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## **Evaluation of Services for Improving Outcomes for Students with Sensory Disabilities in Washington State**

### **Prepared for:**

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# Evaluation of Services for Improving Outcomes for Students with Sensory Disabilities in Washington State

## A. INTRODUCTION

The Washington State Office of Superintendent of Public Instruction (OSPI) contracted with SRI International, an independent research firm, to conduct a small-scale evaluation of one of the nine state needs projects, Washington Sensory Disabilities Services (WSDS). For 2007-08, WSDS received \$1,206,560<sup>1</sup> from OSPI to carry out a number of activities related to improving educational programs and supports to local school districts across the state that are providing services to students with low-incidence sensory impairments (SI), including children and youth who are blind or visually impaired (VI), deaf or hard of hearing (HH), or deaf-blind (DB). WSDS bases its activities on the goals stated in the Washington State Improvement Plan and the Connecting IDEAs Project (CIP), which focus broadly on (1) better outcomes for students with disabilities and (2) increasing project capacity to accomplish their work by accessing and using all available resources more efficiently and effectively.

**Background.** As stated in its proposal, WSDS focuses on improved in-school and postschool outcomes for students with sensory disabilities and on increased project capacity through developing well-trained and skilled personnel. WSDS primarily uses a “consultant model” to build local capacity in communities; respond to specific needs of children and youth with sensory disabilities; develop outreach services via itinerant teachers, interpreters, and assessment evaluators, especially in the rural regions of the state; and provide “on-call” consultation, from a distance and on-site. Its work includes a variety of training workshops and summer institutes that target professionals and families working and living with this population of children and youth.

An important decision for OSPI is how best to invest limited resources for capacity building to get the greatest benefit for students with SI. The evaluation attempts to identify possible service gaps and provide recommendations regarding increasing service capacity for improving outcomes for students with SI and for future planning. This report presents the results of the evaluation, including information about the SI population and the services provided by WSDS and other agency providers.

The current evaluation was limited in that it was small in scope and restricted in the amount of existing or new information available to examine key issues. Although some information is presented on the birth-to-3 population served in early intervention programs and some information on preschool children, most of the information addresses the 6- to 21-year-old population. Within the confines of these limitations, SRI presents the short-term data and descriptive information available to examine the effectiveness of WSDS to date, as well as lays the groundwork for ways to examine critical issues related to improved outcomes for students with SI in the future. The evaluation relied on four sources of information to examine the work

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<sup>1</sup> The dollar amount comprises \$1,071,380 for VI-B, plus \$135,180 for 619 as presented in the 2007-08 budget justification in the WSDS proposal; the budget is administered out of NCESD and includes subcontract costs to PSES, CWU, WSD, and WSSB.

of WSDS: (1) written materials from WSDS, including proposals and reports; (2) a logic model developed with stakeholders; (3) existing data; and (4) interviews with key informants.

**Logic models.** SRI began the evaluation by meeting with OSPI and WSDS staff and other key stakeholders to map out the components of a logic model designed to illustrate the intended outcomes for students with sensory disabilities (e.g., in-school outcomes such as achievement, postschool outcomes such as employment) and their hypothesized relationships to other proximal and more distal inputs and processes (e.g., adequate and available qualified personnel, sufficient resources, high-quality instruction). Two models were developed, one for preschool- and school-age children and another for children receiving early intervention services. The discussion resulted in a graphic representations of the elements considered by these knowledgeable individuals as important to improving student outcomes for each of these age groups (Exhibits 1a and 1b). Together the logic models serve as potential roadmaps for all possible points of influence in a complex system that need to be functioning as intended for students with sensory impairments to realize good outcomes. It is important to note that some of the factors seen as important influences may be within OSPI's sphere of influence and others may be outside its control. Similarly, a technical assistance provider would not be expected to have an impact on all possible factors influencing student outcomes but would need to target activities to the most critical influences. The logic models clearly illustrate the indirect nature of the relationships between support services and student outcomes; for example, technical assistance (TA) provides training to teachers, and teachers provide instructional services to students. Meeting participants identified extant state data sources for areas identified in the logic model and generated a list of potential key informants for interviews. SRI also selected informants from the state's Special Education Directory for the 2007-08 school year to ensure statewide representation.

**Available state data.** SRI worked with OSPI data analysts from several departments (e.g., Washington Assessment of Student Learning, OSPI placement data), as well as the Center for Change in Transition Services (postschool data), and pulled Child Count data from the Web ([www.ideadata.org](http://www.ideadata.org)) to assemble existing data available to address several elements of the logic models, such as identification of students with sensory impairments and their outcomes. Although some data are available to address some of the more basic questions driven by the logic models, many of the data needed to examine issues related to identification, services, and outcomes for students with sensory impairments were not available from existing data. We discuss the need for systematic data collection later in this report.

**Key informant interviews.** SRI developed interview protocols to explore perceptions regarding the quality of statewide services and supports for children and youth with sensory impairments and to gain insight about service gaps, strengths, and needs from a variety of consumers.

SRI conducted interviews with 25 key informants, representing Educational Service District (ESD) special education directors and early childhood specialists, superintendents and directors from the state schools, government offices and Children and Family Services, principals, teachers of the visually impaired, teachers of the deaf and hard of hearing, special education and itinerant teachers, and parents of children and young adults with a range of sensory impairments. Informants hailed from each of the nine ESDs, from geographically diverse areas including the peninsula, island, urban, and rural/remote communities. Participants were eager to share their ideas and experiences, with interviews lasting an hour or more, and we want to acknowledge

their contribution to this evaluation. None of the interviewees were paid WSDS consultants,<sup>2</sup> although we did interview the superintendents of the two state schools that have subcontracts to provide specific services as part of the WSDS grant (these are described later in this report).

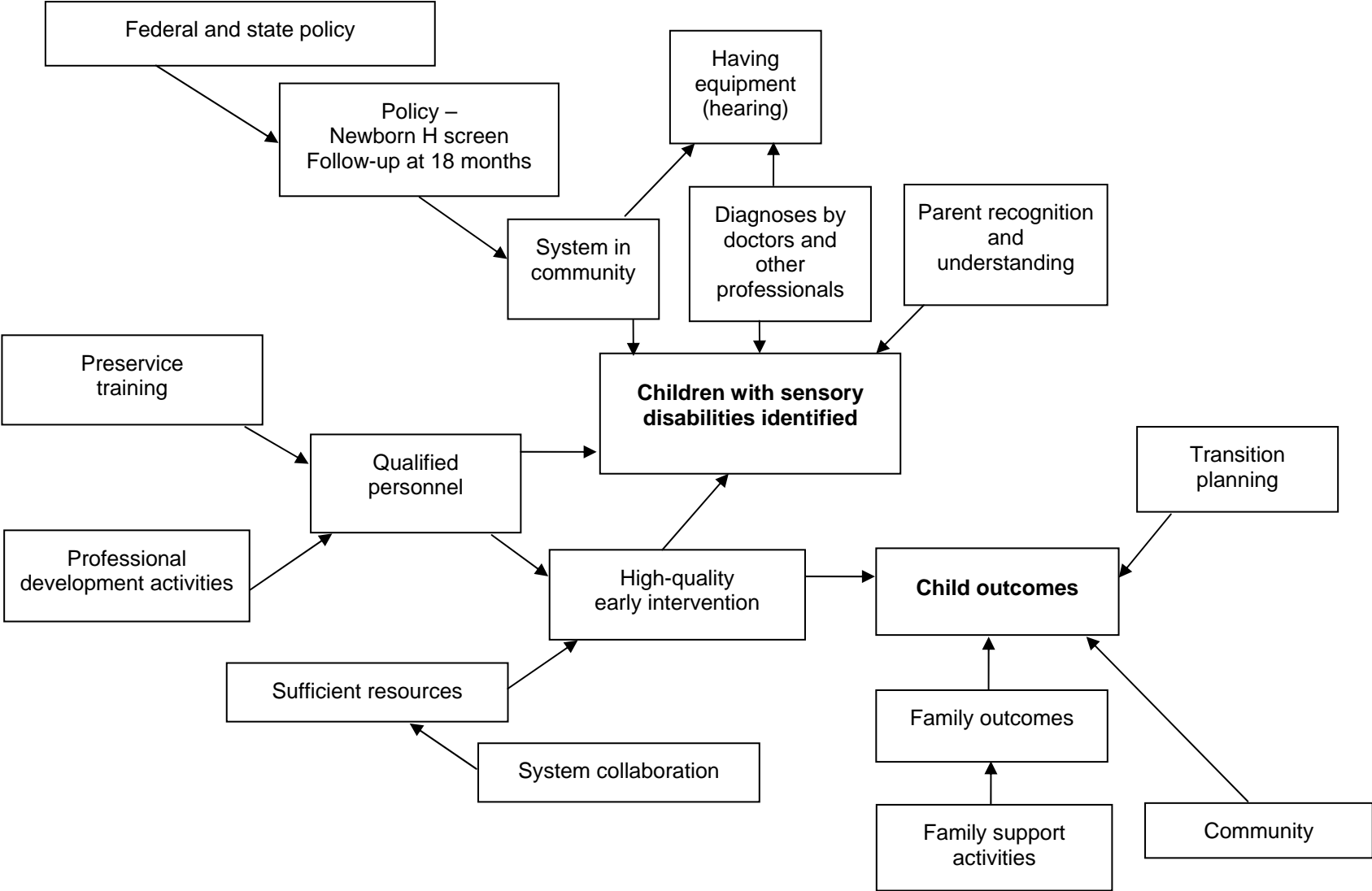
Some interviewees worked for other organizations providing support services to students with SI. The range of voices and experiences of the key informants provide valuable insight into the strengths and weaknesses of the current systems of supports, including WSDS, and the possible gaps in achieving successful outcomes for all children with disabilities in Washington State.

The organization of the report follows some of the key areas of the logic models that are shown on the following pages (Exhibits 1A and 1B). We begin with a discussion of what is known about outcomes for students with sensory impairments in Washington State. We start each section with the desired outcome(s) related to the section topic.

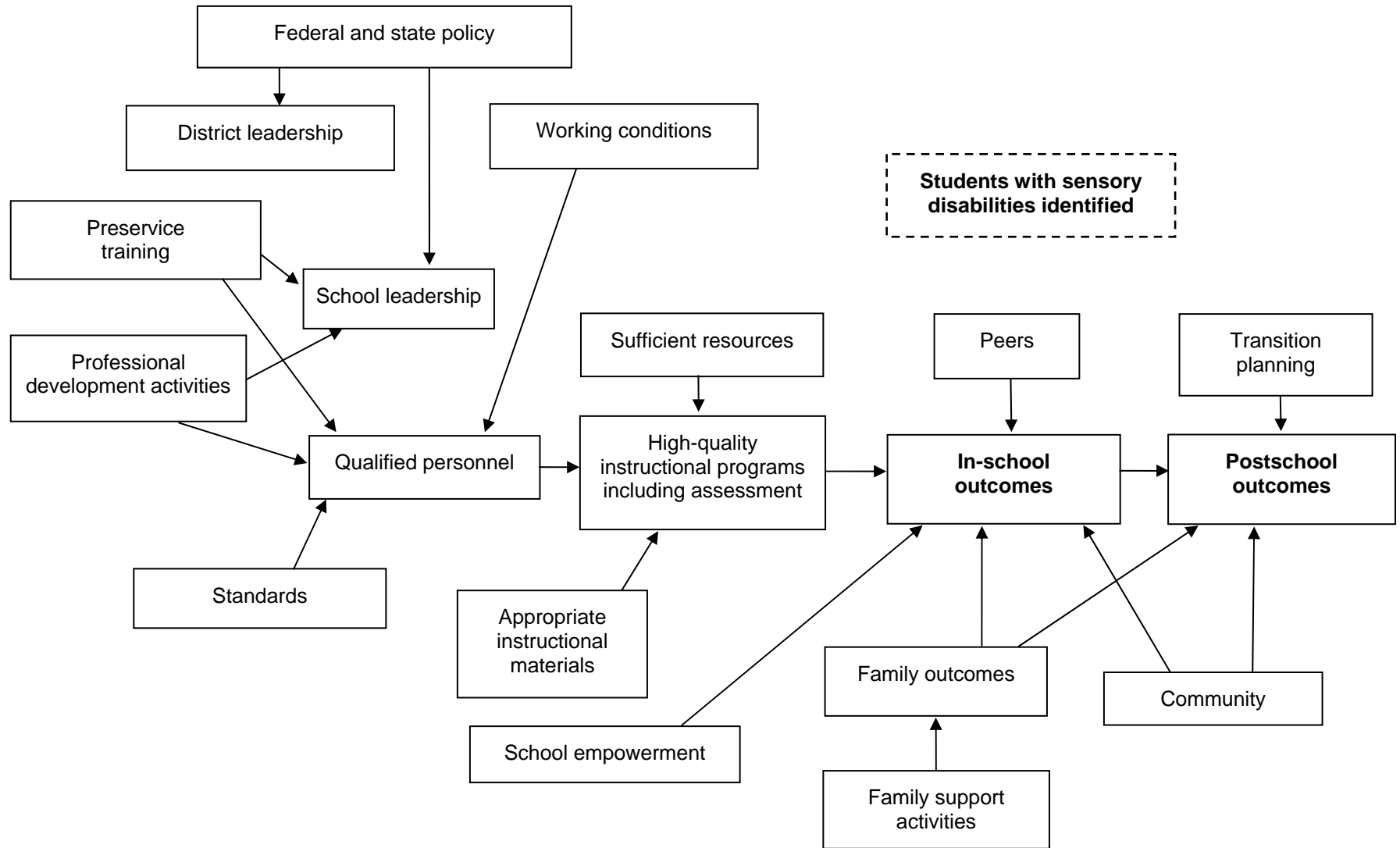
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<sup>2</sup> Our stakeholders meeting with OSPI included valuable input from directors and consultants for the WSDS project.

**Exhibit 1A**  
**Logic Model for Achieving Good Outcomes for All Students**  
**with Sensory Disabilities in Washington State (Birth to 3)**



**Exhibit 1B**  
**Logic Model for Achieving Good Outcomes for All Students**  
**with Sensory Disabilities in Washington State (Ages 3-21)**



## **B. OUTCOMES FOR CHILDREN AND YOUTH WITH SENSORY IMPAIRMENTS**

### **Desired Outcome:**

- **All students with sensory disabilities will achieve good outcomes while in school and after leaving school.**

Because this evaluation is focused on the contribution of WSDS to improving outcomes for students with sensory impairments, we begin with what is known about how these students are faring.

Information on academic outcomes is available through the Washington Assessment of Student Learning (WASL) and the WASL alternative assessments (WASL Basic and WAAS Coded Portfolio). All students in Washington State are required to take the WASL in grades 3 through 8 and grade 10, including students receiving special education services. Beginning with the 2008 graduation class, students are required to meet standard in reading in order to graduate with a regular diploma.

Information also is available on postschool outcomes through the annual follow-up studies conducted by the Center for Change in Transition Services. The Center collects data on postsecondary education and training, employment, and independence for all special education graduates 6 months following graduation.

Outcome data for children ages birth to 3, and 3 to 5, are beginning to be collected but are not yet available.

### **Academic Outcomes**

Exhibit 2 shows participation by grade and disability in the Washington Assessment of Student Learning and WASL alternatives for 915 Washington State students with sensory impairments in grades 3 through 8 and grade 10 who participated in the state assessment in Spring 2007. Also shown are the total number of special education students and the total number of students participating at these grade levels. Overall, 12.7% of those participating in some form of WASL testing were special education students and 1.4% of the special education students were students with sensory impairments.

Exhibit 3 shows the numbers and proportions of students with sensory impairments in grades 3 through 8 and grade 10 combined<sup>3</sup> who participated in each of the three types of WASL testing for reading and math. Overall, 7 of 10 students with sensory impairments participated in the general education WASL testing in both reading and math (71%), one-quarter took the alternative WASL Basic (25%), and few (4%) participated in the Coded WAAS Portfolio.<sup>4</sup> The WASL assessments were taken by the majority of blind or visually impaired students (85%), and by approximately two-thirds of deaf or hard-of-hearing students, and most of the remaining one-third of these students participated in the WASL Basic. In contrast, only one-third of deaf-blind students participated in the WASL assessments in reading and math (33%), and fewer than one-fifth (17%) took the alternative WASL Basic. Half of the deaf-blind students participated in the Coded WAAS Portfolio.

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<sup>3</sup> WASL assessments are developed specifically for each grade level, and, typically, student scores would not be combined across grades for reporting purposes. However, the numbers of students in each of the low-incidence sensory impairment categories are too small to report them separately by grade level. These data provide a general sense of academic achievement in reading and math for students with SI and should be interpreted with caution.

<sup>4</sup> The Coded WAAS Portfolio results are not reported as scores.

**Exhibit 2**  
**Washington Assessment of Student Learning:**  
**Number of Washington State Students with Sensory Impairments,**  
**Total Special Education Students, and Total Students in Grades 3-8 and 10**  
**Participating in WASL or WASL Alternative, Spring 2007**

Grade Level	Deaf-Blind	Deaf	Hard of Hearing	Blind, Visual Impairment	TOTAL SI	TOTAL Special Education	TOTAL Students
3	2	32	79	32	145	1,031	73,999
4	0	32	63	24	119	10,349	73,754
5	1	24	81	20	126	9,782	73,273
6	2	34	86	22	144	9,081	74,727
7	5	38	73	22	138	8,828	74,994
8	5	26	57	19	107	8,854	76,906
10	3	40	73	20	136	8,318	69,393
<b>TOTAL</b>	<b>18</b>	<b>226</b>	<b>512</b>	<b>159</b>	<b>915</b>	<b>65,523</b>	<b>517,046</b>

Sources: Assessment data for total students were obtained from OSPI, Special Education Operations Assessment Data, Olympia, WA, available at <http://www.k12.wa.us/assessment/WASL/default.aspx>. Assessment data for students with SI were obtained through special request from the OSPI Special Education Operations Assessment Data office, Olympia, WA.  
Note: WASL Alternative includes the WASL Basic and the Coded WAAS Portfolio.

**Exhibit 3**  
**Washington Assessment of Student Learning:**  
**Number of Washington State Students with Sensory Impairments in Grades 3-8 and 10**  
**Combined Participating in WASL, WASL Basic, or Coded WAAS Portfolio, Spring 2007**

	READING						MATH						Total N
	WASL		WASL Basic		Coded WAAS Portfolio		WASL		WASL Basic		Coded WAAS Portfolio		
	n	%	n	%	n	%	n	%	n	%	n	%	
<b>Blind, VI</b>	136	85%	17	11%	6	4%	135	85%	19	12%	5	3%	159
<b>Deaf</b>	148	66%	71	31%	7	3%	144	64%	74	33%	8	3%	226
<b>Hard of Hearing</b>	356	69%	137	27%	19	4%	362	71%	134	26%	16	3%	512
<b>Deaf-Blind</b>	6	33%	3	17%	9	50%	6	33%	3	17%	9	50%	18
<b>Total SI</b>	<b>646</b>	<b>71%</b>	<b>228</b>	<b>25%</b>	<b>41</b>	<b>4%</b>	<b>647</b>	<b>71%</b>	<b>230</b>	<b>25%</b>	<b>38</b>	<b>4%</b>	<b>915</b>

Source: Assessment data for students with SI were obtained through special request from the OSPI Special Education Operations Assessment Data office, Olympia, WA.

Exhibit 4 presents the number and proportion of all Washington State students in grades 3 through 8 and in grade 10 who met standards in reading and math on the WASL in 2007. The percentage who met the standard varies across grade level and subject area ranging from a high of 81% for 10th grade in reading to a low of 50% for grades 6, 8, and 10 in mathematics.

**Exhibit 4**  
**Washington Assessment of Student Learning:**  
**Number and Percentage of Washington State Students Meeting WASL Standards**  
**in Reading and Math by Grade Level, Spring 2007**

Grade Level	Met Reading Standard		Met Math Standard		Total N
	n	%	n	%	
3	53,004	71%	52,018	70%	73,999
4	5,7089	77%	43,257	58%	73,754
5	53,233	72%	44,006	60%	73,273
6	51,354	68%	37,483	50%	74,727
7	52,199	69%	41,441	55%	74,994
8	50,952	65%	38,977	50%	76,906
10	62,766	81%	39,008	50%	69,393
<b>Total grades 3-8 and 10</b>					<b>517,046</b>

Source: Assessment data for total students were obtained from OSPI, Special Education Operations Assessment Data, Olympia, WA, available at <http://www.k12.wa.us/assessment/WASL/default.aspx>.

Exhibit 5 shows the number and proportion of Washington State students with SI in grades 3 through 8 and grade 10 who met standards in reading and math on the WASL or on the WASL Basic.<sup>5</sup> Higher percentages of students who are blind or visually impaired met standards in reading (43%) and math (32%), compared with their peers who are hard of hearing (32% and 21%, respectively), or deaf (13% and 17%, respectively). In general, the WASL data indicate that students with sensory impairments in Washington State are having difficulty meeting standards in reading and math and that the percentages who met standards are considerably lower than for students overall (Exhibit 4).

<sup>5</sup> Data obtained from OSPI of the percentages of students meeting assessment standards are calculated for the total number of students in each disability category excluding those who were exempt from testing. In addition, data for deaf-blind students are not reported because fewer than 10 deaf-blind students participated in the WASL or WASL Basic assessments in reading or math in 2007.

**Exhibit 5**  
**Washington Assessment of Student Learning:**  
**Number and Percentage of Washington State Students with Sensory Impairments**  
**in Grades 3-8 and 10 Meeting Standards in Reading and Math on the WASL**  
**and the WASL Basic, Spring 2007**

	READING				MATHEMATICS			
	Met Reading Standard		Exempt from Testing	Total N	Met Mathematics Standard		Exempt from Testing	Total N
	n	%	n		n	%	n	
<b>On the WASL</b>								
Blind/VI	57	43%	4	136	41	32%	5	135
Deaf	19	13%	3	148	24	17%	1	144
Hard of hearing	108	32%	14	356	75	21%	12	362
Deaf-Blind*	—	—	0	6	—	—	0	6
<b>On the WASL Basic</b>								
Blind/VI	10	63%	1	17	5	28%	1	19
Deaf	14	20%	1	71	10	14%	0	74
Hard of hearing	66	32%	1	137	16	12%	1	134
Deaf-Blind*	—	—	0	3	—	—	0	3

Source: Assessment data for students with SI were obtained through special request from the OSPI Special Education Operations Assessment Data office, Olympia, WA.

\* According to OSPI guidelines, data for deaf-blind students are not reported on this table because fewer than 10 deaf-blind students participated in the WASL (n = 6) or WASL Basic (n = 3) assessments in reading or math in 2007.

Note: Percentages of students meeting assessment standards were calculated for the total number of students participating in the assessment in each disability category excluding those who were exempt from testing.

## Postschool Outcomes

With support from the Center for Change in Transition Services (CCTS), school districts contact their graduates who had individualized education programs (IEPs) to collect information on postschool outcomes. Interviews are conducted with youth who graduated or turned age 21, or their families. Questions focus on the students' postschool experiences with employment, postsecondary education and training, and independence 6 months following graduation. Exhibit 6 presents follow-up data 6 months following graduation for students who are deaf, hard of hearing, blind, or visually impaired, or who have multiple disabilities, and who graduated high school in 2005, 2006, and 2007. Data for the total SI and total special education graduates for these years also are presented. CCTS reports that overall the study represents 95% of school districts in Washington State and that follow-up contact was successful with about 78% of the graduates.

**Exhibit 6**  
**Postschool Outcomes for Graduates with Sensory Impairments or Multiple Disabilities**  
**in Washington State, 6 Months after Graduation, 2005, 2006, 2007**

Postschool Outcome	Multiple Disabilities	Deaf or HH	School for the Deaf Graduates	Blind, VI	TOTAL Sensory Impaired Graduates	TOTAL Special Education Graduates 2007 only
In postsecondary education (degree program in 4-yr, 2-yr, or voc/tech college)	12%	40%	41%	49%	44%	28%
In any kind of school or training	22%	50%	62%	58%	53%	NA
Employed (competitive, supported, military)*	27%	36%	—	—	34%	58%
Engaged (working and/or in school or training)	43%	72%	69%	68%	73%	75%
Living at home with parent/guardian	80%	65%	42%	50%	62%	NA
<b>Total N</b>	<b>367</b>	<b>165</b>	<b>39</b>	<b>34</b>	<b>198</b>	<b>4,315</b>
Source: Postschool outcome data for total special education graduates were obtained from the Center for Change in Transition Services (CCTS), Seattle University available at <a href="http://www.seattleu.edu/ccts/">www.seattleu.edu/ccts/</a> . Outcome data for graduates with SI and multiple disabilities were obtained through special request from the CCTS, Seattle University. * Cells with dash have too few students to report. Notes: Data reflect "current" status at the time of the interview. Data for the three graduation years were combined in order to have sufficient numbers for reporting. There were too few deaf-blind graduates to include in this table. Graduates with multiple disabilities are included because some students in this disability category also have SI.						

Nearly three-quarters of high school graduates with sensory impairments (73%) and total special education graduates (75%) are reported engaged in school, work, or both 6 months following graduation, but their patterns differ (Exhibit 6). Fewer graduates with sensory impairments are employed (34%), compared with the total group of special education graduates (58%), whereas graduates with sensory impairments are 1.5 times as likely to be enrolled in a 4-year, 2-year, or technical/vocational college or university (44% versus 28% of total special education graduates). Moreover, more than half of graduates with sensory impairments (53%) are attending some form of postsecondary education or training during their first year following graduation, 2.5 times as many as graduates with multiple disabilities (22%). Approximately two-thirds of graduates with sensory impairments are living at home 6 months after graduation, ranging from 42% of graduates from the School for the Deaf to 65% of all other deaf or hard of hearing graduates. Half of blind or visually impaired graduates and 80% of graduates with multiple disabilities are living at home with parents or guardians.

In addition to the follow-up work conducted by the Center for Change in Transition Services, the Washington State School for the Blind (WSSB) has been tracking all its graduates since 1998. Data from a 7-year study (1998-2005) of 52 blind or VI WSSB graduates show an 87% success rate (employed and/or involved in postsecondary education), a rate that is higher than national figures of 50% to 70% unemployment in the blind community. Three-quarters (76%) of WSSB graduates are reported employed or in vocational, technical, or academic college programs during this period. This percentage increases 10 percentage points to 87% when homemakers are included for WSSB graduates who report postsecondary engagement.

## C. IDENTIFYING CHILDREN AND YOUTH WITH SENSORY IMPAIRMENTS

### Desired outcome:

- **All students with sensory disabilities are identified and served at the youngest possible ages.**

A critical issue for achieving good outcomes for children and youth with sensory impairments is first ensuring that all students with sensory impairments have been identified as early as possible. If identification is a problem, then outcomes can be improved by providing supports to improve identification procedures across the state or targeted to regions deemed to be underidentifying. In this section, we present what is known about the number of children and youth with sensory impairments receiving special education and related services under IDEA in Washington State

**Blind and visually impaired.** Nationally, approximately 11.4 million people have severe visual conditions not correctable by glasses, and more than 1 million individuals are legally blind.<sup>6</sup> The incidence of visual impairment/blindness is about 0.1% of the national population. Approximately 0.5% of children and youth ages 6-21 are identified as blind or visually impaired and receive special education services under Part B of the Individuals with Disabilities Education Act (IDEA).<sup>7</sup>

**Deaf and hard of hearing.** Approximately 21 of every 1,000 U.S. citizens are deaf or hard of hearing. More than half of this population, however, report their hearing loss after age 64.<sup>8</sup> More than 70,000 children and youth ages 6-21 were identified as receiving special education services because of a “hearing impairment of educational significance,” about 0.15% of the public school K-12 enrollment.

### Statewide Child Count

Each year, all states submit counts to the U.S. Department of Education of the number of students receiving special education, characterized by the student’s primary disability category. Exhibit 7 presents IDEA Child Count data for Washington State collected in the Fall of 2004, 2005, and 2006 for students ages 3-5 and 6-21 who have an IEP and have been identified with a primary disability category of blind/visually impaired, deaf, hard of hearing, deaf-blind, or multiple disabilities; data for total students with disabilities are included. No data are presented for children under age 3 because states do not report these data by disability category. The counts for students with multiple disabilities are included because students with sensory impairments can be included in this category if they have other disabilities as well.

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<sup>6</sup> As of January 1, 2004, University of Washington School of Medicine, Department of Ophthalmology.

<sup>7</sup> U.S. Department of Education. (2007). Retrieved May 12, 2007, from [https://www.ideadata.org/arc\\_toc8.asp#partbCC](https://www.ideadata.org/arc_toc8.asp#partbCC).

<sup>8</sup> *A Brief Summary of Estimates for the Size of the Deaf Population in the USA Based on Available Federal Data and Published Research.* (2008). Retrieved May 20, 2008, from <http://gri.gallaudet.edu/Demographics/deaf-US.php>.

**Exhibit 7**  
**Number of Students Identified Through IDEA Child Count with Sensory Impairments  
or Multiple Disabilities in Washington State, Fall of Years 2004, 2005, 2006**

<b>Ages 3-5</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
Deaf, Hard of Hearing (HH)	101	118	129
Blind, Visually Impaired (VI)	35	29	19
Deaf-Blind (DB)*	—	—	—
Total Sensory Impaired (SI)	136	147	148
Multiple Disabilities (Multi)	65	84	64
All Disabilities	13,086	13,429	13,238
<b>Ages 6-21</b>			
Deaf, Hard of Hearing (HH)	1,286	1,287	1,233
Blind, Visually Impaired (VI)	286	281	289
Deaf-Blind (DB)	37	34	27
Total Sensory Impaired (SI)	1,609	1,602	1,549
Multiple Disabilities (Multi)	2,478	2,545	2,577
All Disabilities	110,981	111,069	109,805
Source: Child Count data by state are available at <a href="http://www.IDEAdata.org">www.IDEAdata.org</a> .			
* Numbers for deaf-blind students are too small to report.			

The counts for students ages 6-21 do not vary significantly across the three years (2004-2006), with Washington State serving approximately 1,600 students with sensory impairments with some additional unknown number also possibly counted in the “multiple disabilities” category. The number of 3- to 5-years olds with SI is approaching 150 across the state.

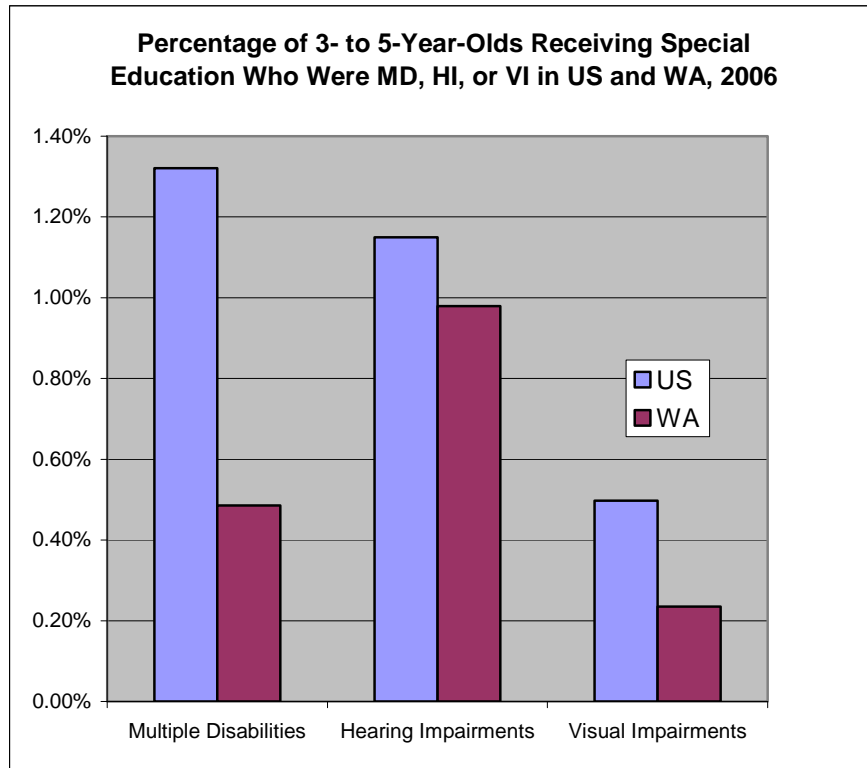
To provide insight into the question of whether Washington State is identifying all children with sensory impairments, we looked at how Washington State compares with the nation with regard to percentage of children served. Exhibit 8 compares the percentages of children and youth (3- to 5-year-olds, and 6- to 21-year-olds) receiving special education services under IDEA in Washington State and nationally and shows Washington State’s rank order among the 50 states and the District of Columbia. Compared with the national percentage, smaller percentages of students in Washington State received special education both under and over age 5. This also holds true for children with hearing impairments, visual impairments and multiple impairments except for students ages 6-21 with multiple impairments. Washington State served nearly the same proportion as the nation as a whole and ranked 18.5 out of 43 states that were ranked.

**Exhibit 8**  
**Summary Comparison of Percentage of Children Receiving**  
**Special Education Services Nationally and in Washington State,**  
**and Rank of Washington State Compared with Other States, 2006**

	3- to 5-year olds	6- to 21-year olds
All Disabilities		
National	5.81%	9.07%
Washington State	5.38%	8.02%
Washington State Rank Order	36 out of 51	45 out of 51
Hearing Impairments		
National	.07%	.11%
Washington State	.05%	.02%
Washington State Rank Order	36-43 out of 50	30-40 out of 51
Visual Impairments		
National	.03%	.04%
Washington State	.01%	.02%
Washington State Rank Order	41-47 out of 47	47-51 out of 51
Multiple Disabilities		
National	.08%	.20%
Washington State	.03%	.19%
Washington State Rank Order	34-38 out of 42	18-19 out of 43
Source: Child Count data by state are available at <a href="http://www.IDEadata.org">www.IDEadata.org</a> .		
Note: The state serving the largest percentage is ranked as 1. A range in rank order indicates ties, that is, more than one state serving the same percentage.		

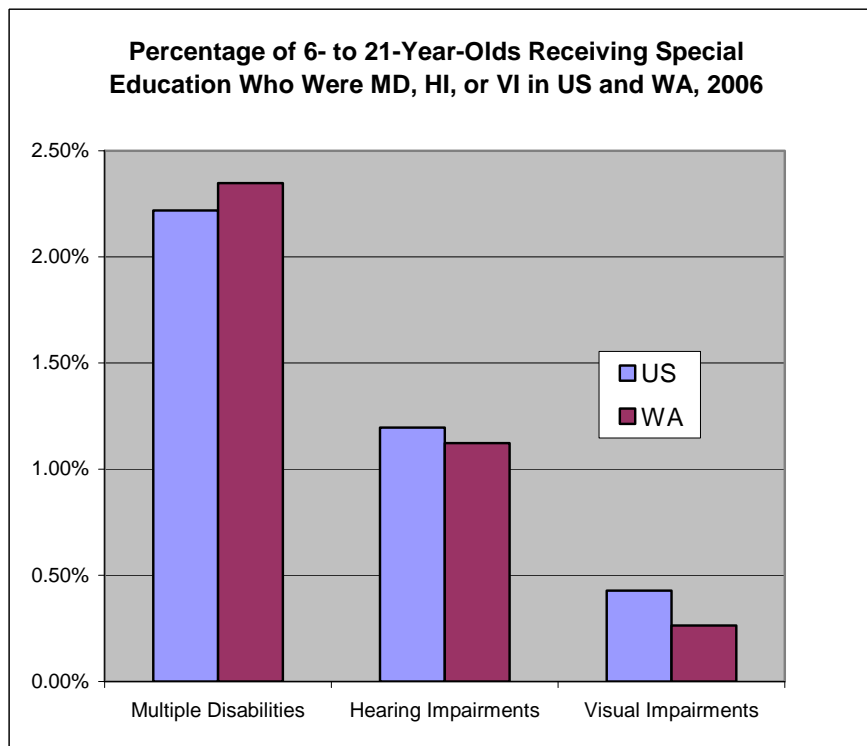
Examining the data on children with multiple disabilities is important to see whether the data are consistent with the hypothesis that children in Washington State with sensory impairments may be categorized as having multiple disabilities, in which case we would expect the proportion of children in that category to be higher in Washington State. For 3- to 5-year-olds, Washington State served proportionately fewer students who were classified as deaf/HH or blind/VI, or having multiple disabilities. Given that Washington State is serving smaller percentages of children in all three categories compared with other states, the data suggest that underidentification of 3- to 5-year-olds with sensory impairments could be a problem in Washington State. For 6- to 21-year-olds, Washington State served a slightly higher percentage of students classified as having multiple disabilities and slightly lower percentages of deaf/HH or blind/VI students (Exhibits 9 and 10). These data are consistent with the hypothesis that some students with HH or VI between the ages of 6 and 21 in Washington State are possibly being categorized as having multiple disabilities rather than HH or VI and that this is occurring more in Washington State than it does in other states. Because there is no additional information on the students classified with multiple disabilities, it is impossible to know whether the relatively low percentages of students identified in the VI and HH categories are due to their being counted as having multiple disabilities.

### Exhibit 9



Source: Child Count data by state and for the United States are available at [www.IDEAdata.org](http://www.IDEAdata.org).

### Exhibit 10

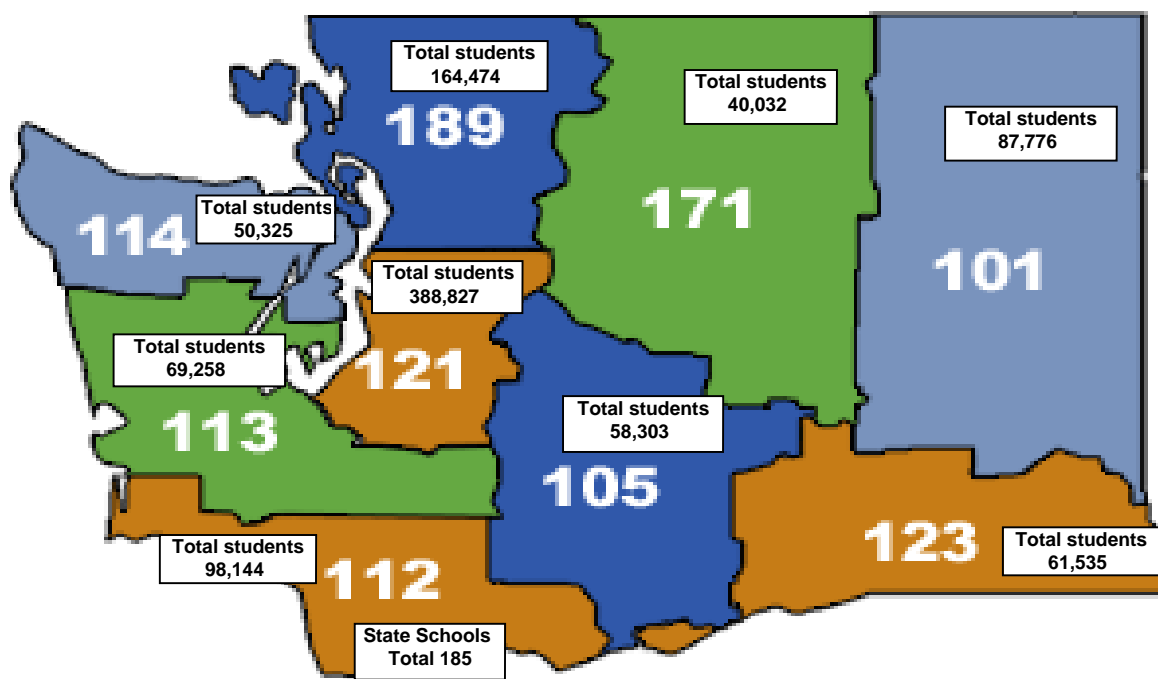


Source: Child Count data by state and for the United States are available at [www.IDEAdata.org](http://www.IDEAdata.org).

## Identification Across the State

There are 295<sup>9</sup> school districts in Washington State, organized regionally into 9 Education Service Districts (ESDs) (Exhibit 11). In addition, there are two state schools (Washington State School for the Blind [WSSB] and Washington School for the Deaf [WSD]), identified as a tenth ESD (ESD 900), but located geographically in ESD 112 near the Oregon border and Portland. In Fall 2007, more than 1 million students were reported enrolled in Washington State's public schools. More than three-quarters (76%) of all students live on the west side of the Cascades mountain range.

**Exhibit 11**  
**Student Enrollment, K-12, in Washington State by ESDs, 2007**



Source: Student enrollment data by ESD for 2007 were obtained from OSPI, available at <http://www.k12.wa.us/DataAdmin/default.aspx>.

**Children ages 3 to 5 with SI.** There were 164 children ages 3 to 5 identified as deaf, hard of hearing, blind, visually impaired, or deaf-blind with an IEP in Washington State in 2007 (Exhibit 12). Most (84%) lived west of the Cascades. Given that the majority of the state's student population lives on the west side of the mountains, one would expect the same distribution of children with disabilities, including those with SI. The percentage of special education students ages 3 to 5 is comparable to the overall percentage of the student population in the east and west; 74% of the 3- to 5-year-olds receiving special education live in the west compared to 76% of the total student population. This was not true, however, for preschool children with SI. The 84% to 16% division for children ages 3 to 5 with SI indicates that proportionately fewer young children with SI are being identified in the eastern part of the state which means that proportionately more are being identified in the west.

<sup>9</sup> Most of the data in this report are based on the previous number of 296 school districts.

**Exhibit 12**  
**Washington State Enrollment of Total Special Education and Children with SI**  
**Ages 3 to 5 by ESD, 2007**

ESD	Deaf/ HH	Blind/ VI	Deaf- Blind	Total SI	% Total SI	Total Special Educ	% Total Special Educ
<b>WEST</b>							
112	11	2	0	13	8%	1,237	9%
113	3	8	0	11	7%	1,145	8%
114	8	2	0	10	6%	748	6%
121	60	9	1	70	43%	4,482	33%
189	24	6	0	30	18%	2,338	17%
900*	4	0	0	4	2%	7	<1%
<b>Total West</b>	<b>110</b>	<b>27</b>	<b>1</b>	<b>138</b>	<b>84%</b>	<b>9957</b>	<b>74%</b>
<b>EAST</b>							
101	7	1	0	8	5%	1,242	9%
105	6	2	1	9	5%	874	6%
123	5	1	0	6	4%	773	6%
171	2	1	0	3	2%	683	5%
<b>Total East</b>	<b>20</b>	<b>5</b>	<b>1</b>	<b>26</b>	<b>16%</b>	<b>3572</b>	<b>26%</b>
<b>TOTAL Ages 3-5</b>	<b>130</b>	<b>32</b>	<b>2</b>	<b>164</b>	<b>100%</b>	<b>13,529</b>	<b>100%</b>
Source: Washington state enrollment data by ESD for total special education and students with SI ages 3-5 were obtained through special request from OSPI, Special Education Operations, available at <a href="http://www.k12.wa.us/specialed">www.k12.wa.us/specialed</a> . * ESD 900 includes data from the Washington School for the Deaf and the Washington State School for the Blind (n = 110). Although the two state schools are identified as ESD 900, geographically, they are located in ESD 112.							

**Children ages 6 to 21 with SI.** In 2007 approximately 1,520 students ages 6 to 21 in Washington State were identified as deaf, hard of hearing, blind, visually impaired, or deaf-blind with an IEP. Exhibit 13 shows the number of students with sensory impairments in each of the state's ESDs and the proportion of the total SI population in each ESD. These data indicate that more than three-quarters of students with sensory impairments (76%) live in one of the five ESDs west of the Cascades (ESDs 189, 121, 114, 113, 112 and the two state schools), and 24% live in one of the remaining four ESDs in eastern Washington State (ESDs 171, 101, 123, 105). This distribution approximates that for the total student population. Furthermore, the percentage of students with SI as well as the percentage receiving special education in each ESD approximates the percentage of the total student population residing in each ESD. For example, ESD 189 has 18% of all students, ages 6 to 21, with SI in the state, 16% of all special education students, and 16% of the total student population.

**Exhibit 13**  
**Washington State Enrollment of Total Special Education and Students with SI**  
**Ages 6 to 21 by ESD, 2007**

ESD	Deaf/HH	Blind/VI	Deaf-Blind	Total SI	% SI	Total Special Educ	% Total Special Educ	Total Students	% Total Students
<b>WEST</b>									
112	76	14	2	92	6%	10,688	10%	98,144	10%
113	57	22	0	79	5%	8,029	7%	69,258	7%
114	62	14	2	78	5%	5,785	5%	50,325	5%
121	438	94	6	538	35%	41,138	37%	388,827	38%
189	218	44	10	272	18%	17,867	16%	164,474	16%
900*	85	23	2	110	7%	140	<1%	185	<1%
<b>Total West</b>	<b>936</b>	<b>211</b>	<b>22</b>	<b>1,169</b>	<b>77%</b>	<b>83,647</b>	<b>76%</b>	<b>771,213</b>	<b>76%</b>
<b>EAST</b>									
101	95	23	4	122	8%	10,185	9%	87,776	9%
105	70	23	1	94	6%	5,974	5%	58,303	5%
123	60	26	0	86	6%	6,453	6%	61,535	6%
171	37	12	0	49	3%	3,910	4%	40,032	4%
<b>Total East</b>	<b>262</b>	<b>84</b>	<b>5</b>	<b>351</b>	<b>23%</b>	<b>26,522</b>	<b>24%</b>	<b>247,646</b>	<b>24%</b>
<b>TOTAL Ages 6-21</b>	<b>1,198</b>	<b>295</b>	<b>27</b>	<b>1,520</b>	<b>100%</b>	<b>110,169</b>	<b>100%</b>	<b>1,018,859</b>	<b>100%</b>

Source: Washington state enrollment data by ESD for total special education and students with SI ages 6-21 were obtained through special request from OSPI, Special Education Operations, available at [www.k12.wa.us/specialed](http://www.k12.wa.us/specialed).

\* ESD 900 includes data from the Washington School for the Deaf and the Washington State School for the Blind (n = 110). Although the two state schools are identified as ESD 900, geographically, they are located in ESD 112.

### Are students with sensory impairments underidentified in Washington State?

Obtaining an accurate count of children birth to 21 with sensory impairments in Washington State is challenging for several reasons. Different data sources provide different information to address the identification issue. Some research suggests that the IDEA Child Count underestimates the incidence of sensory impairments, and underestimation would not be surprising since the count is not meant to be a measure of incidence; it is a count of students with IEPs. For example, the number of children and youth with visual impairments reported nationally to the American Printing House (APH) for the Blind is more than twice the IDEA count. According to the Ogden Resource Center (Washington State's APH resource center), more than 1,400 children and youth are identified as blind or visually impaired in Washington State, more than four times the IDEA count of 327 VI students ages 3 through 21 reported to OSEP. These differences can occur because of differences in who is included in the respective counts. The APH, for example, tracks anyone who requests books and materials from its stock, regardless of special education status.

The data presented in the previous exhibits on students receiving special education services may undercount students with SI (hearing, visual, or deaf-blind) with IEPs because some may be counted in the category of multiple disabilities or other health impairments. Data on the prevalence of children with visual disabilities who have other disabilities are limited, but one

estimate is that 50% to 70% of children with visual impairments have additional disabilities, and many of these may be included in the disability category of multiple disabilities.<sup>10</sup>

Equally important, some students with SI may not be counted at all in the IDEA count because they are being served on 504 plans and are not receiving special education services. Indeed, these students have been identified, but not for IDEA services. Several key informants mentioned students in their classes or schools who are receiving support through 504 plans. Interviewees also described resistance by some families to having their children identified and labeled “special education,” especially for high-functioning VI or HH students whose needs may be related to mobility (e.g., transportation, cane training), technology (Braille machine, hearing aids), or communication (e.g., interpreters), rather than modified education or instruction. We were not able to locate data on the number of students with SI who are on 504 plans, so it is impossible to say whether the use of 504 plans might explain Washington State’s relatively low numbers of students with SI receiving special education, compared with other states.

From both the stakeholders who helped develop the logic model and the key informant interviews, we heard a number of comments that suggest a perception that underidentification is a problem in the state, especially with regard to young children. For example, we heard there are families who either do not understand the importance of early communication development for their deaf or HH children or live in areas where early intervention services are too far away or too difficult to access.

It can be difficult to identify hearing deficiency in some children early enough to provide crucial early intervention. This should be less of a problem now that state law requires the Early Hearing Loss Detection, Diagnosis, and Intervention (EHDDI) infant screening administered through the Department of Health at local hospitals. There are pilot programs around the state to develop systematic collaboration among hospital screening staff, audiologists, early intervention, and schools. Nonetheless, some of the interviewees believe that there is a lack of consistent hearing screening and follow-up, especially for children who lose their hearing after infancy. Follow-up also can pose difficulties for families in rural and remote areas. One early childhood administrator relayed that of 14 babies who failed two early screenings, only 4 were able to travel to an urban area for follow-up with an audiologist; 2 of these children were diagnosed with severe/profound hearing loss. Some parents who spoke with us now devote their time to educating and advocating for other parents.

Furthermore, stakeholders believe that some children are identified as having VI or HH but also may have some level of dual impairment (e.g., VI and HH) and are not being recognized as needing services related to DB. Identification of dual SI or DB may be particularly difficult in areas of the state where DB is rare or in many of the rural and remote areas, where education staff have no exposure to or experience with low-incidence disabilities.

In conclusion, more and better data are needed to definitively address the issue of underidentification of children with SI or even the more restricted issue of underidentification for early intervention or special education services under IDEA. The Child Count data on

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<sup>10</sup> Silberman, R. K. (2000). Children and Youths with Visual Impairments and Other Exceptionalities. In M. C. Holbrook and A. J. Koenig (Eds.), *Foundations of Education, Vol. I: History and Theory of Teaching Children and Youths with Visual Impairments* (2nd ed., pp. 173-196). New York: AFB Press.  
Huebner, K. M. (2000). Visual Impairment. In M. C. Holbrook and A. J. Koenig (Eds.), *Foundations of Education, Vol. I: History and Theory of Teaching Children and Youths with Visual Impairments* (2nd ed., pp. 55-76). New York: AFB Press.

3- to 5-year-olds suggest that the state may not be identifying the full range of children in this age group. The Child Count data on 6- to 21-year-olds indicate that Washington State is serving proportionately fewer children with SI than the nation as a whole; however, this could be because of students being classified as having multiple disabilities or being on 504 plans. The information from stakeholders suggests several obstacles to identification. Some of these could be addressed through a technical assistance project like WSDS, but it is difficult to make more specific recommendations as to how resources should be invested in relation to identification without better data.

## **D. EDUCATION FOR CHILDREN AND YOUTH WITH SENSORY IMPAIRMENTS AND SUPPORTS FOR THE EDUCATIONAL SERVICES**

### **Desired Intermediate Outcome:**

- **Students with sensory disabilities receive appropriate instructional programs.**

As portrayed in the logic model, one of the critical direct influences on the outcomes experienced by students with sensory impairments is the instructional services they receive. For a statewide technical assistance project to improve student outcomes, it is critical that it effectively address the multiple needs of the many professionals and paraprofessionals around the state who work with students with SI. Given that families also are an important influence on student outcomes, support provided to families through a technical assistance project also will contribute to improved outcomes.

Students who are blind or visually impaired, deaf or hard of hearing, or deaf-blind may be grouped together and characterized as “sensory impaired,” but their impairments influence their ability to interact with their environment in very different ways, particularly with struggles related to communication and access to instruction and to the community. Regardless of these important differences, they share one common characteristic—a restriction of significant enough severity that it impedes progress in a general educational setting without some modification and often requires specialized equipment and technology and specially trained teachers, Braille transcribers, and interpreters. Examples of the kinds of specialized expertise needed by students with sensory impairments include orientation and mobility training for VI and deaf-blind students; teachers who are trained specifically to work with blind students and Braille instruction; certified Braille transcribers; teachers who are trained specifically to work with deaf and HH students, who understand the range of instructional modes for this population, such as signed English, American Sign Language (ASL), and oral methods; ASL interpreters who assist students with communication in a variety of environments (e.g., academic, social, recreational); and paraeducators who are trained to work with SI students.

Accommodations made to the presentation, format, and content of instruction, materials, and assessments are increasingly a part of the educational programs for students with visual or hearing impairments. Some accommodations, such as interpreters, FM transmitters, or hearing aids, directly address the various communication modes of many deaf or hard-of-hearing students. Others, such as transcribing teacher materials to Braille, large-print materials, or specialized computers, provide ready access to classroom activities for blind or visually impaired students. The highly specialized technology and personnel needed by students with SI can be expensive or difficult to recruit, especially in the more rural and remote areas of Washington State.

### **Where are educational services being provided to children and youth in Washington State?**

IDEA requires that a child with a disability receive a free appropriate public education in the least restrictive environment (LRE) appropriate. This principle demonstrates strong preference for educating students with disabilities in general education classes with access to general education curriculum. Exhibits 14 and 15 present the LRE placements for students ages 3 to 5 and 6 to 21 with sensory impairments or multiple disabilities.

**Exhibit 14**  
**Percentage of Children Ages 3 to 5 with Sensory Impairments or Multiple Disabilities**  
**in Least Restrictive Environments, 2007**

Percentage of children:	Multiple Disabilities	Deaf-Blind*	Deaf	Hard of Hearing	Blind, VI	TOTAL SI	TOTAL Children Ages 3-5
Attending general early childhood program or kindergarten							
80% to 100% of time	14%	—	20%	27%	28%	22%	34%
40% to 79% of time	13%	—	7%	6%	9%	8%	6%
39% or less of time	14%	—	20%	12%	25%	16%	13%
Attending special early childhood program or kindergarten in							
Separate class	42%	—	14%	38%	28%	33%	30%
Separate school	7%	—	32%	13%	3%	14%	6%
Residential facility	6%	—	0%	0%	0%	2%	1%
Home	6%	—	7%	5%	6%	6%	10%
<b>TOTAL number of children ages 3-5</b>	<b>72</b>	<b>2</b>	<b>44</b>	<b>86</b>	<b>32</b>	<b>236</b>	<b>13,529</b>
<small>Source: Placement data for children with SI or multiple disabilities ages 3-5 were obtained from OSPI, Special Education Operations, Olympia, WA, Implementation of Least Restrictive Environment Requirement—IDEA-B (2007-08), December 1, 2007, available at <a href="http://www.k12.wa.us/SpecialEd/data.aspx">http://www.k12.wa.us/SpecialEd/data.aspx</a>, Special Education Child Count and Placement Data: State December 2007 LRE and Child Count Data (Excel file).</small>							
<small>* Too few deaf-blind children to include.</small>							

Overall, about 46% of preschool-age children with sensory impairments spend at least some of their day in a general education setting, although only 22% are there 80% to 100% of their day (Exhibit 14). Young children who are blind/VI are more likely to spend their school day with typically developing peers (62%) than deaf or hard of hearing children (47% and 45%, respectively) or children with multiple disabilities (41%). More than one-quarter of blind/VI (28%) or HH children (27%) are in general education preschool settings 80% to 100% of the time.

One-third of young children with sensory impairments are in a separate preschool or kindergarten classroom, and almost one-quarter attend a separate school or residential facility or are at home. More than twice as many deaf children (32%) as their peers who are HH or have multiple disabilities (13% of each) are educated in a separate school or residential facility, and deaf children are more than 10 times as likely as their blind peers (3%) to be in a special school.

In contrast to the younger children, 9 out of 10 students with sensory impairments or multiple disabilities ages 6 to 21 are educated in general education classrooms (Exhibit 15); although students who are blind/VI or hard of hearing are far more likely to spend from 80% to all of their school day with typically developing peers (49% and 43%, respectively) than are students who are deaf (33%) or deaf-blind (19%) or who have multiple disabilities (7%). About two-thirds of students who are deaf-blind or have multiple disabilities spend 39% or less of their school day in general education settings. From 7% to 10% of blind/VI, deaf-blind, or deaf school-age students receive special education programs in separate day or residential schools.

**Exhibit 15**  
**Percentage of Students Ages 6 to 21 with Sensory Impairments or Multiple Disabilities**  
**in Least Restrictive Environments, 2007**

<b>Percentage of students:</b>	<b>Multiple Disa- bilities</b>	<b>Deaf- Blind</b>	<b>Deaf</b>	<b>Hard of Hearing</b>	<b>Blind, VI</b>	<b>TOTAL SI</b>	<b>TOTAL Students Ages 6-21</b>
Spending the school day in general education classes							
80% to 100% of time	7%	19%	33%	43%	49%	41%	51%
40% to 79% of time	19%	11%	29%	36%	31%	33%	34%
39% or less of time	70%	63%	28%	13%	11%	17%	14%
Receiving special education programs in							
Day school	2%	4%	10%	3%	2%	5%	1%
Residential school	1%	4%	0%	0%	5%	1%	1%
Detention/corrections facility	<1%	0%	<1%	0%	0%	<1%	<1%
Enrolled in private school & receiving special education services through public school service plan	<1%	0%	<1%	1%	1%	1%	<1%
Receiving services in home or hospital program	2%	0%	0%	0%	1%	<1%	<1%
<b>TOTAL number of students ages 6-21</b>	<b>2,607</b>	<b>27</b>	<b>374</b>	<b>824</b>	<b>295</b>	<b>1,520</b>	<b>110,169</b>

Source: Placement data for students with SI or multiple disabilities ages 6-21 were obtained from OSPI, Special Education Operations, Olympia, WA, Implementation of Least Restrictive Environment Requirement—IDEA-B (2007-08), December 1, 2007, available at <http://www.k12.wa.us/SpecialEd/data.aspx>, Special Education Child Count and Placement Data: State December 2007 LRE and Child Count Data (Excel file).

**Who is providing education and other services for children and youth with SI?**

**Desired intermediate outcomes:**

- **Administrators and others providing leadership to staff working with students with sensory disabilities have the knowledge and skills necessary to provide appropriate direction and supervision.**
- **Personnel working with students with sensory disabilities have the knowledge and skills necessary to provide high-quality instruction.**

There are 53,600 elementary and secondary school teachers working in public schools in Washington State (OSPI, 2005-06 school year). Washington State reported to the U.S. Department of Education that there were 5,096 fully certified special education teachers working in the public schools in 2005 ([www.ideadata.org](http://www.ideadata.org)). Because Washington State does not have categorical certification for its special education teachers, there are no data on how many special education teachers are trained to work with students with SI. According to WSSB data (2007) there are approximately 77 trained teachers of the blind/VI serving districts and ESDs, although some interviewees suggested that some of these are also Orientation and Mobility (O&M) specialists and thus are counted twice, meaning there may be only 50 or so actual FTE teachers of the blind and visually impaired in the state. We were not able to confirm these FTE counts,

nor locate data on exactly how many specialists are currently employed in the state to address the needs of students who are HH or deaf.

The Child Count data and the LRE data presented previously have several implications for personnel. While some students with SI are in ESDs or even in school districts with other SI students, many students with SI are attending schools with few or no students with similar educational needs. Since more than 90% of students with SI are attending regular schools and nearly three-quarters are spending 40% or more of their day in regular classrooms, the great majority of students with SI across the state are spending a fair amount of time being instructed by general education teachers who may have little or no experience with students with disabilities, including the complex needs of those with SI. The types of support services and professional development opportunities provided by a technical assistance project like WSDS must reach many special and general education teachers if all students with SI are to be provided an appropriate instructional program throughout their day.

**Qualified and available staff.** When asked what they thought was the greatest challenge to providing high-quality instructional programs to students with SI, 100% of the interviewees referred to the pervasive shortage of and need for qualified staff, including teachers of the VI, teachers of the deaf/HH, O&M specialists, Braille transcribers, ASL interpreters, and other support staff. One interviewee remarked:

*The pool of available and qualified staff who have experience and qualifications, teachers who understand instructional strategies, parent educators who can interpret for the deaf or provide Braille is especially a problem for small, rural districts spread out over a wide area. It's a long bus ride for some of these kids.*

Similarly, key informants spoke of problems related to the dearth of certified itinerant teachers of the deaf and HH and of high-quality trained interpreters, especially in rural and remote areas. We heard of a lack of deaf panelists or interviewers to determine skill levels of potential interpreters, so that demand supersedes standards; often, a person who can sign a little will be brought into the classroom. But, as one administrator said, “*something is not better than nothing,*” because students pick up bad habits and have to “unlearn” incorrect signing.

When specialized teachers of the blind/VI, deaf/HH, or deaf-blind and other specialists, such as Braille transcribers, interpreters, and O&M teachers, can be found, their availability to assist a teacher or a student in many districts is limited because of the number of schools or districts they must cover. For example, unlike some programs such as the deaf and hard of hearing program in the Anacortes school district that is able to employ full-time teachers of the deaf, it is not feasible for most of the state's districts to hire a full-time teacher or specialist for one or two children. Interviewees who teach or help recruit staff for these students report that the majority of VI and HH teachers are *itinerant*, traveling from school to school, sometimes long distances, and working sporadically with students, most often in general education classrooms. Itinerant teachers also may not have the experience or skills to partner successfully with the general or special educators with whom they will be working. One itinerant teacher remarked:

*We need to spend more time working with general education teachers. For example, the role of the VI teacher in an eighth-grade algebra class is to transcribe and adapt materials, not to teach algebra; but sometimes these roles get murky, especially at the secondary level.*

We were told that the itinerant model for teaching the blind or VI child in rural communities can be problematic, especially if the student needs intensive interventions. One teacher told us:

*“When a child is learning to read, they are immersed in it all day; but a blind child with an itinerant teacher is not being immersed in reading.”* It is difficult to “regionalize services.” On the other hand, a school district with a few students with low-incidence disabilities cannot afford to hire full-time staff with the specific expertise to work with these children.

Stakeholders attributed part of the personnel problem to the lack of categorical certificates in Washington State. In addition, lack of state standards for VI and deaf/HH teachers and specialists results in programs’ relying on “*parent volunteers and other untrained paraprofessionals,*” often with minimal experience in instruction, ASL interpretation, or Braille transcription. Only 3 years ago (2005), the Professional Education Standards Board accepted specialty endorsements for teachers of the deaf and HH. Currently, there is a grassroots effort to secure similar specialty endorsements for teachers of the blind/VI and for orientation and mobility specialists. We were also told, however, that there are no personnel preparation programs specifically for educators of SI at any of the state’s universities and colleges, meaning that teachers and specialists must be recruited from out of state. Key informants reported that current training programs devote minimal attention to working with students with SI. They claimed that a 2-year preservice education program at the University of Washington includes about 1 hour devoted to issues related to sensory impairments.<sup>11</sup> Although specialty endorsements would improve the quality of these services for students with SI, requiring endorsements or special certification without training programs would exacerbate these staffing shortages.

### **What is the role of geography in providing services to SI children and youth?**

*“The largest county by area in Washington has two stop lights.”*

–Special Education Director

Another theme related to personnel was that the issues are more significant in some parts of the state than in others. There was a sense among interviewees that a student’s location is related to the quality of the instruction and services that student receives. The Cascades mountain range that runs the length of the state from north to south, essentially dividing the state into two enclaves, can pose serious obstacles to providing services to students with special needs who live on the east side, especially in the winter, when mountain passes often are closed for snow or avalanches. There are important implications for planning and providing services to this population, especially to areas in the eastern ESDs that have few students, as well as to ESDs in rural communities on the western Olympic and Kitsap peninsulas and several island communities accessible by ferry only. For example, we were told about a blind student who was bright and learned Braille at age 5, but when her family had to move from their urban neighborhood to a rural community, they struggled to find instructional support, orientation and mobility training, and adequate assistive technology for her.

It is clear that some ESDs have a critical mass of students with SI, whereas others have relatively small numbers of students spread over the entire age span and distributed over many miles. This pattern poses significant challenges for the number of specialists available to these ESDs and how best to support the instructional personnel who are working directly with these

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<sup>11</sup> There is some activity under way to address the shortage of teachers of the deaf. Currently, there is a collaborative effort with Washington State University at its Vancouver branch (located near the Washington School for the Deaf) to supplement funding to continue a project setting up a preparation program for teachers of the deaf; the first class is expected to begin in Fall 2009.

students. School districts that are far from urban centers and resources face the challenge of how to balance the issue of critical mass with school budgets and availability of specialists.

Interviewees also mentioned that there are several comprehensive programs in the state that provide direct instruction in a child's modality (e.g., ASL, Signed English), as well as private agencies, such as Listen and Talk, a nonprofit auditory oral training center in Seattle; although, one interviewee lamented:

*The bottom line is that if you live near a program, then the service is good, but only half the children in the state live anywhere near a program; the rest are dependent on local districts finding someone, and they usually are not trained or certified to teach or interpret for the deaf and hard of hearing.*

The state also has a rapidly growing Latino population. Several interviewees mentioned the challenge of working with deaf students who are “trilingual”—sign language, English, and Spanish. The geographic and demographic distribution of students in Washington State is a fundamental consideration for how an organization such as WSDS can provide efficient and effective support services.

### **What services and supports have been made available through WSDS to support appropriate instruction and good outcomes?**

#### **Desired intermediate outcomes:**

- **Administrators, teachers, and other staff have ready access to resources and technical assistance necessary to provide appropriate services and supports to students with sensory disabilities.**
- **Families of students with sensory disabilities have access to high-quality family training and information to enable them to support their children's learning.**

**Services provided by Washington Sensory Disabilities Services.** WSDS receives support from OSPI, as one of its state need projects, to carry out a number of activities related to improving educational programs and supports to local school districts across the state that are providing services to students with low-incidence disabilities. In concert with the goals of the Washington State Improvement Plan and approved by the Office of Special Education Programs (OSEP), WSDS is to focus on improved in-school and postschool outcomes for students with sensory disabilities and increasing capacity through developing well-trained and skilled personnel.

WSDS was created to consolidate a variety of statewide needs grants for the SI and low-incidence populations that had been administered independently. The idea was to create a single portal through which services and supports could be funneled throughout the state. Although the mission of WSDS is to provide centralized management, its programs are administered through ESDs with input from several other subcontractors. The executive director, who also functions as the coordinator of blind and VI resources, is in the primary administrative office in the North Central ESD 171, located in the town of Wenatchee on the east side of the state. The Deaf and Hard of Hearing Coordinator and program support staff are located in the eastern town of Ellensburg. WSDS also includes the Washington State Services for Children with Deaf-Blindness, which has two co-directors, a family consultant, and other support staff, along with the grants coordinator and program staff; they are in the Puget Sound ESD 121, located on the west side of the Cascades. Given the topography of the state (as described earlier), the WSDS

was designed to manage the needs of this population from both sides of the Cascades. It also includes the Washington Instructional Resource Center (now called the Ogden Resource Center); the Braille materials depository for the American Printing House, housed and managed by the Washington State School for the Blind;<sup>12</sup> and the Shared Reading Video Outreach Project, based at the Washington School for the Deaf.

WSDS uses a “consultant model” to build local capacity in communities. This model of service provision relies on a “network relay” that markets WSDS expertise to the public and in turn communicates to WSDS when its services are needed. Through this mechanism, WSDS provides outreach services via itinerant teachers, interpreters, and assessment evaluators, who visit locations and work with students, families, educators, and others. They provide on-call consultation and technical assistance, especially in rural and remote regions of the state. They also provide TA from a distance, through phone consultation and video conferences (a project that is managed through the Washington School for the Deaf). WSDS develops and disseminates materials, maintains a website, and conducts training workshops and summer institutes that target professionals and families working and living with this population of children and youth.

In its proposal to OSPI, WSDS states four goals for its project:

- Goal 1. Provide information about sensory impairments, effective practices, and resources for children, birth to 21, who are blind/VI, deaf/HH, and deaf-blind.
- Goal 2. Facilitate activities that address the needs of families of children and young adults with sensory disabilities.
- Goal 3. Provide child-specific technical assistance, consultation, and training to support the individual needs of children.
- Goal 4. Increase statewide capacity for service provision to students with sensory disabilities through collaboration with other public and private agencies and programs.

**Statewide coordinators.** The staffing structure of WSDS calls for two statewide coordinators, one for deaf and hard of hearing and one for blind and visually impaired, along with a consultant for deaf-blind. The statewide Deaf and Hard of Hearing Coordinator provides on- and off-site expertise and support to teachers and service providers working with deaf and HH students and their families throughout the state. Efforts include student observations, participating in IEP meetings, conducting direct assessments, and making educational recommendations. Feedback from a range of key informants shows overall satisfaction with the HH coordinator, and several ESD directors, teachers and parents expressed accolades for the advice, communication, responsiveness, and direct support provided to staff and families.

The WSDS consultant for the deaf-blind student population works with educators and providers around the state through networking, training workshops (including a teleconference class), and resources. A number of interviewees commented on the strong relationship between WSDS and the deaf-blind community, in part because of the attention WSDS staff provide to this low-incidence, high-needs population and their families.

WSDS has attempted to hire and support a statewide coordinator to work as a resource for all the teachers and providers of blind and VI students. It appears that this position was more problematic than its HH counterpart. Several key informants working with the blind/VI population remarked that the VI coordinator position was not fully developed or defined and, as

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<sup>12</sup> Until 1996, this was the Special Education Materials Clearinghouse and Depository (SEMCAD), financed by OSPI and housed at and managed by the Clover Park School District.

a result, tended to “*migrate from one agency, to another*” remaining vacant for about 2 years. Eventually, the position was filled by someone from out of state “*who was trying to redefine the role, but there were some struggles with the process, and then he passed away.*” The position has remained vacant, and one interviewee commented that they have “*functioned without it, but I think it could be an important job and fulfill an important need....*” The dissatisfaction with WSDS over the failure to fill this position was coupled with a more general sense that WSDS has not attended to the needs of the VI community to the same degree as it has to the deaf/HH and deaf-blind communities. Another interviewee claimed that “*of the 17 WSDS employees, only one is designated to work with the blind/VI population.*” This person expressed that the blind/VI population get “*very little help from WSDS*” and might actually be “*better served if their state vision consultant was independent of the deaf-blind and HH groups.*”

Before WSDS was formed, there had been a full-time State Coordinator for the Blind and VI, an experienced teacher of the VI who apparently provided leadership; educated district administrators about the unique needs of blind and VI children, youth, and adults; provided technical assistance to teachers; and promoted the educational rights of this population. According to a position paper prepared in May 2007 by the Pacific Northwest Association of Educators and Rehabilitators of the Blind and Visually Impaired (PNW-AER), the WSDS State Coordinator for the Blind and VI position “*has been poorly salaried, poorly defined, and poorly monitored.*” The paper contends that the current organizational structure “*is not an efficient model for meeting our state’s needs...to effectively support school districts...nor adequately advocate for blind and visually impaired specialized needs.*” PNW-AER argues for developing a position for a State Coordinator for the Blind and VI that is apart from WSDS.

**Outreach, training, and consultation.** Overall, the majority of interviewees expressed approval for the variety of outreach activities, staff recruitment efforts, student assessments, family support, summer workshops and training, and other TA services by WSDS for students with SI around the state, and their families and teachers. Teachers and providers working in the rural areas of the state were particularly appreciative of the Combined Summer Institute (CSI), citing positive effects on the staff who work with high-needs populations. The state’s annual infant and early childhood conference always has a strand on SI, as well, which is coordinated by WSDS. In addition, WSDS provides a curriculum support program for teachers of the deaf called SKI-HI, and itinerant teachers of the deaf mentioned the value of the WSDS-sponsored RESPECT group, a collaboration of teachers of the deaf who meet quarterly to share stories and exchange ideas.

As part of their OSPI grant, WSDS subcontracts with the School of the Deaf, collaborating frequently to conduct joint consultations, fulfill interpreter needs, make presentations, and support the outreach team. As one key informant explained, the focus of this joint effort is on developing local capacity so that “*children can be served where they are, so it’s not a problem if you are stuck in Republic in the winter.*” The goal is to set up systems to improve the local infrastructure and show teachers the direct services they can provide.

Several special education directors and school principals reported that WSDS is working on building capacity through teaching teachers instructional strategies to use with their blind/VI, deaf/HH, or deaf-blind students. One interviewee commented that WSDS is best at training and providing TA, stressing that “*when the educator uses ideas from training on a regular basis, the process is more coordinated so that the consultant can function as a mentor, and the teacher can work on techniques based on the framework already given the team through training.*”

**Family support.** Parents we spoke with described WSDS as advocating on behalf of their families and others they knew about, intervening with the school district, participating in IEP meetings, securing equipment (e.g., FM transmitters for a deaf son), conducting assessments and observations, and providing information “*on the parents’ timeline and priorities, knowing culturally, families’ needs vary in regard to when they are ready.*”

Several parents also mentioned positive experiences with WSDS parent support activities, and a few now work as parent-to-parent coordinators as a result. One mother of a deaf daughter remarked:

*When our daughter transitioned into elementary school, we considered going outside our school district, so the district hired WSDS to evaluate other programs to authorize moving district dollars elsewhere. WSDS observed different programs on different days and validated our choice to move her to a specialized deaf program in a different district. It was a hugely positive experience for us. We’ve had a collaborative relationship with them now for 7 years, presenting at conferences and providing a parent voice.*

On the other hand, one interviewee told us that WSDS planned “a ‘*deaf fiesta*’ scheduled for families but had to cancel it because there was no response.” This person discussed the need for better marketing and communication to attract both families and providers to take advantage of some WSDS services. This area may need attention in terms of data collection—to determine to what extent outreach activities are well advertised or marketed and whether they are reaching the intended audiences. Perhaps more importantly, it is a question of whether outreach activities meet the needs of providers and families (e.g., apparently the “*deaf fiesta*” was about teaching parents about Supplemental Security Income; the interviewee was not sure this was of great interest to these families).

Parents we spoke with reported that WSDS sponsors family retreats to work with families, teaching parents how to interact with their children. They also mentioned special workshops at these retreats that help siblings understand how to interact with their brothers and sisters with SI. Questions remain regarding how proactive these services are in reaching families across communities and what the actual results are from these and other trainings; we do not have data describing these outcomes.

Interviewees remarked that support groups are difficult to put together or maintain for low-incidence disabilities, especially in rural and remote areas; yet, it is in these areas where the families may feel the most isolated and need information and help with advocacy. WSDS created an electronic discussion group, POVI (parents of the visually impaired), developed to provide some online support for families. We received mixed reviews on the functionality of the discussion group some using it infrequently and finding it not that useful and others finding it very helpful. One Parent to Parent representative mentioned that efforts are under way to improve the service and to attract more families. WSSB also maintains an electronic discussion group, but it is primarily for families of the school’s students.

### **How have these services and supports been received?**

Overall, the services provided by WSDS staff and consultants appear to have been well received throughout the state by professionals and families. The majority of comments from interviewees who expressed concerns in regard to WSDS focused on issues with the “system,” rather than individuals; in fact, the work being done by WSDS staff was highly praised by the

vast majority of informants. The emphasis voiced by most of the informants was on the need for change in the organizational structure, including the following:

**The relationships between WSDS and the ESDs, and how these affect constituents in the field.**

- One interviewee made this remark: *“WSDS has great, well-trained people, but they are location specific, an ‘island mentality,’ with different ESDs taking the lead in different areas driven by particular staff, but it is not equitable across the state; equity is important.”*
- The need to expand technology options was brought up by several interviewees. *“They tend to underutilize technology. We don’t have to travel as much as we used to now with laptops and Ipods. We’ve had telemedicine here for 10 years and can use this technology to work with families across the state, provide information for vision or hearing specialists. I want to see OSPI using their resources efficiently across service entities.”*

**The functional nature of employing a “consultation model” versus a “collaboration model” was a point of contention for a number of key informants.**

- Key informants suggested that the “consultant model” usually comprises capacity building that is couched in sporadic, needs-based, problem-solving advisories from experts that tend to be “hierarchal” in nature. Generally, this type of approach is considered a “deficit model,” providing technical assistance when needed, but not necessarily building the capacity within the community to develop, support and provide services locally.
- The “consultant model” is in contrast to a systemized “collaboration model,” whereby capacity building is based on continuous, hands-on teamwork and a cooperative, “lateral” nature to the partnership, in which everyone involved really is thought of as valuable contributor. Some key informants believe that the collaboration model requires a high level of *“commitment, responsibility, and ownership”* from all constituents and tends toward greater accountability through data collection and evaluation.
- One interviewee remarked: *“WSDS is more or less a provider of information and outreach services. But outreach service means working with school districts to retain ownership. The nature of the consultant model is to assess a need, provide advice or some training, and then pull back. This model does not include any commitment or ownership, no responsibility or accountability for a child’s success.”*
- We heard about programs in the state that serve as a prototype for how this type of collaboration model is effectively implemented. The Yakima Children’s Village was cited as an example.
- As one interviewee relayed, to be successful you *“need to embrace collaboration by bringing in and training your own replacements with your expertise. This level of ‘sharing’ has to be worked on and ‘owned’ every day.”*

**What has been the contribution of WSDS to improving student outcomes?**

WSDS has based its activities on the goals stated in the Washington State Improvement Plan, the Connecting IDEAs Project and developed from performance indicators approved by the

federal Office of Special Education Programs that must be addressed by all projects receiving special education funding. These goals (recently revised) focus broadly on the following:

- Better outcomes for students with disabilities (including academic and postschool performance)
- Increasing project capacity to accomplish work by accessing and using all available resources more efficiently and effectively (including sufficient numbers of special education personnel who are well trained and skilled to provide special education and support services)

Based on the primary activities highlighted in the WSDS proposals and reports, the TA and consultation activities are at the heart of WSDS. It intends to improve student outcomes through the following:

- Increased awareness through information development and dissemination
- Improved instructional strategies for teachers and parents through workshops, conferences, summer institutes, and individual consultation
- Improved communication through teacher electronic discussion groups, newsletters, and problem-solving access through phone and on-site consultation.
- Improved ASL skills through classes and workshops
- Increased identification of children with SI through on-site TA with educational staff and service providers, child and student observations, and parent consultations
- Increased educator competency through supporting specialty endorsements and developing innovative professional development opportunities
- Promotion of student rights and educational opportunities through advocacy

**Data collected by WSDS.** WSDS collects data and reports to OSPI on the number of trainings and staff development activities it provides, the number of students who receive child-specific TA, and collaborative activities with other agencies. It provides details regarding its outreach, information, and dissemination activities, including counts of contacts made, referrals and responses, and materials developed and sent out. WSDS also provides participant evaluations from its trainings and workshops.

These data provide valuable “process” information about the activities undertaken by WSDS related to its goals; however, they do not demonstrate whether the activities are contributing to improved outcomes for students. This is not a critique of the activities themselves; the activities may be of the highest quality and making a substantial contribution to good outcomes. The problem is that one cannot ascertain impact on student outcomes from the kinds of data that have been collected and reported. One also cannot ascertain whether all students are benefiting from these activities and, if not, which ones are and which are not. These types of benefits and contextual factors are referred to as “coverage.” For example, if one reports that 50 teachers have been trained, it is difficult to know how to interpret this number without knowing the size of the workforce working with students with SI and how many need to be trained. If there are 60 teachers statewide who need to be trained and 50 of the 60 have been trained, 50 could be a good number. If there are 600 teachers statewide who need training, training 50 is not likely to have much impact on improving student outcomes statewide. Or if the 50 are all in urban school districts, then there are other kinds of coverage issues that need to be addressed. The data collected by WSDS do not allow for an assessment of coverage.

This past year, WSDS collected data on outcomes and performance indicators for each child served through the Deaf-Blind TA project. The evaluation included 11 children served by seven providers, with input from seven family members. While these data have value to the project, the small numbers underscore the difficulty of generating global outcome data for low-incidence disability populations.

Although WSDS provides valuable and appreciated services throughout the state, as evidenced by the data collected by WSDS and as reported by our key informants, there do not appear to be data available right now to track the relationships illustrated in the logic models and demonstrate that these activities carried out by WSDS are effective in improving outcomes for the SI population.

## E. SUMMARY AND RECOMMENDATIONS

In this report, we presented findings from interviews with educators, administrators, and families across the state who have knowledge and experiences with children and youth with SI. We provided summaries of data from state OSPI and federal IDEA extant databases that focus on academic and postschool outcomes, statewide identification, and instructional environments and other services for students with SI. In this final section, we summarize the key findings of the study and present recommendations based on what was learned. Recommendations are made in three areas:

- **Data systems.** To better serve students with SI and to monitor their outcomes, the state needs to collect and regularly make use of the data on who these students are, where they are, what they need, which instructional personnel are working with them, and the outcomes they are achieving.
- **Personnel.** The state needs to take systematic steps to address the shortage of personnel who are adequately trained to meet the complex instructional needs of students with SI.
- **Technical assistance models.** The state needs to undertake a systematic examination of possible approaches to the provision of technical assistance to identify those with demonstrated effectiveness and then implement approaches shown to produce the best outcomes.

### Summary of Key Findings

The two logic models developed as part of the evaluation illustrate the multiple influences on the outcomes experienced by children and youth with low-incidence disabilities. Some of the factors that lead to good outcomes are within the sphere of influence of OSPI and, by extension WSDS, and others are outside their control. In this evaluation, we used several data sources to learn about some key components of the logic models, including identification, instructional services and related staffing issues, and the nature of the supports available through WSDS to districts, schools, staff, and families. The instructional needs of blind, visually impaired, deaf, hard of hearing, or deaf-blind children and youth are multifaceted and require specialized assistive technology and equipment as well as instructional personnel and other staff with specialized knowledge and expertise, expertise well beyond that possessed by general education teachers and even some special education teachers. Addressing these needs in any area of the state could be challenging. The low prevalence of children with sensory impairment (SI), combined with the geography and population distribution of Washington State, means some areas of the state have very few such students. How to effectively and efficiently build the capacity of districts, schools, and staff to identify and address the specialized needs of a very few students is especially challenging, but it is a challenge that must be addressed.

The evaluation was small in scale compared with the complexity of the issues being addressed, and the findings need to be understood in that context. We did not have the resources to contact a wide range of individuals across the state or to explore the specifics of technical assistance provision in any depth. With those caveats in mind, we summarize the findings of the evaluation as follows.

**Student outcomes.** The only sources of statewide data on school outcomes for students with SI are the WASL and WAAS for students in grades 3-8 and 10. We do not know the extent

to which these assessments accurately capture the skill level of students with SI, but if they do, the data suggest that not many students with SI are meeting state standards in reading and mathematics and that efforts need to be targeted to improving outcomes for students with SI.

The data on postschool outcomes indicate that postsecondary education participation among those with SI exceeds that of the overall special education population. The percentage of employed with SI is lower than that of the overall special education population, and the overall engagement rate (working or in school) is comparable, with 73% of those with SI working or in school 6 months after graduation.

**Identification.** Understanding the identification data requires understanding that there is a difference between the number of children and youth birth to age 21 with SI and the number who qualify for services under IDEA. Many counts from groups addressing issues related to sensory impairment address the former, whereas OSPI's responsibility is for the latter. These differences produce differences in the counts and makes it difficult to determine whether there is a problem with underidentification for IDEA services. The critical question for OSPI is how the number receiving special education in each of the categories (visually impaired, hard of hearing, deaf, deaf-blind) compares with the number eligible to receive and interested in receiving it. If such a discrepancy exists, it would indicate a problem with identification. The problem for the evaluation and for OSPI is that there is no way to answer that question with currently available data. Students with SI may be counted in other disability categories (e.g., multiple disabilities). They also can be served through 504 plans, either because they do not qualify for special education or they opt not to receive special education services. The data on preschool children indicate that lower percentages of children are identified in Washington State compared with other states in each of the SI categories and in the multiple disabilities category.

**Instructional and other services.** Personnel issues are presenting a major challenge to the provision of appropriate instructional services for students with SI. There is a widespread perception that there are not enough qualified personnel in the state, especially in rural areas, to provide the kinds of instructional and other services these students need to achieve good outcomes. We heard about the need for more training programs around the state, the need for more training related to SI for those in special education preparation programs, and the need for additional requirements to certify the specialized qualifications of those who have been trained.

The data also show that many students with SI are being educated for at least part of their day in general education classrooms. These teachers are not likely to have any training related to working with students with SI. Given the dispersion of students with SI across the state, there are many areas where a general education teacher is not likely to have access to another staff member in the building or even the district who has expertise related to the student's particular sensory impairment. This is not necessarily a staff shortage because even if the specialized staff existed to be hired, the district may not have the resources to hire them for one or two students. The challenge for the state is how to build the capacity of a continually changing pool of general education and even special education staff who are serving as the student's primary teacher in elementary school or one of the student's teachers in secondary school. There are no data on the qualifications of the specific personnel across the state currently working with SI students or on their access to or receipt of technical assistance or other support services.

**TA services provided by WSDS.** WSDS is a collection of organizations providing a range of services related to the education of students with VI, HH, deafness, and deaf-blindness. Both the interviews we conducted and the evaluation data for WSDS suggest that these services

generally are well received and appreciated. Reaction to the family services was especially positive. On the other hand, there was dissatisfaction with the staffing structure and the models used by WSDS. There are some in the VI community who believe that this population would be better served if there were a statewide coordinator for VI. The consultant model employed by WSDS in its work with districts also was the subject of some criticism.

## Recommendations

**The need for better data.** The evaluation was hindered in its ability to reach conclusions about some of the key issues related to the provision of technical assistance and the improvement of outcomes for students with SI by a lack of data. This is a relatively minor and time-limited problem confined to the pages of this report. A more significant problem is that the lack of comprehensive data about students with SI hampers the state's ability to oversee and meaningfully support ESDs and school districts in the provision of instructional services. Information is needed about who these students are, where they are, what outcomes they are achieving, who is working with them, and what kinds of supports their instructional and other staff need. These data elements need to be linked to one another and reside in the same database.

For the state or one of its funded projects like WSDS to be able to seriously pursue improving outcomes for students with SI, they need to be able to meaningfully track student outcomes as they relate to instructional and service characteristics. The benefits of data-based decisionmaking are widely acknowledged, but it is impossible to implement data-based decisionmaking without the appropriate data. The number of students with SI is so small that establishing a *registry-like database* or series of regional databases is highly feasible. We acknowledge the importance of issues related to confidentiality and data sharing that would need to be addressed in creating such a database. Personally identifiable information could be used for technical assistance purposes and would not need to be available directly to OSPI.

OSPI needs the capability to monitor outcomes for these students as a group and examine how outcomes relate to the nature of instructional services and supports for those services which could be provided by data extracted from the registry. Unlike the registry database, this kind of analytic database does not need to contain personally identifiable information at the state level. The value of these data are at the aggregate level so the state can answer questions not just about the proportion of students achieving reading or math standards, the data currently available, but also how outcomes relate to instructional services and supports including the types of technical assistance provided and the types of personnel working with the student. With such a database, Washington State would build its own evidence base as to what is and is not working to produce good outcomes for students with SI.

We recommend that OSPI undertake a systematic examination of how data from both types of databases can be more effectively used to address critical issues related to improving outcomes for students with SI, begin to build the data system(s) that will provide the necessary information, and institute procedures for ongoing use of the data to examine and improve services for students with SI. The registry database would be used to monitor the supports students with SI need and are receiving. The analytic database, containing nonidentifiable information, would allow to the state to undertake regular review of data on student outcomes and activities supporting students with sensory disabilities, followed by the identification of areas in need of improvement and implementing the programmatic adjustments needed to bring about better outcomes for these students.

**The need for more qualified personnel.** Ensuring the availability of a qualified workforce for students with SI is a complex and not easily achieved goal. It is impacted by a variety of factors, including institutions of higher education, certification and licensing policies, salary structures, and working conditions. We could not tell from the information available to us whether the perceived personnel shortage is due to vacancies that would be filled if the specialists existed (i.e., a need to train more “line” personnel) or whether those currently working with students with SI need increased skills (i.e., a need to provide more technical assistance, which could indicate a need for more or better trained TA providers, consultants, etc.), but it is clear that there are serious issues related to staffing and students with SI. To the extent the issues are “pipeline” problems, in that there is a need for a pool of qualified specialists who would be hired by ESDs or districts if the personnel existed, it is probably more efficient for the state to take steps to increase the supply of available personnel than to use a technical assistance project to try to fill staffing holes. More data on personnel employed, available, and needed would help elucidate more precisely what kinds of personnel are needed and where. With these data in hand, it will be possible for OSPI to design a more informed approach to attacking the problem.

**How best to provide technical assistance services.** One criterion by which to evaluate technical assistance services is whether they are well received by the recipients. Both the data collected by WSDS and this evaluation suggest that many (but not all) are pleased with the services provided by WSDS. If the criteria for effective TA are that it improves outcomes for students with SI, then we do not know how effective the services are. More data are needed on who is being reached and how effectively by the TA provided. As noted above, the dispersion of students with SI and the staff working with them poses some serious challenges for how to provide technical assistance that reaches all of those who need it. These challenges underscore the importance of using TA strategies with documented effectiveness. The state is making a considerable investment in technical assistance, and there are many choices related to training and technical assistance for how specifically to invest that money. Those we spoke with offered a number of suggestions for improving the delivery of technical assistance, including better uses of technology and a different model for working with teachers and schools. More comprehensive study is required to identify the specific improvements in the content of the TA and the nature of the strategies being employed. We recommend that Washington State undertake such study to identify possible alternatives for structuring and delivering technical assistance and support services focusing especially on mechanisms proven to be effective for building capacity in rural areas. We further recommend that Washington State look at approaches being used in other states. Washington State is not alone in the challenges it is facing, and possibly other states have implemented evidence-based approaches that merit adoption here. Finally, to return to the oft-repeated theme, we recommend that Washington State use the data system recommended above to regularly examine and refine, as necessary, the technical assistance being provided. A good data system will provide ongoing feedback as to which geographic populations, which age or grade levels, and which disability groups are not being well served—and then the state has the necessary information to adjust the technical assistance system accordingly.