



# 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 6 RESULTS (2008-09)

SUBMITTED TO:  
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[This electronic version was modified on September 2, 2009, to change the name of the Los Angeles Unified School District's "Research and Planning Division" to the "Office of Data and Accountability," which was effective July 1, 2009. All other content remains the same.]

## Table Contents

Introduction.....	1
Results .....	3
<i>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?</i> .....	3
<i>Were services provided at the frequency and duration required by the IEP?</i> .....	6
Appendix A: Population Estimates and Statistical Confidence Intervals .....	10
Appendix B: Estimates for Years 2-6.....	15
Appendix C: Results for Non-Public Agency Services, Disaggregated by Service Type .....	21

## Introduction

This report presents the results from the Year 6 (2008-09) study to measure whether the Los Angeles Unified School District (LAUSD) met the goals of Outcome #13 of the Modified Consent Decree (MCD). Outcome #13 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 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 2008 and February 2009.<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 first year of this outcome study in which the period investigated for evidence of service was six months. In prior years, 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 6 of this study, LAUSD's Office of Data and Accountability provided the American Institutes for Research (AIR) with databases containing IEPs for a sample of 4,862 students in special education in the district and their corresponding provider log information. Using these databases, the final results include 7,528 services for 4,485 of the students in this sample.<sup>4</sup> The analyses for this year's study were done entirely by a computer program using the electronic provider logs, eliminating the hand-coding procedures followed in Years 2 - 5. While AIR created an initial set of rules on how to analyze the data in Year 1 and was responsible for creating the computer program in Year 6, LAUSD's Office of Data and Accountability, in consultation with the OIM, subsequently modified and supplemented the Year 1 rules. The computer program used by AIR for this year's analysis attempted to follow as closely as possible the coding rules used for the hand-coding process in Year 5. To test the reliability of the computer program, LAUSD's Office of Data and Accountability hand-coded a sample of 234 services for 225 students to compare to the codes derived by the program. In the final comparisons, codes from AIR's program and the Office of Data and Accountability codes on this sub-sample matched 100% on evidence of service delivery. For frequency and duration, the codes matched for all students except one (less than a half percent discrepancy).<sup>5</sup>

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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 = 4,485) is smaller than the sample that LAUSD's Office of Data and Accountability initially drew for this study (n = 4,862). Ninety-nine students were dropped from the original sample due to receiving services that were not included in the outcome. In accordance with the coding rules, an additional 278 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> This coding difference was due to the specificity in the program for identifying service patterns to apply credit for services that would have occurred on school holidays. For a detailed discussion of the program holiday rules, please see Appendix E in *Study to Measure the Delivery of Services in Accordance with the Individualized Education Programs of Students with Disabilities, Year 5 2007-08: A Joint Report Produced by the Los Angeles Unified School District Research and Planning Division and the American Institutes for Research* (Harr, Oliver, & Socias, 2008).

## 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 94% of the special education services required by IEPs district-wide<sup>6</sup> during the 2008-09 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 included in this study, we found evidence that 91% 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 91.4% and 96.0%. Therefore, for special education students excluding SLD, the MCD outcome of 93% falls within the 95% confidence intervals. 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 89.4% and 92.9%.

Across the individual disability categories, the estimate of service delivery varied from 90% for students with Speech/Language Impairment to 98% for students with Multiple Disabilities/Deaf-Blindness. By service category, the percentages ranged from 90% for Speech and Language services to 100% for Least Restrictive Environment Itinerant, Pre-School, and Visual Impairment Itinerant services.

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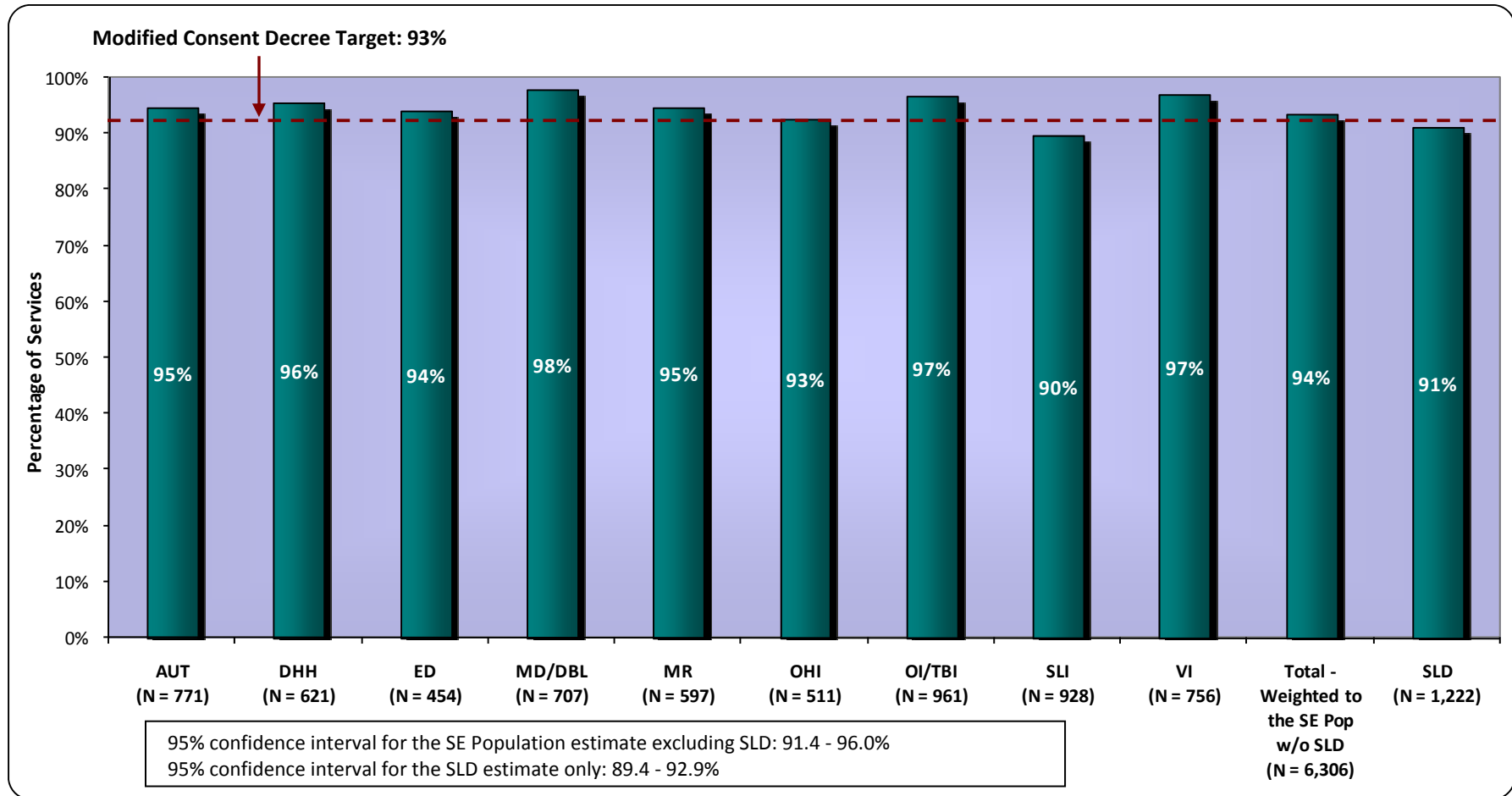
<sup>6</sup> This is a population estimate based on the probability weights for each disability category, excluding SLD. Please see Appendix A for more details. The population estimate represents students whose IEPs required at least one special education service according to the Special Education Student 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 2008 and February 2009. 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, 2008-09**



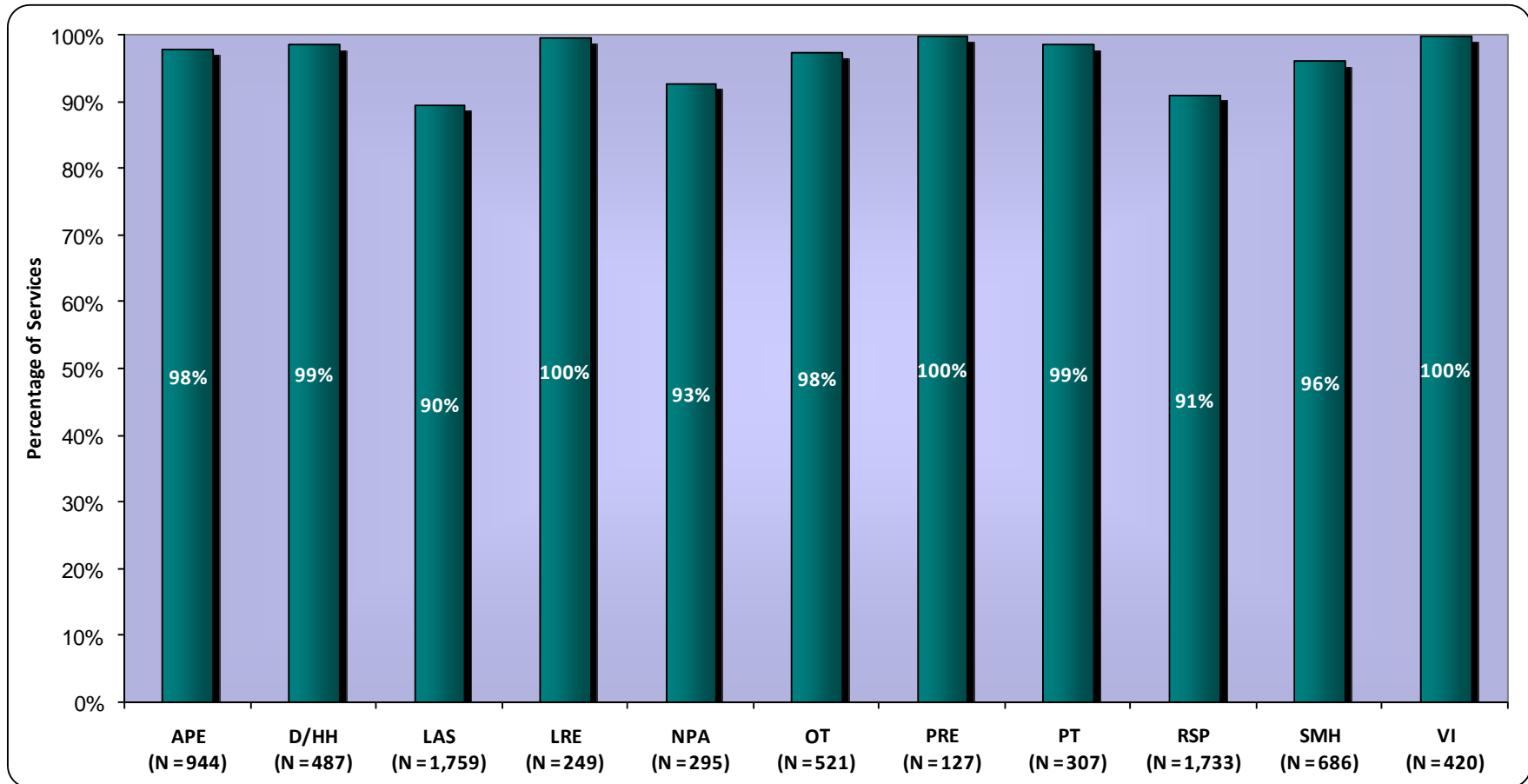
Note 1: The population estimate represents the population of students in special education district-wide (excluding students with Specific Learning Disabilities) whose IEPs required at least one special education service as reported in the Special Education Student Information System (SIS) database.

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 771 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, 2008-09**



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 98% of the 944 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 72% 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 2008-09, while 67% met the IEP specifications for duration.<sup>9</sup> For frequency, the confidence intervals ranged from 68.2% to 76.3%, and 62.6% to 71.1% 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, these estimates decrease from 72% to 63% for frequency and from 67% to 58% 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 68% for students with Emotional Disturbance to 84% for students with Visual Impairments. Duration rates ranged from 63% for students with Autism to 80% 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 771 services for students with Autism in the evidence of service analysis, the frequency and duration percentages are based on a smaller number (676 services for frequency and 675 for duration; see Appendix B). These lower numbers are due to not receiving logs for all 771 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 40 services; the IEPs did not state a frequency for 6 services; and 49 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, and NPA-Behavior Intervention Development. When these individual services are re-grouped with Language and Speech (LAS) and School Mental Health (SMH) categories, the frequency percentage for SMH increases from 61% to 64% while the duration percentage declines from 68% to 64%. The rounded percentages for LAS do not change. Furthermore, the percentages for the evidence of service analysis remain the same for LAS and SMH when the NPA services are added.

from 61% for School Mental Health to 91% for Pre-school services; duration estimates ranged from 52% for Non-Public Agency to 85% for Least Restrictive Environment Itinerant, Physical Therapy, and Visual Impairment Itinerant services.<sup>13</sup>

In addition to the alternative estimates presented above which include all students for whom we expected a log, we tested the impact of rules for coding circumstances beyond the control of the district. These rules kept records in the analyses if the log met the requirements specified in the student's IEP, but excluded records if the log did not meet the requirements. For example, the rules specified that if a log is received for students who left the district during the eight week/two month timeframe, it will be included in the results if the log met the IEP requirements but excluded if it does not. If all such cases were treated equally (i.e., uniformly excluded), the weighted estimate for service frequency would decrease from 72% (as reported above) to 70% and from 67% to 64% for duration.<sup>14</sup>

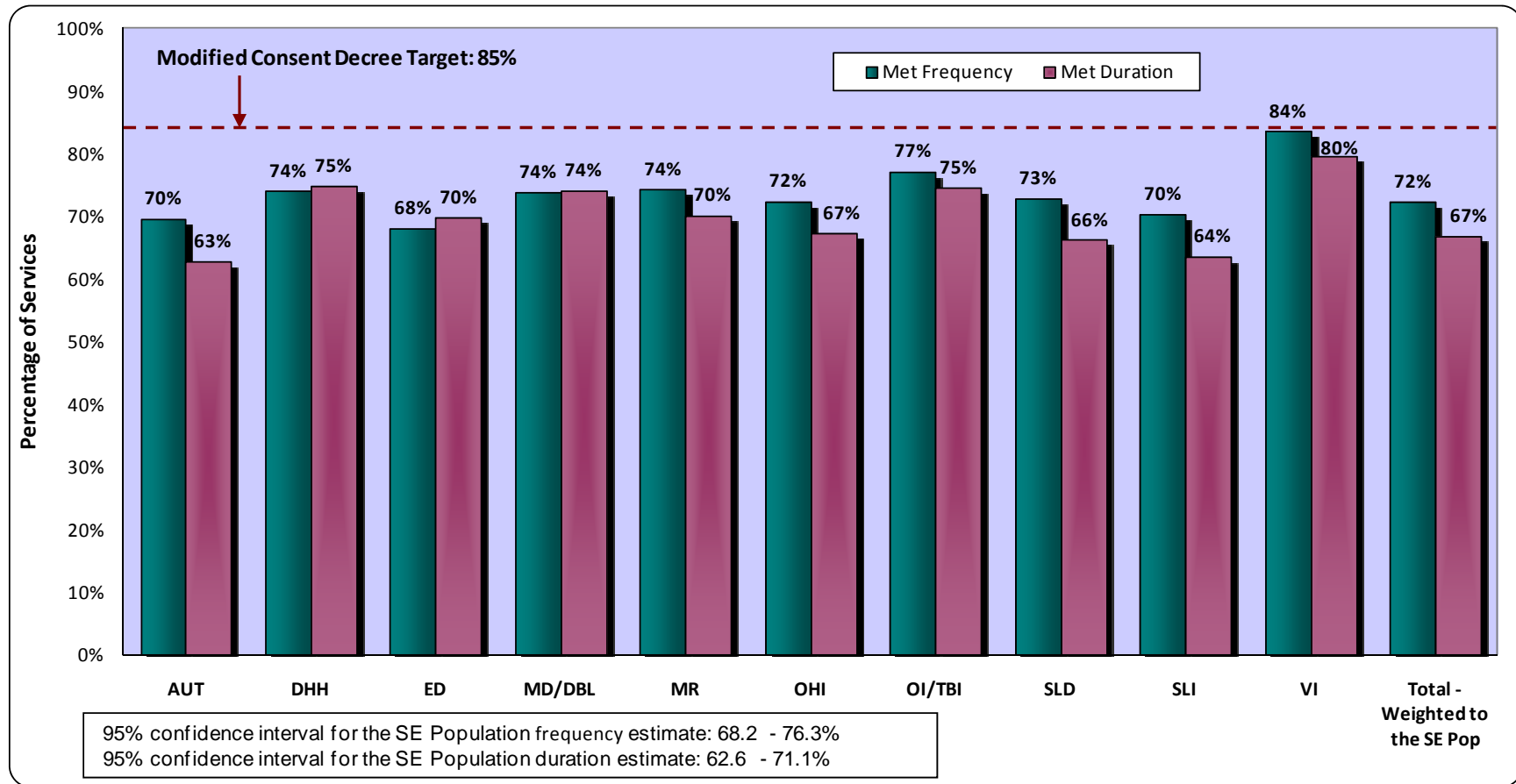
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<sup>13</sup> Please see Appendix C for the Non-Public Agency (NPA) group disaggregated by specific service.

<sup>14</sup> These coding rules also apply to evidence of service; uniformly excluding these cases had no noticeable impact on the evidence of service estimates in Year 6.

**FIGURE 3**

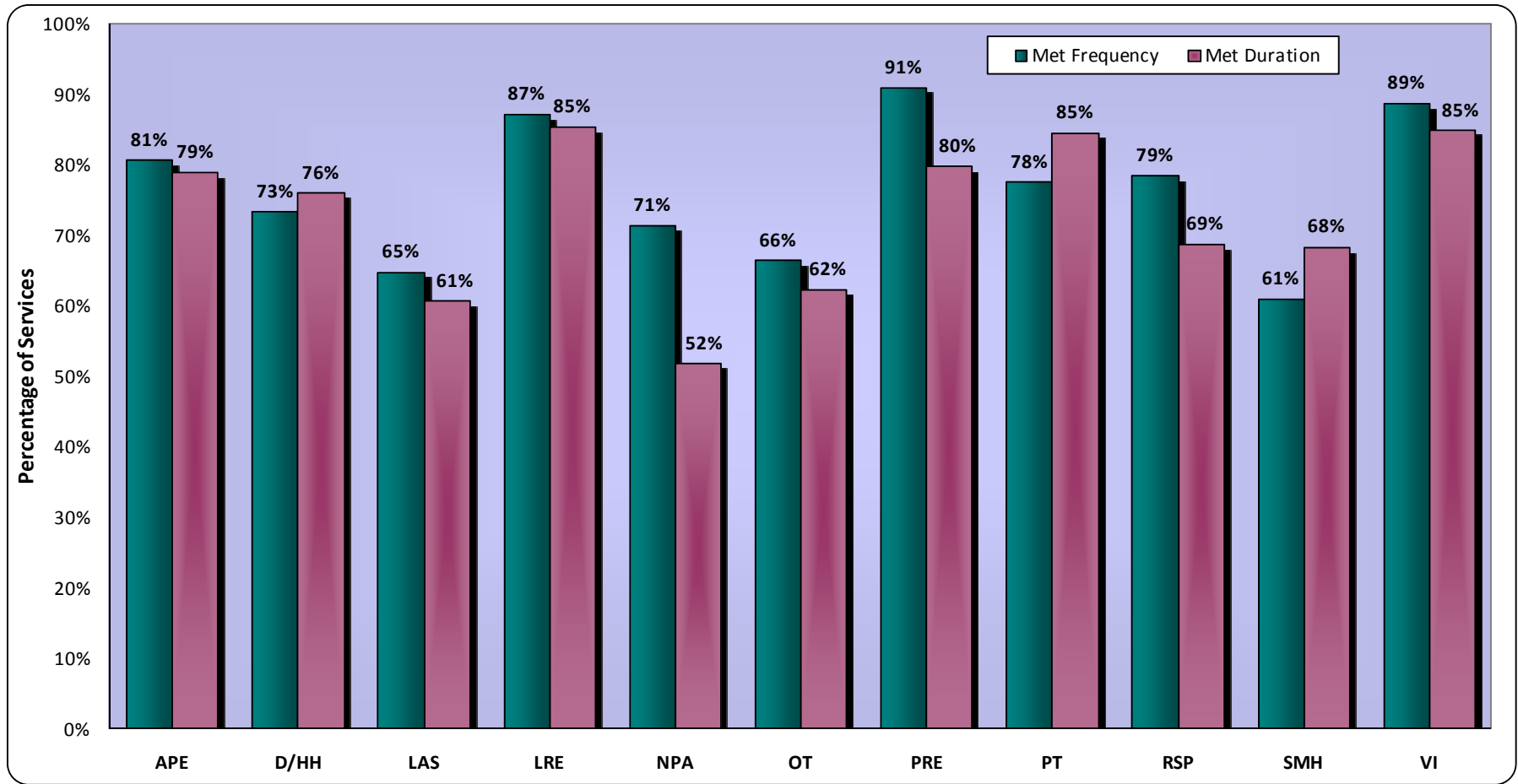
**Percentages of services that met frequency/duration as specified by the IEPs during an eight-week/two-month period, by disability category, 2008-09**



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, 2008-09**



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).

## 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>15</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 ( $n = 4,485$ ) – 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 7% probability (Column C (i.e.,  $375 / 5,366$ )) 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 14 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 94%. 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>15</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, 2008.

**TABLE A-1**

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

Disability	Population <sup>1</sup>	Analytic Sample	Probability	Weight
	A	B	C	D
Autism	6,060	366	0.0604	16.6
Deaf/Hard of Hearing	1,045	367	0.3512	2.8
Emotional Disturbance	707	343	0.4851	2.1
Multiple Disabilities/Deaf-Blindness	956	350	0.3661	2.7
Mental Retardation	5,366	356	0.0663	15.1
Other Health Impairment	4,382	356	0.0812	12.3
Orthopedic Impairment/ Traumatic Brain Injury	834	374	0.4484	2.2
Speech & Language Impairment	8,687	640	0.0737	13.6
Visual Impairment	372	361	0.9704	1.0
<b>Total</b>	<b>28,409</b>	<b>3,513</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, 2008-09**

Disability Categories	% 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	94.8%	92.5%	97.1%	69.7%	64.9%	74.5%	62.8%	57.8%	67.9%
Deaf/Hard of Hearing	95.7%	93.6%	97.7%	74.0%	69.4%	78.6%	74.8%	70.2%	79.3%
Emotional Disturbance	94.3%	91.8%	96.7%	68.1%	62.8%	73.4%	69.7%	64.6%	74.9%
Multiple Disabilities/ Deaf-Blindness	97.9%	96.4%	99.4%	73.8%	68.9%	78.8%	74.1%	69.3%	78.9%
Mental Retardation	94.8%	92.5%	97.1%	74.3%	69.7%	78.9%	70.2%	65.3%	75.0%
Other Health Impairment	92.8%	90.1%	95.5%	72.4%	67.6%	77.2%	67.2%	62.2%	72.3%
Orthopedic Impairment/Traumatic Brain Injury	96.7%	94.9%	98.5%	77.2%	72.9%	81.5%	74.5%	70.0%	79.0%
Specific Learning Disability	91.2%	89.4%	92.9%	72.9%	70.0%	75.7%	66.2%	63.1%	69.3%
Speech/Language Impairment	89.9%	87.5%	92.2%	70.4%	66.7%	74.0%	63.6%	59.7%	67.5%
Visual Impairment	97.1%	95.4%	98.8%	83.5%	79.7%	87.4%	79.6%	75.4%	83.8%
<b>Population Estimates (including SLD)</b>	--	--	--	<b>72.3%</b>	<b>68.2%</b>	<b>76.3%</b>	<b>66.9%</b>	<b>62.6%</b>	<b>71.1%</b>
<b>Population Estimates (excluding SLD)</b>	<b>93.7%</b>	<b>91.4%</b>	<b>96.0%</b>	--	--	--	--	--	--



## Appendix B: Estimates for Years 2-6<sup>16</sup>

TABLE B-1

Percentages of services for which there was evidence of service provision by disability category, 2004-05 to 2008-09

	2004-05 Year 2		2005-06 Year 3		2006-07 Year 4		2007-08 Year 5		2008-09 Year 6	
Disability	% 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	N of Services	N of Services	N of Services	N of Services
Autism	95%	528	87%	594	89%	704	91%	727	95%	771
Deaf/Hard of Hearing	95%	546	93%	524	90%	633	97%	622	96%	621
Emotional Disturbance	81%	306	85%	355	80%	437	90%	400	94%	454
Multiple Disabilities/Deaf-Blind	98%	432	93%	446	95%	656	95%	690	98%	707
Mental Retardation	96%	385	88%	457	87%	577	92%	564	95%	597
Other Health Impairment	84%	416	84%	424	81%	483	95%	539	93%	511
Orthopedic Impairment/ Traumatic Brain Injury	93%	693	91%	740	89%	841	96%	893	97%	961
Speech & Lang. Impairment	95%	338	78%	389	86%	459	91%	432	90%	928
Visual Impairment	98%	630	96%	659	96%	751	98%	743	97%	756
<b>Overall Population Estimate (w/o SLD)</b>	<b>93%</b>		<b>85%</b>		<b>87%</b>		<b>92%</b>		<b>94%</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

<sup>16</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 2008-09**

Disability	2004-05 Year 2		2005-06 Year 3		2006-07 Year 4		2007-08 Year 5		2008-09 Year 6	
	% 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
Deaf/Hard of Hearing	58%	486	66%	423	75%	528	77%	577	74%	562
Emotional Disturbance	49%	206	67%	254	74%	320	69%	345	68%	373
Multiple Disabilities/Deaf-Blind	60%	363	70%	374	80%	531	82%	551	74%	550
Mental Retardation	54%	348	61%	365	74%	462	76%	487	74%	525
Other Health Impairment	56%	305	58%	298	70%	351	78%	483	72%	442
Orthopedic Impairment/ Traumatic Brain Injury	67%	543	70%	582	78%	612	80%	748	77%	785
Specific Learning Disability	52%	442	54%	459	65%	794	77%	1,105	73%	1,058
Speech & Lang. Impairment	49%	289	50%	282	62%	360	71%	367	70%	776
Visual Impairment	60%	571	68%	583	82%	690	85%	686	84%	693
<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>Overall Population Estimate</b>	--	--	--	--	--	--	<b>76%</b>		<b>72%</b>	

Note: 2007-08 is the first year in which a population estimate was calculated. This estimate in 2007-08 and 2008-09 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 2008-09**

Disability	2004-05 Year 2		2005-06 Year 3		2006-07 Year 4		2007-08 Year 5		2008-09 Year 6	
	% 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
Deaf/Hard of Hearing	60%	484	68%	419	76%	513	77%	579	75%	559
Emotional Disturbance	65%	200	69%	255	77%	310	67%	343	70%	380
Multiple Disabilities/Deaf-Blind	60%	359	74%	373	82%	548	82%	598	74%	618
Mental Retardation	55%	345	64%	365	69%	463	73%	483	70%	516
Other Health Impairment	59%	299	61%	302	65%	338	72%	485	67%	436
Orthopedic Impairment/ Traumatic Brain Injury	68%	542	73%	582	78%	641	80%	806	75%	828
Specific Learning Disability	56%	435	59%	467	56%	762	72%	1,094	66%	1,032
Speech & Lang. Impairment	51%	288	53%	282	62%	354	70%	366	64%	764
Visual Impairment	63%	567	69%	581	81%	685	81%	689	80%	691
<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>Overall Population Estimate</b>	--	--	--	--	--	--	<b>72%</b>		<b>67%</b>	

Note: 2007-08 is the first year in which a population estimate was calculated. This estimate in 2007-08 and 2008-09 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 2008-09**

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

**TABLE B-5**

**Percentages of services with frequency at least equal to the IEP by service category, 2004-05 to 2008-09**

	2004-05 Year 2		2005-06 Year 3		2006-07 Year 4		2007-08 Year 5		2008-09 Year 6	
<b>Disability</b>	% 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
Deaf/Hard of Hearing	62%	362	69%	346	81%	397	77%	430	73%	446
Language and Speech	42%	965	48%	895	60%	1,085	69%	1,140	65%	1,474
Least Restrictive Environment	80%	145	87%	174	87%	212	91%	246	87%	243
Non-Public Agency	80%	39	70%	77	71%	123	77%	150	71%	245
Occupational Therapy	55%	367	67%	365	72%	429	72%	426	66%	423
Pre-School	80%	51	81%	36	76%	87	90%	101	91%	122
Physical Therapy	61%	72	79%	90	71%	114	80%	113	78%	125
Resource Specialist Program	60%	498	54%	593	67%	994	81%	1,461	79%	1,507
School Mental Health	45%	318	65%	352	71%	459	64%	571	61%	574
Visual Impairment	63%	301	71%	289	92%	384	87%	371	89%	402

**TABLE B-6**

**Percentages of services with duration at least equal to the IEP by service category, 2004-05 to 2008-09**

	2004-05 Year 2		2005-06 Year 3		2006-07 Year 4		2007-08 Year 5		2008-09 Year 6	
<b>Disability</b>	% 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
Deaf/Hard of Hearing	64%	361	72%	342	84%	383	79%	431	76%	446
Language and Speech	44%	959	50%	899	60%	1,064	67%	1,141	61%	1,459
Least Restrictive Environment	80%	144	87%	176	81%	211	81%	248	85%	241
Non-Public Agency	83%	42	68%	77	55%	119	60%	148	52%	243
Occupational Therapy	56%	365	66%	369	67%	435	68%	461	62%	452
Pre-School	86%	51	83%	36	69%	86	79%	97	80%	119
Physical Therapy	60%	72	75%	81	80%	173	88%	202	85%	221
Resource Specialist Program	61%	487	60%	601	55%	946	75%	1,437	69%	1,457
School Mental Health	62%	313	67%	355	74%	445	67%	570	68%	589
Visual Impairment	67%	302	72%	284	89%	380	83%	369	85%	404

## Appendix C: Results for Non-Public Agency Services, Disaggregated by Service Type

**Table C-1**

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

	NPA services analyzed by type		Services that had evidence of at least one incident of provision	
	N	%	N	%
NPA – Speech	114	39%	102	89%
NPA - Behavior Intervention Implementation	93	32%	88	95%
NPA - Behavior Intervention Development	88	30%	84	95%
Total NPA Services	295	100%	274	93%

**Table C-2**

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

	NPA services analyzed by type		Services with Frequency at least Equal to the IEP	
	N	%	N	%
NPA – Speech	87	36%	56	64%
NPA - Behavior Intervention Implementation	80	33%	57	71%
NPA - Behavior Intervention Development	78	32%	62	79%
Total NPA Services	245	100%	175	71%

**Table C-3**

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

	NPA services analyzed by type		Services with Duration at least Equal to the IEP	
	N	%	N	%
NPA – Speech	88	36%	56	64%
NPA - Behavior Intervention Implementation	78	32%	27	35%
NPA - Behavior Intervention Development	77	32%	43	56%
Total NPA Services	243	100%	126	52%