, however, may be due to such services often being required daily, making it difficult to provide make-up sessions.

For the duration analysis, 4,782 service records met the IEP requirements, whereas 2,274 did not. Among those, 718 (32%) missed the duration by one session.<sup>14</sup> As with the frequency analysis, this ranged from 6% for RSP to 57% for Visual Impairment services (Table 4).

If the services that missed the frequency and duration by one session had provided this additional session, the weighted frequency and duration provision rate would have increased from 74.5% to 81.7% and from 66.6% to 75.9%, respectively.<sup>15</sup>

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<sup>14</sup> For each service observation, AIR estimated the average session duration across the 8-week/2-month period to determine if a service missed the IEP requirement by a single session.

<sup>15</sup> Had an additional session been provided, the confidence interval for the frequency estimate would include the MCD outcome of 85%. The MCD outcome would continue to be above the confidence interval for the duration estimate.

**Table 4. Number and percentage of services that missed frequency and duration by one session, by service category, 2009-10**

Service category	Total N that missed frequency	N that missed frequency by one session	% of services that missed frequency by one session	Total N that missed duration	N that missed duration by one session	% of services that missed duration by one session
Adapted Physical Education	195	63	32%	262	72	27%
Deaf/Hard of Hearing	123	58	47%	108	50	46%
Language and Speech	576	205	36%	711	262	37%
Least Restrictive Environment	*	*	*	53	23	43%
Non-Public Agency	74	17	23%	138	42	30%
Occupational Therapy	133	58	44%	178	80	45%
Pre-School	*	*	*	*	*	*
Physical Therapy	39	18	46%	44	21	48%
Resource Specialist Program	300	24	8%	453	28	6%
School Mental Health	259	87	34%	237	92	39%
Visual Impairment	47	33	70%	69	39	57%
<b>Total</b>	<b>1,746</b>	<b>563</b>	<b>32%</b>	<b>2,253</b>	<b>709</b>	<b>31%</b>

\* Denotes services with fewer than 30 observations.

The "Total" row excludes the Least Restrictive Environment and Pre-School results for frequency and the Pre-School results for duration.

Table 5 provides more detail on the degree by which services missed the required frequency. For this examination, AIR focused on the two most common frequencies across an 8-week/2-month study period: 8 times (n = 985 records) and 16 times (n = 367). Please note that the percentages in Table 5 are based on the number of services that did not meet the IEP requirements. Nearly a third of services required once weekly (i.e., 8 times across 8 weeks) and 22% of services required twice a week (i.e., 16 times across 8 weeks) missed the required frequency by one. However, about 10 percent of services that did not meet the frequency did not have *any* sessions provided during the designated time period (see Tables D-1 and D-2 in Appendix D). In addition, approximately 20% of the weekly services were provided 1–4 times and 28% of the twice weekly services were provided 1–8 times across the eight weeks, which was half or less of the required frequency.

**Table 5. Distribution of frequency provided for services that missed required frequency of 8 and 16 times across 8-week/2-month period, 2009-10**

Services that required 8 sessions across 8-week/2-month period and did not meet frequency			Services that required 16 sessions across 8-week/2-month period and did not meet frequency		
N of sessions provided	N of services	% of services	N of sessions provided	N of services	% of services
0	104	10.6%	0	37	10.1%
1	25	2.5%	1	6	1.6%
2	44	4.5%	2	10	2.7%
3	51	5.2%	3	4	1.1%
4	72	7.3%	4	12	3.3%
5	124	12.6%	5	9	2.5%
6	223	22.6%	6	12	3.3%
7	342	34.7%	7	20	5.5%
			8	30	8.2%
			9	17	4.6%
			10	13	3.5%
			11	17	4.6%
			12	19	5.2%
			13	35	9.5%
			14	46	12.5%
			15	80	21.8%
<b>Total</b>	<b>985</b>	<b>100%</b>	<b>Total</b>	<b>367</b>	<b>100%</b>

Similar issues were found with the services missing the required duration. Table 6 presents the results for the two most commonly required duration amounts across an 8-week/2-month period among the 2,274 service records that did not meet duration: 240 minutes (n = 869 records) and 480 (n = 410 records). The percentages in Table 6 reflect the percentages of services that did not meet the required duration. About 8% of services that missed the required duration had *no* minutes documented on the log during the time period analyzed. Furthermore, 18% of services requiring 240 minutes and 41% of services requiring 480 minutes across eight weeks reported some duration, but were still under the required amount by two or more hours. Please see Tables D-3 and D-4 in Appendix D for service-level information. A sizeable percentage of services that missed the duration were provided within 30 minutes of the requirement – 37% and 22% of services required at 240 and 480 minutes, respectively.



**Table 6. Distribution of duration provided for services that missed required duration of 240 and 480 minutes across 8-week/2-month period, 2009-10**

<b>For services requiring 240 minutes across 8-week/2-month period</b>			
<b>Minutes provided:</b>	<b>Under by:</b>	<b>N of services</b>	<b>% of services</b>
211 - 239	29 minutes or less	50	5.8%
210	30 minutes	274	31.5%
181 - 209	31 - 59 minutes	26	3.0%
180	60 minutes	174	20.0%
151 - 179	61 - 89 minutes	15	1.7%
150	90 minutes	90	10.4%
121 - 149	91 - 119 minutes	11	1.3%
120	120 minutes	60	6.9%
Less than 120	121 minutes or more	97	11.2%
None	240 minutes	72	8.3%
<b>Total</b>		<b>869</b>	<b>100.0%</b>
<b>For services requiring 480 minutes across 8-week/2-month period</b>			
<b>Minutes provided:</b>	<b>Under by:</b>	<b>N of services</b>	<b>% of services</b>
451 - 479	29 minutes or less	4	1.0%
450	30 minutes	85	20.7%
421 - 449	31 - 59 minutes	8	2.0%
420	60 minutes	69	16.8%
419 - 391	61 - 89 minutes	7	1.7%
390	90 minutes	33	8.0%
361 - 389	91 - 119 minutes	4	1.0%
360	120 minutes	35	8.5%
Less than 360	121 minutes or more	133	32.4%
None	480 minutes	32	7.8%
<b>Total</b>		<b>410</b>	<b>100.0%</b>

To understand possible reasons for why services were not being provided in accordance with the IEP, AIR also examined the cancelled sessions documented on the log for services that missed the required duration by one session.<sup>16</sup> The Welligent system has a pull-down menu from which providers select reasons (defined by LAUSD) for cancelled sessions (see Appendix E for definitions). For the purpose of this study, a subset of these cancellations do not count towards the frequency and duration; these include provider absent (no additional information

<sup>16</sup> For each service observation, AIR estimated the average session duration across the 8-week/2-month period to determine if a service missed the IEP requirement by a single session.

provided)<sup>17</sup>, provider unexcused from IEP meeting, IEP meeting, student IEP meeting, provider off-calendar, waiver, early dismissal, and for certain services, student schedule change.

Table 7 reports these results for all services that missed the duration by one session (n = 718) as well as by service category for those categories with more than 30 observations (Appendix F provides similar information for all services that missed duration). The results show that more than half of the services that missed duration by one session (55%) did not document any of the cancelled sessions listed above. The most cited reason for a cancelled session was the provider attending an IEP meeting (18%), with an unexcused IEP meeting being the most common subset of that category. This seemed particularly high for Language and Speech services, with nearly 28% of missed services reported as cancelled due to an IEP meeting. A provider absence (no additional information) was the second most documented reason, reflecting 14% of the services missing the required duration by one session. A third of the NPA services and 21% of the School Mental Health services showed cancelled sessions due to provider absence (no additional information). The "none of the prior reasons reported" category represents services that missed duration, but for which no cancelled sessions with the above reasons were documented on the log (i.e., the service session was missing entirely from the log).

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<sup>17</sup> Some provider absences counted towards frequency and duration if certain reasons were documented (i.e., jury duty, illness, personal necessity) and if they did not exceed two consecutive weeks. If no reason was provided, the absence did not count.

**Table 7. Number and percentages of services by reason for cancelled sessions among services that did not meet required duration by one session, by service category, 2009-10**

Service category	Duration not met	Student schedule change		IEP meeting (all reasons)		Unexcused IEP meeting		IEP meeting		IEP meeting with student	
Adapted Physical Education	72	1	1.4%	17	23.6%	11	15.3%	7	9.7%	0	0.0%
Deaf/Hard of Hearing	50	5	10.0%	3	6.0%	0	0.0%	3	6.0%	0	0.0%
Language and Speech	262	33	12.6%	72	27.5%	46	17.6%	25	9.5%	4	1.5%
Non-Public Agency	42	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Occupational Therapy	80	2	2.5%	15	18.8%	8	10.0%	7	8.8%	0	0.0%
School Mental Health	92	13	14.1%	9	9.8%	3	3.3%	5	5.4%	1	1.1%
Visual Impairment	39	5	12.8%	7	17.9%	3	7.7%	4	10.3%	0	0.0%
<b>Total</b>	<b>718</b>	<b>60</b>	<b>8.4%</b>	<b>131</b>	<b>18.2%</b>	<b>75</b>	<b>10.4%</b>	<b>54</b>	<b>7.5%</b>	<b>6</b>	<b>0.8%</b>

**Table 7 (cont.). Number and percentages of services by reason for cancelled sessions among services that did not meet required duration by one session, by service category, 2009-10**

Service category	Duration not met	Provider absence (no additional info)		Off calendar		Early dismissal		Waiver		None of the prior reasons reported	
Adapted Physical Education	72	6	8.3%	3	4.2%	0	0.0%	1	1.4%	46	63.9%
Deaf/Hard of Hearing	50	1	2.0%	2	4.0%	0	0.0%	0	0.0%	39	78.0%
Language and Speech	262	46	17.6%	29	11.1%	7	2.7%	1	0.4%	93	35.5%
Non-Public Agency	42	14	33.3%	0	0.0%	1	2.4%	0	0.0%	28	66.7%
Occupational Therapy	80	2	2.5%	13	16.3%	0	0.0%	0	0.0%	43	53.8%
School Mental Health	92	19	20.7%	2	2.2%	0	0.0%	4	4.3%	53	57.6%
Visual Impairment	39	1	2.6%	1	2.6%	3	7.7%	0	0.0%	24	61.5%
<b>Total</b>	<b>718</b>	<b>100</b>	<b>13.9%</b>	<b>51</b>	<b>7.1%</b>	<b>11</b>	<b>1.5%</b>	<b>6</b>	<b>0.8%</b>	<b>394</b>	<b>54.9%</b>

<1> Pre-School, Least Restrictive Environment, Physical Therapy, and Resource Specialist excluded as a separate category due to having fewer than 30 observations. The "Total" row includes the results for all service categories, including those not disaggregated in Table 7.

<2> The "Unexcused IEP meeting," "IEP meeting," and "IEP meeting with student" are subsets of "IEP meeting" category.

<3> Because a single log could document several cancelled sessions, the categories above are not mutually exclusive. The total across all categories does not add to 100%.

To understand possible patterns related to the cancellations analyzed above, Table 8 below shows the days of the week in which such reasons were documented (for services that missed the required duration by one session). Nearly 30% of cancelled sessions due to IEP meetings were reported on Thursdays, followed by 24% on Wednesdays. Wednesdays were also common for the other documented reasons: 28% for provider absence (no additional information), 29% for student schedule change, 47% for off-calendar, and 43% for early dismissal.

**Table 8. Number and percentage of services by days of the week in which cancelled sessions were reported for services that missed the required duration by one session, 2009-10**

Day of the week	IEP meeting		Provider absence (no additional info)		Student schedule change		Off calendar		Early dismissal	
<b>Monday</b>	28	19%	15	13%	19	26%	10	19%	0	0%
<b>Tuesday</b>	14	10%	25	22%	14	19%	13	25%	5	36%
<b>Wednesday</b>	35	24%	33	28%	21	29%	25	47%	6	43%
<b>Thursday</b>	42	29%	18	16%	6	8%	1	2%	1	7%
<b>Friday</b>	28	19%	25	22%	13	18%	4	8%	2	14%
<b>Total N of sessions with these reasons reported for cancelled sessions</b>	<b>147</b>	<b>100%</b>	<b>116</b>	<b>100%</b>	<b>73</b>	<b>100%</b>	<b>53</b>	<b>100%</b>	<b>14</b>	<b>100%</b>
<b># of services that missed duration by one session and with at least one of these reasons for cancelled sessions</b>	<b>131</b>		<b>100</b>		<b>60</b>		<b>51</b>		<b>11</b>	

Note: The smaller number of logs in the last row indicates that some logs reported these reasons more than once.

The analyses above attempted to delve more in-depth into the services that did not meet the frequency and duration requirements across an 8-week/2-month period. Although the results show many records missing the requirements by the equivalent of one session, they also suggest that a considerable percentage of services fell short of the IEP requirements by a large margin.

## Appendix A: Population Estimates and Statistical Confidence Intervals

### *Calculating Population Estimates*

To derive estimates representative of the entire population of students in special education in the Los Angeles Unified School District (LAUSD), we assigned a weight to the evidence of service delivery, frequency, and duration estimates for each disability category.<sup>18</sup> Table A-1 shows the population (Column A) and analytic sample size (Column B) of each disability category excluding Specific Learning Disability (SLD) for the evidence of service delivery analysis. The analytic sample is the number of students included in calculating the percentages for the evidence of service analysis ( $n = 4,743$ , including SLD) – students for whom we received a log and students for whom we expected a log but none was provided. Column C shows the probability that each student with a particular disability had of being sampled. To calculate this probability, we divided the analytic sample size by the population size for each disability category. In the case of students with Mental Retardation, for instance, each student had a 6% probability (Column C (i.e.,  $372 / 5,814$ )) of being included in the analytic sample.

Column D presents the *probability weight*, which we calculated by dividing one by the probability of being included in the analytic sample. This weight reflects the number of students with the same disability category in the overall population represented by each student in the analytic sample. For example, each student with Mental Retardation in the analytic sample represented about 16 students with this disability in the population. We then applied the weights to the individual percentages by disability category to derive an overall population estimate of 95%. Because SLD was examined separately for evidence of service delivery, we did not include it in generating the weighted population estimate for that analysis. We conducted similar weighting exercises to estimate population estimates for frequency and duration, which included all disability categories.

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<sup>18</sup> The population in this study is comprised of students in special education whose IEPs required at least one special education service and excluded students who did not have a disability code and students who attended non-public schools, who graduated or left LAUSD, or who were not three years old by September 30, 2009.

**TABLE A-1**

**Probability and weights for evidence of service delivery population estimates (excluding SLD)**

Disability category	Population <sup>1</sup>	Analytic Sample	Probability	Weight
	A	B	C	D
Autism	6,887	379	0.0550	18.2
Deaf/Hard of Hearing	1,353	376	0.2779	3.6
Emotional Disturbance	723	367	0.5076	2.0
Multiple Disabilities/Deaf-Blindness	994	366	0.3682	2.7
Mental Retardation	5,814	372	0.0640	15.6
Other Health Impairment	5,030	374	0.0744	13.4
Orthopedic Impairment/ Traumatic Brain Injury	820	375	0.4573	2.2
Speech & Language Impairment	7,978	715	0.0896	11.2
Visual Impairment	353	348	0.9858	1.0
<b>Total</b>	<b>29,952</b>	<b>3,672</b>		

<sup>1</sup> The population in this study consists of students who appear in the Special Education Student Information System (SIS) database as having a disability category and as receiving at least one special education service. Students with SLD are excluded from the weights for the evidence of service delivery analysis since they are examined separately.

**Statistical Confidence Intervals**

The estimated rates of service delivery, frequency, and duration discussed in this report are point estimates of the population rates. These are the best single estimates for summarizing the information contained in the sample. It is also possible to generate intervals around these point estimates. These intervals reflect the probability of containing the true population measure (e.g., the service delivery rate for the full population of students with disabilities in LAUSD). Intervals at the 95% confidence level mean that there is a 95% probability that the true population measure falls between the lower and upper interval.

In order to generate confidence intervals, it is necessary to know the statistical distribution of the variable under analysis. In the case of this study, the unit of analysis is a dichotomous variable. This means that the variable analyzed only takes two possible values (e.g., yes or no), indicating whether a given service was provided or not. The distribution of such dichotomous variables is called a *Bernoulli distribution*. At a level of 95%, the confidence intervals for these distributions are defined as:

$$\left[ p - 1.96 \frac{\sqrt{p(1-p)}}{\sqrt{n}}, p + 1.96 \frac{\sqrt{p(1-p)}}{\sqrt{n}} \right]$$

(*p* represents the proportion of cases estimated). This means, that if 100 samples are drawn from the population of students with disabilities in LAUSD, in 95 of the cases, the true population rate will be contained in these confidence intervals. Note that these intervals use the Central Limit Theorem (CLT). CLT holds that the sampling distribution of the mean will approximate a normal distribution in large samples. This allows us to construct confidence intervals without knowing the specific distribution of the variable under analysis in LAUSD, such as the

probability of receiving services. As with any inference testing, as the sample size increases, the accuracy of the estimates improve and confidence intervals get smaller. Conversely, the smaller the sample size, the larger the confidence intervals must be to maintain the 95% confidence level. Table A-2 presents the confidence intervals for individual disability categories and the overall population estimates.





**TABLE A-2**

**Statistical confidence intervals by disability category, 95% confidence level, 2009-10**

Disability category	% of services with evidence of log			% of services that met frequency			% of services that met duration		
	Lower limit	Upper limit		Lower limit	Upper limit		Lower limit	Upper limit	
Autism	94.9%	92.6%	97.1%	74.1%	69.6%	78.6%	61.3%	56.3%	66.3%
Deaf/Hard of Hearing	97.4%	95.8%	99.0%	72.6%	68.0%	77.2%	71.9%	67.3%	76.5%
Emotional Disturbance	88.9%	85.7%	92.1%	66.0%	60.8%	71.1%	65.6%	60.5%	70.8%
Multiple Disabilities/ Deaf-Blindness	97.3%	95.7%	99.0%	71.3%	66.4%	76.2%	68.0%	63.1%	73.0%
Mental Retardation	95.9%	93.9%	97.9%	74.0%	69.4%	78.5%	65.0%	60.1%	70.0%
Other Health Impairment	92.8%	90.1%	95.4%	74.9%	70.4%	79.5%	68.9%	64.0%	73.8%
Orthopedic Impairment/Traumatic Brain Injury	95.4%	93.3%	97.5%	73.7%	69.1%	78.3%	68.1%	63.3%	72.9%
Specific Learning Disability	93.0%	91.5%	94.5%	76.8%	74.2%	79.4%	69.3%	66.4%	72.2%
Speech/Language Impairment	94.9%	93.3%	96.5%	72.3%	68.9%	75.7%	64.5%	60.9%	68.1%
Visual Impairment	98.6%	97.4%	99.9%	81.6%	77.5%	85.7%	75.0%	70.5%	79.6%
<b>Population Estimates (including SLD)</b>	--	--	--	<b>74.5%</b>	<b>70.6%</b>	<b>78.4%</b>	<b>66.6%</b>	<b>62.4%</b>	<b>70.8%</b>
<b>Population Estimates (excluding SLD)</b>	<b>94.8%</b>	<b>92.7%</b>	<b>96.9%</b>	--	--	--	--	--	--



## Appendix B: Estimates for Years 2-7<sup>19</sup>

TABLE B-1

Percentages of services for which there was evidence of service provision by disability category, 2004-05 to 2009-10

	2004-05 Year 2		2005-06 Year 3		2006-07 Year 4		2007-08 Year 5		2008-09 Year 6		2009-10 Year 7	
Disability category	% of services for which there was evidence of service provision		% of services for which there was evidence of service provision		% of services for which there was evidence of service provision		% of services for which there was evidence of service provision		% of services for which there was evidence of service provision		% of services for which there was evidence of service provision	
	N of services		N of services		N of services		N of services		N of services		N of services	
Autism	95%	528	87%	594	89%	704	91%	727	95%	771	95%	817
Deaf/Hard of Hearing	95%	546	93%	524	90%	633	97%	622	96%	621	97%	664
Emotional Disturbance	81%	306	85%	355	80%	437	90%	400	94%	454	89%	495
Multiple Disabilities/Deaf-Blind	98%	432	93%	446	95%	656	95%	690	98%	707	97%	791
Mental Retardation	96%	385	88%	457	87%	577	92%	564	95%	597	96%	615
Other Health Impairment	84%	416	84%	424	81%	483	95%	539	93%	511	93%	525
Orthopedic Impairment/ Traumatic Brain Injury	93%	693	91%	740	89%	841	96%	893	97%	961	95%	981
Speech & Language Impairment	95%	338	78%	389	86%	459	91%	432	90%	928	95%	882
Visual Impairment	98%	630	96%	659	96%	751	98%	743	97%	756	99%	663
<b>Overall Population Estimate (w/o SLD)</b>	<b>93%</b>		<b>85%</b>		<b>87%</b>		<b>92%</b>		<b>94%</b>		<b>95%</b>	
Specific Learning Disability	<b>73%</b>	723	<b>79%</b>	744	<b>74%</b>	1,187	<b>93%</b>	1,251	<b>91%</b>	1,222	<b>93%</b>	1,271

<sup>19</sup> Due to considerable changes in the study methodology since Year 1, the results for the first year (2003-04) are not presented.

**TABLE B-2**

**Percentages of services with frequency at least equal to the IEP by disability category, 2004-05 to 2009-10**

Disability category	2004-05 Year 2		2005-06 Year 3		2006-07 Year 4		2007-08 Year 5		2008-09 Year 6		2009-10 Year 7	
	% of services with frequency at least equal to the IEP	N of services	% of services with frequency at least equal to the IEP	N of services	% of services with frequency at least equal to the IEP	N of services	% of services with frequency at least equal to the IEP	N of services	% of services with frequency at least equal to the IEP	N of services	% of services with frequency at least equal to the IEP	N of services
Autism	56%	458	59%	462	66%	581	75%	633	70%	676	74%	753
Deaf/Hard of Hearing	58%	486	66%	423	75%	528	77%	577	74%	562	73%	631
Emotional Disturbance	49%	206	67%	254	74%	320	69%	345	68%	373	66%	423
Multiple Disabilities/Deaf-Blind	60%	363	70%	374	80%	531	82%	551	74%	550	71%	630
Mental Retardation	54%	348	61%	365	74%	462	76%	487	74%	525	74%	572
Other Health Impairment	56%	305	58%	298	70%	351	78%	483	72%	442	75%	475
Orthopedic Impairment/ Traumatic Brain Injury	67%	543	70%	582	78%	612	80%	748	77%	785	74%	798
Specific Learning Disability	52%	442	54%	459	65%	794	77%	1,105	73%	1,058	77%	1,168
Speech & Language Impairment	49%	289	50%	282	62%	360	71%	367	70%	776	72%	820
Visual Impairment	60%	571	68%	583	82%	690	85%	686	84%	693	82%	637
<b>Total (unweighted)</b>	<b>57%</b>	<b>4,011</b>	<b>63%</b>	<b>4,082</b>	<b>73%</b>	<b>5,229</b>	<b>78%</b>	<b>5,982</b>	<b>74%</b>	<b>6,440</b>	<b>74%</b>	<b>6,907</b>
<b>Overall Population Estimate</b>	--	--	--	--	--	--	<b>76%</b>		<b>72%</b>		<b>74%</b>	

Note: 2007-08 is the first year in which a population estimate was calculated. This estimate in 2007-08 through 2009-10 is not comparable to earlier years.

**TABLE B-3**

**Percentages of services with duration at least equal to the IEP by disability category, 2004-05 to 2009-10**

Disability category	2004-05 Year 2		2005-06 Year 3		2006-07 Year 4		2007-08 Year 5		2008-09 Year 6		2009-10 Year 7	
	% of services with duration at least equal to the IEP	N of services	% of services with duration at least equal to the IEP	N of services	% of services with duration at least equal to the IEP	N of services	% of services with duration at least equal to the IEP	N of services	% of services with duration at least equal to the IEP	N of services	% of services with duration at least equal to the IEP	N of services
Autism	58%	458	59%	463	60%	573	69%	627	63%	675	61%	757
Deaf/Hard of Hearing	60%	484	68%	419	76%	513	77%	579	75%	559	72%	630
Emotional Disturbance	65%	200	69%	255	77%	310	67%	343	70%	380	66%	425
Multiple Disabilities/Deaf-Blind	60%	359	74%	373	82%	548	82%	598	74%	618	68%	701
Mental Retardation	55%	345	64%	365	69%	463	73%	483	70%	516	65%	572
Other Health Impairment	59%	299	61%	302	65%	338	72%	485	67%	436	69%	473
Orthopedic Impairment/ Traumatic Brain Injury	68%	542	73%	582	78%	641	80%	806	75%	828	68%	878
Specific Learning Disability	56%	435	59%	467	56%	762	72%	1,094	66%	1,032	69%	1,160
Speech & Language Impairment	51%	288	53%	282	62%	354	70%	366	64%	764	64%	819
Visual Impairment	63%	567	69%	581	81%	685	81%	689	80%	691	75%	641
<b>Total (unweighted)</b>	<b>60%</b>	<b>3,977</b>	<b>65%</b>	<b>4,089</b>	<b>70%</b>	<b>5,187</b>	<b>75%</b>	<b>6,070</b>	<b>70%</b>	<b>6,499</b>	<b>68%</b>	<b>7,056</b>
<b>Overall Population Estimate</b>	--	--	--	--	--	--	<b>72%</b>		<b>67%</b>		<b>67%</b>	

Note: 2007-08 is the first year in which a population estimate was calculated. This estimate in 2007-08 through 2009-10 is not comparable to earlier years.

**TABLE B-4**

**Percentages of services for which there was evidence of service provision by service category, 2004-05 to 2009-10**

Service category	2004-05 Year 2		2005-06 Year 3		2006-07 Year 4		2007-08 Year 5		2008-09 Year 6		2009-10 Year 7	
	% of services for which there was evidence of service provision	N of services	% of services for which there was evidence of service provision	N of services	% of services for which there was evidence of service provision	N of services	% of services for which there was evidence of service provision	N of services	% of services for which there was evidence of service provision	N of services	% of services for which there was evidence of service provision	N of services
Adapted Physical Education	99%	977	96%	962	98%	1,038	99%	1,010	98%	944	97%	908
Deaf/Hard of Hearing	100%	390	99%	392	96%	448	99%	453	99%	487	98%	484
Language and Speech	96%	1,075	86%	1,147	82%	1,420	86%	1,414	90%	1,759	97%	1,825
Least Restrictive Environment	85%	197	95%	198	96%	254	95%	276	100%	249	92%	232
Non-Public Agency	95%	55	85%	110	92%	155	87%	187	93%	295	90%	372
Occupational Therapy	98%	402	93%	427	92%	537	94%	530	98%	521	97%	557
Pre-School	100%	75	38%	110	95%	100	100%	102	100%	127	90%	112
Physical Therapy	100%	131	94%	148	98%	218	98%	247	99%	307	99%	339
Resource Specialist Program	65%	959	77%	1,055	71%	1,592	95%	1,612	91%	1,733	91%	1,789
School Mental Health	88%	409	86%	459	87%	572	94%	641	96%	686	93%	714
Visual Impairment	99%	327	97%	324	100%	394	100%	389	100%	420	100%	372

**TABLE B-5**

**Percentages of services with frequency at least equal to the IEP by service category, 2004-05 to 2009-10**

Service category	2004-05 Year 2		2005-06 Year 3		2006-07 Year 4		2007-08 Year 5		2008-09 Year 6		2009-10 Year 7	
	% of services with frequency at least equal to the IEP	N of services	% of services with frequency at least equal to the IEP	N of services	% of services with frequency at least equal to the IEP	N of services	% of services with frequency at least equal to the IEP	N of services	% of services with frequency at least equal to the IEP	N of services	% of services with frequency at least equal to the IEP	N of services
Adapted Physical Education	68%	893	70%	865	81%	945	85%	973	81%	879	77%	866
Deaf/Hard of Hearing	62%	362	69%	346	81%	397	77%	430	73%	446	73%	459
Language and Speech	42%	965	48%	895	60%	1,085	69%	1,140	65%	1,474	67%	1,753
Least Restrictive Environment	80%	145	87%	174	87%	212	91%	246	87%	243	86%	211
Non-Public Agency	80%	39	70%	77	71%	123	77%	150	71%	245	76%	308
Occupational Therapy	55%	367	67%	365	72%	429	72%	426	66%	423	71%	457
Pre-School	80%	51	81%	36	76%	87	90%	101	91%	122	89%	99
Physical Therapy	61%	72	79%	90	71%	114	80%	113	78%	125	71%	134
Resource Specialist Program	60%	498	54%	593	67%	994	81%	1,461	79%	1,507	81%	1,611
School Mental Health	45%	318	65%	352	71%	459	64%	571	61%	574	60%	645
Visual Impairment	63%	301	71%	289	92%	384	87%	371	89%	402	87%	364

**TABLE B-6**

**Percentages of services with duration at least equal to the IEP by service category, 2004-05 to 2009-10**

Service category	2004-05 Year 2		2005-06 Year 3		2006-07 Year 4		2007-08 Year 5		2008-09 Year 6		2009-10 Year 7	
	% of services with duration at least equal to the IEP	N of services	% of services with duration at least equal to the IEP	N of services	% of services with duration at least equal to the IEP	N of services	% of services with duration at least equal to the IEP	N of services	% of services with duration at least equal to the IEP	N of services	% of services with duration at least equal to the IEP	N of services
Adapted Physical Education	67%	881	73%	869	83%	945	86%	966	79%	868	70%	860
Deaf/Hard of Hearing	64%	361	72%	342	84%	383	79%	431	76%	446	76%	458
Language and Speech	44%	959	50%	899	60%	1,064	67%	1,141	61%	1,459	59%	1,754
Least Restrictive Environment	80%	144	87%	176	81%	211	81%	248	85%	241	75%	208
Non-Public Agency	83%	42	68%	77	55%	119	60%	148	52%	243	54%	301
Occupational Therapy	56%	365	66%	369	67%	435	68%	461	62%	452	65%	514
Pre-School	86%	51	83%	36	69%	86	79%	97	80%	119	79%	99
Physical Therapy	60%	72	75%	81	80%	173	88%	202	85%	221	83%	253
Resource Specialist Program	61%	487	60%	601	55%	946	75%	1,437	69%	1,457	72%	1,602
School Mental Health	62%	313	67%	355	74%	445	67%	570	68%	589	63%	642
Visual Impairment	67%	302	72%	284	89%	380	83%	369	85%	404	81%	365



## Appendix C: Results for Non-Public Agency Services

**Table C-1**

**Percentages of Non-Public Agency (NPA) services for which there was evidence of service provision, by service type, 2009-10**

	NPA services analyzed by type		Services that had evidence of at least one incident of provision	
	N	%	N	%
NPA – Speech	126	34%	106	84%
NPA - Behavior Intervention Implementation	123	33%	114	93%
NPA - Behavior Intervention Development	123	33%	116	94%
Total NPA Services	372	100%	336	90%

**Table C-2**

**Percentages of Non-Public Agency (NPA) services with frequency at least equal to the IEP, by service type, 2009-10**

	NPA services analyzed by type		Services with frequency at least equal to the IEP	
	N	%	N	%
NPA – Speech	87	28%	58	67%
NPA - Behavior Intervention Implementation	112	36%	82	73%
NPA - Behavior Intervention Development	109	35%	94	86%
Total NPA Services	308	100%	234	76%

**Table C-3**

**Percentages of Non-Public Agency (NPA) services with duration at least equal to the IEP, by service type, 2009-10**

	NPA services analyzed by type		Services with duration at least equal to the IEP	
	N	%	N	%
NPA – Speech	83	28%	49	59%
NPA - Behavior Intervention Implementation	110	37%	48	44%
NPA - Behavior Intervention Development	108	36%	66	61%
Total NPA Services	301	100%	163	54%

**Table C-4**

**Population Results if Non-Public Agency (NPA) services were removed from the study sample, 2009-10**

	%
% of Services with Evidence of Log – Excluding SLD	95.3%
% of Services with Evidence of Log – SLD only	93.0%
% of Services with Frequency at least Equal to the IEP	74.2%
% of Services with Duration at least Equal to the IEP	67.0%

**Table C-5**

**Comparing Results for Non-Public Agency (NPA) Speech to Language and Speech, 2009-10**

	Services with evidence of log		Services with frequency at least equal to the IEP		Services with duration at least equal to the IEP	
	N analyzed	%	N analyzed	%	N analyzed	%
NPA – Speech	126	84.1%	87	66.7%	83	59.0%
Language and Speech (LAUSD/Charter Providers)	1,825	97.4%	1,753	67.1%	1,754	59.5%
Difference between NPA – Speech and Language and Speech	-13.3%***		-0.4%		-0.5%	

Level of statistical significance: \*\*\* p < .001.

## Appendix D: Services that Missed Required Frequency and Duration

**Table D-1**

**Services that were required 8 times over 8-week/2-month period but showed no service sessions during specified period, 2009-10**

Services	N	%
Adapted Physical Education	6	6%
Deaf/Hard of Hearing	4	4%
Language and Speech	24	23%
Least Restrictive Environment	1	1%
Non-Public Agency	7	7%
Occupational Therapy	12	12%
Physical Therapy	3	3%
Resource Specialist Program	20	19%
School Mental Health	27	26%
<b>Total Services</b>	<b>104</b>	<b>100%</b>

**Table D-2**

**Services that were required 16 times over 8-week/2-month period but showed no service sessions during specified period, 2009-10**

Services	N	%
Adapted Physical Education	2	5
Language and Speech	3	8
Non-Public Agency	1	3
Occupational Therapy	1	3
Resource Specialist Program	30	81
<b>Total Services</b>	<b>37</b>	<b>100%</b>

**Table D-3**

**Services that were required for 240 minutes over 8-week/2-month period but were under by 120 minutes during specified period, 2009-10**

Services	N	%
Adapted Physical Education	7	3%
Deaf/Hard of Hearing	8	3%
Language and Speech	110	48%
Non-Public Agency	3	1%
Occupational Therapy	14	6%
Physical Therapy	4	2%
Pre-school	10	4%
Resource Specialist Program	14	6%
School Mental Health	59	26%
<b>Total Services</b>	<b>229</b>	<b>100%</b>

**Table D-4**

**Services that were required for 480 minutes over 8-week/2-month period but were under by 120 minutes during specified period, 2009-10**

<b>Services</b>	<b>N</b>	<b>%</b>
Adapted Physical Education	36	18%
Deaf/Hard of Hearing	7	4%
Language and Speech	81	41%
Least Restrictive Environment	1	1%
Non-Public Agency	18	9%
Occupational Therapy	17	9%
Physical Therapy	4	2%
Resource Specialist Program	19	10%
School Mental Health	17	9%
<b>Total Services</b>	<b>200</b>	<b>100%</b>

**Appendix E: Welligent Definitions for Cancelled Sessions**

## Appendix F: Reasons for Cancelled Sessions among Services that Did Not Meet Required Duration

**Table-F. Percentages of services by reason for cancelled sessions among services that did not meet required duration, by service category, 2009-10**

Service category	Duration not met	Student schedule change		IEP meeting (all reasons)		Unexcused IEP meeting		IEP meeting		IEP meeting with student	
Adapted Physical Education	262	1	0.4%	36	13.7%	20	7.6%	17	6.5%	0	0.0%
Deaf/Hard of Hearing	108	5	4.6%	9	8.3%	2	1.9%	6	5.6%	1	0.9%
Language and Speech	711	93	13.1%	172	24.2%	115	16.2%	63	8.9%	8	1.1%
Least Restrictive Environment	53	0	0.0%	2	3.8%	1	1.9%	3	5.7%	0	0.0%
Non-Public Agency	138	1	0.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Occupational Therapy	178	10	5.6%	34	19.1%	18	10.1%	0	0.0%	0	0.0%
Physical Therapy	44	2	4.5%	8	18.2%	4	9.1%	17	38.6%	2	4.5%
Resource Specialist Program	453	25	5.5%	21	4.6%	4	0.9%	17	3.8%	0	0.0%
School Mental Health	237	20	8.4%	16	6.8%	7	3.0%	8	3.4%	2	0.8%
Visual Impairment	69	15	21.7%	8	11.6%	3	4.3%	5	7.2%	0	0.0%
<b>Total</b>	<b>2,253</b>	<b>172</b>	<b>7.6%</b>	<b>306</b>	<b>13.6%</b>	<b>174</b>	<b>7.7%</b>	<b>136</b>	<b>6.0%</b>	<b>13</b>	<b>0.6%</b>

**Table-F (cont.). Percentages of services by reason for cancelled sessions among services that did not meet required duration, by service category, 2009-10**

Service category	Duration not met	Provider absence (no additional info)		Off calendar		Early dismissal		Waiver		None of the prior reasons reported	
Adapted Physical Education	262	10	3.8%	5	1.9%	0	0.0%	1	0.4%	212	80.9%
Deaf/Hard of Hearing	108	3	2.8%	5	4.6%	1	0.9%	0	0.0%	85	78.7%
Language and Speech	711	110	15.5%	57	8.0%	16	2.3%	2	0.3%	340	47.8%
Least Restrictive Environment	53	3	5.7%	1	1.9%	2	3.8%	0	0.0%	47	88.7%
Non-Public Agency	138	29	21.0%	0	0.0%	1	0.7%	0	0.0%	108	78.3%
Occupational Therapy	178	21	11.8%	19	10.7%	1	0.6%	0	0.0%	108	60.7%
Physical Therapy	44	2	4.5%	2	4.5%	0	0.0%	1	2.3%	30	68.2%
Resource Specialist Program	453	34	7.5%	3	0.7%	0	0.0%	0	0.0%	381	84.1%
School Mental Health	237	35	14.8%	6	2.5%	1	0.4%	4	1.7%	170	71.7%
Visual Impairment	69	1	1.4%	2	2.9%	4	5.8%	0	0.0%	41	59.4%
<b>Total</b>	<b>2,253</b>	<b>248</b>	<b>11.0%</b>	<b>100</b>	<b>4.4%</b>	<b>26</b>	<b>1.2%</b>	<b>8</b>	<b>0.4%</b>	<b>1,522</b>	<b>67.6%</b>

\* Pre-School is excluded as a separate category and from the total row due to having fewer than 30 observations. The "Unexcused IEP meeting," "IEP meeting," and "IEP meeting with student" are subsets of "IEP meeting" category. Because a single log could document several cancelled sessions, the categories above are not mutually exclusive. The total across all categories does not add to 100%.

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