



Disproportionality

Understanding the Risk Ratio Formulas



There are four indicators that determine disproportionality:

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| <p>1. Indicator 4: Suspension and Expulsion</p> <ul style="list-style-type: none"> A. Any Discipline B. Greater than 10 Days In-School C. Greater than 10 Days Out of School D. Less than 10 Days In-School E. Less than 10 Days Out of School <p>2. Indicator 5: Least Restrictive Environment (LRE)</p> <ul style="list-style-type: none"> A. In Regular Class Less than 40% B. In Separate Schools | <p>3. Indicator 9: Disproportionality Overall</p> <p>4. Indicator 10: Disproportionality by Disability</p> <ul style="list-style-type: none"> A. Autism B. Emotional Disturbance C. Intellectual Disabilities D. Other Health Impairments E. Specific Learning Disability F. Speech or Language Impairment |
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There are four factors used to determine which risk ratio (if any) will be used to calculate disproportionality (*only 1 factor will apply to each race/ethnicity*):

1. If the # of SWD in the race/ethnicity group (numerator) is less than 10 **and** the number of students in the same race/ethnicity group for general education (denominator) is less than 20, then **no calculation (NC)** is done.
2. If the # of SWD in the race/ethnicity group (numerator) is less than 2, then **no calculation (NC)** is done.
3. If the # of SWD in the race/ethnicity group (numerator) is less than 10 **or** the number of students in the same race/ethnicity group for general education (denominator) is less than 20, then the **Alternate Risk Ratio** is used.
4. If the # of SWD in the race/ethnicity group (numerator) is more than 10 **and** the number of students in the same race/ethnicity group for general education (denominator) is more than 20, then the **LEA Risk Ratio** is used.

Data Sources:

- 1. Indicator 4: Suspension and Expulsion**
 - a. SWD Enrollment Data: June CASEMIS Submission - Prior Year
(Example: If this school year is 2017-18, then the June 2017 submission would be used).
 - b. Discipline Data: CALPADS End of Year (EOY) Submission – Prior Year
(Example: If this school year is 2017-18, then the CALPADS EOY Submission from 2017 would be used).
 - c. General Education Data: CALPADS Enrollment Data
(Example: If this school year is 2017-18, then the CALPADS Enrollment Submission from 2016 would be used).
- 2. Indicator 5: Least Restrictive Environment (LRE)**
 - a. Enrollment Data: December CASEMIS Submission
(Example: If this school year is 2017-18, then the December 2017 submission would be used).
 - b. General Education Data: CALPADS Enrollment Data
(Example: If this school year is 2017-18, then the CALPADS Enrollment Submission from 2017 would be used).
- 3. Indicator 9: Disproportionality Overall**
 - a. Enrollment Data: December CASEMIS Submission
(Example: If this school year is 2017-18, then the December 2017 submission would be used).
 - b. General Education Data: CALPADS Enrollment Data
(Example: If this school year is 2017-18, then the CALPADS Enrollment Submission from 2017 would be used).
- 4. Indicator 10: Disproportionality by Disability**
 - a. Enrollment Data: December CASEMIS Submission
(Example: If this school year is 2017-18, then the December 2017 submission would be used).
 - b. General Education Data: CALPADS Enrollment Data
(Example: If this school year is 2017-18, then the CALPADS Enrollment Submission from 2017 would be used).

Indicator 4: Suspension and Expulsion

Example:

Any Discipline	American Indian	Asian	African American	Hispanic	Multiple Ethnicities	Pacific Islander	White
Students Discipline (SWD)	1	1	0	5	0	0	21
General Education	15	11	46	214	56	2	675
Risk Ratio (Max = 3)	NC	NC	NC	2.40	NC	NC	1.53
Disproportionate?	No	No	No	No	No	No	No

If the risk ratio is over 3, then the district is considered disproportionate.

The # of students with disabilities disciplined in the race/ethnicity group of American Indian is 1 (numerator), which is less than 10 and the # of general education students disciplined in the same race/ethnicity group of American Indian is 15 (denominator), which is less than 20 so **no calculation (NC)**.

The # of students with disabilities disciplined in the race/ethnicity group of Pacific Islander is 0 (numerator), which is less than 2 so **no calculation (NC)** for risk ratio.

The # of students with disabilities disciplined in the race/ethnicity group of White is 21 (numerator) which is over 10 and the # of general education students disciplined in the same race/ethnicity group of Hispanic is 675, which is over 20 so the **LEA Risk Ratio** is used.

$$\frac{\left(\frac{\text{\# of SWD in White}}{\text{\# of General Education in White}} \right) \times 100}{\left(\frac{\text{\# of SWD not White}}{\text{\# of General Education not White}} \right) \times 100} = \frac{\left(\frac{21}{675} \right) \times 100}{\left(\frac{7}{344} \right) \times 100} = \frac{3.11111}{2.03488} = 1.53$$

7 = American Indian (1) + Asian (1) + African American (0) + Hispanic (5) + Multiple Ethnicities (0) + Pacific Islander (0) [Source: Any Discipline – Student Discipline]
 344 = American Indian (15) + Asian (11) + African American (46) + Hispanic (214) + Multiple Ethnicities (56) + Pacific Islander (2) [Source: General Education]

The # of students with disabilities disciplined in the race/ethnicity group of Hispanic (numerator) is 5, which is less than 10 but the # of general education students disciplined in the same race/ethnicity of Hispanic is 214, which is over 20 so the **alternative risk ratio** is used.

The chart below displays the statewide data for this example:

Statewide – Indicator 4	American Indian	Asian	African American	Hispanic	Multiple Ethnicities	Pacific Islander	White
General Education	33,369	712,829	350,338	3,378,344	253,472	29,384	1,470,499
Any Discipline	653	1,248	10,456	28,208	2,155	265	12,880
> 10 Days Out of School	48	41	908	1,654	132	15	707
< 10 Days In School	129	210	1,835	5,337	427	52	2,737
< 10 Days Out of School	544	1,071	8,703	23,574	1,801	221	10,598
> 10 Days In School	1	0	18	38	1	0	18

$$\frac{\left(\frac{\text{\# of SWD in Hispanic}}{\text{\# of General Education in Hispanic}} \right) \times 100}{\left(\frac{\text{\# of Statewide SWD not Hispanic AND is in Any Discipline}}{\text{\# of General Education not Hispanic}} \right) \times 100} = \frac{\left(\frac{5}{214} \right) \times 100}{\left(\frac{27,657}{2,849,891} \right) \times 100} = \frac{2.33644}{0.97045} = 2.40$$

27,657 = American Indian (653) + Asian (1,248) + African American (350,338) + Multiple Ethnicities (253,472) + Pacific Islander (26,384) + White (1,470,499)
 [Source: Statewide Indicator 4 – Any Discipline]

2,849,891 = American Indian (33,369) + Asian (712,829) + African American (350,339) + Multiple Ethnicities (253,472) + Pacific Islander (29,384) + White (1,470,499) [Source: Statewide Indicator 4 - General Education]

Indicator 5: Least Restrictive Environment

Example:

In Regular Class Less Than 40%	American Indian	Asian	African American	Hispanic	Multiple Ethnicities	Pacific Islander	White
Students with Disabilities (SWD)	1	1	1	5	12	0	15
General Education	6	194	93	1,055	419	15	2,383
Risk Ratio (Max = 3)	NC	NC	NC	0.17	4.69	NC	0.57
Disproportionate?	No	No	No	No	Yes	No	No

If the risk ratio is over 3, then the district is considered disproportionate.

The # of students with disabilities in regular class less the 40% in the race/ethnicity group of American Indian is 1 (numerator), which is less than 10 and the # of general education students in the same race/ethnicity group of American Indian is 6 (denominator), which is less than 20 so **no calculation (NC)**.

The # of students with disabilities in regular class less the 40% in the race/ethnicity group of Pacific Islander is 0 (numerator), which is less than 2 so **no calculation (NC)** for risk ratio.

The # of students with disabilities in regular class less the 40% in the race/ethnicity group of Multiple Ethnicities is 12 (numerator) which is over 10 and the # of general education students in the same race/ethnicity group of Multiple Ethnicities is 419, which is over 20 so the **LEA Risk Ratio** is used.

$$\frac{\left(\frac{\text{\# of SWD in Multiple Ethnicities}}{\text{\# of General Education in Multiple Ethnicities}} \right) \times 100}{\left(\frac{\text{\# of SWD not Multiple Ethnicities}}{\text{\# of General Education not Multiple Ethnicities}} \right) \times 100} = \frac{\left(\frac{12}{419} \right) \times 100}{\left(\frac{23}{3,746} \right) \times 100} = \frac{2.86}{0.61} = 4.69$$

23 = American Indian (1) + Asian (1) + African American (1) + Hispanic (5) + Pacific Islander (0) + White (15) [Source: SWD – In Regular Class Less Than 40%]
 3,746 = American Indian (6) + Asian (194) + African American (93) + Hispanic (1,055) + Pacific Islander (15) + White (2,383) [Source: General Education]

The # of students with disabilities in regular class less the 40% in the race/ethnicity group of Hispanic (numerator) is 5, which is less than 10 but the # of general education students in the same race/ethnicity of Hispanic is 1,055, which is over 20 so the **alternative risk ratio** is used.

The chart below displays the statewide data for this example:

Statewide - LRE	American Indian	Asian	African American	Hispanic	Multiple Ethnicities	Pacific Islander	White
General Education	32,500	721,394	340,841	3,376,591	277,779	28,920	1,442,388
In Regular Class Less Than 40 %	1,067	16,287	16,667	108,932	8,008	728	38,398
Separate School	160	1,954	3,372	11,295	1,060	110	7,087

$$\frac{\left(\frac{\text{\# of SWD in Hispanic}}{\text{\# of General Education in Hispanic}} \right) \times 100}{\left(\frac{\text{\# of SWD Statewide not in Hispanic AND In Regular Class Less Than 40\%}}{\text{\# of General Education Statewide not in Hispanic}} \right) \times 100} = \frac{\left(\frac{5}{1,055} \right) \times 100}{\left(\frac{81,155}{2,843,822} \right) \times 100} = \frac{0.47393}{2.85372} = 0.1660744 = 0.17$$

81,155 = American Indian (1,067) + Asian (16,287) + African American (16,667) + Multiple Ethnicities (8,008) + Pacific Islander (728) + White (38,398)
 [Source: Statewide LRE – In Regular Class Less Than 40%]
 2,843,822 = American Indian (32,500) + Asian (721,394) + African American (340,841) + Multiple Ethnicities (277,779) + Pacific Islander (28,920) + White (1,442,388) [Source: Statewide LRE - General Education]

Indicator 9: Disproportionality Overall

Example:

Disproportionality Overall	American Indian	Asian	African American	Hispanic	Multiple Ethnicities	Pacific Islander	White
Students with Disabilities (SWD)	1	0	5	23	3	1	7
General Education	2	20	14	233	18	1	67
Risk Ratio (Max = 3)	NC	NC	3.33	0.71	0.00	NC	1.00
Disproportionate?	No	No	Yes	No	No	No	No

If the risk ratio is over 3, then the district is considered disproportionate.

The # of students with disabilities that are disproportionate overall in the race/ethnicity group of American Indian is 1 (numerator), which is less than 10 and the # of general education students in the same race/ethnicity group of American Indian is 2 (denominator), which is less than 20 so **no calculation (NC)**.

The # of students with disabilities that are disproportionate overall in the race/ethnicity group of Pacific Islander is 1 (numerator), which is less than 2 so **no calculation (NC)** for risk ratio.

The # of students with disabilities that are disproportionate overall in the race/ethnicity group of Hispanic is 23 (numerator) which is over 10 and the # of general education students in the same race/ethnicity group of Hispanic is 233, which is over 20 so the **LEA Risk Ratio** is used.

$$\frac{\left(\frac{\text{\# of SWD in Hispanic}}{\text{\# of General Education in Hispanic}} \right) \times 100}{\left(\frac{\text{\# of SWD not in Hispanic}}{\text{\# of General Education not in Hispanic}} \right) \times 100} = \frac{\left(\frac{23}{233} \right) \times 100}{\left(\frac{17}{122} \right) \times 100} = \frac{9.87124}{13.93442} = 0.71$$

17 = American Indian (1) + Asian (0) + African American (5) + Multiple Ethnicities (3) + Pacific Islander (1) + White (7) [Source: SWD – Disproportionality Overall]
 122 = American Indian (2) + Asian (20) + African American (14) + Multiple Ethnicities (18) + Pacific Islander (1) + White (67) [Source: General Education]

The # of students with disabilities that are disproportionate overall in the race/ethnicity group of White (numerator) is 7, which is less than 10 but the # of general education students in the same race/ethnicity of White is 67, which is over 20 so the **alternative risk ratio** is used.

The chart below displays the statewide data for this example:

Statewide – Indicator 9	American Indian	Asian	African American	Hispanic	Multiple Ethnicities	Pacific Islander	White
Special Education	4,874	38,522	55,949	371,293	23,947	2,481	155,560
General Education	32,500	721,394	340,841	3,376,591	277,779	28,920	1,442,388

$$\frac{\left(\frac{\text{\# of SWD in White}}{\text{\# of General Education in White}} \right) \times 100}{\left(\frac{\text{\# of Statewide SWD not in White}}{\text{\# of Statewide General Education not in White}} \right) \times 100} = \frac{\left(\frac{7}{67} \right) \times 100}{\left(\frac{497,066}{4,778,025} \right) \times 100} = \frac{10.44776}{10.40316} = 1.0042871 = 1.00$$

497,066 = American Indian (4,874) + Asian (38,522) + African American (55,949) + Hispanic (371,293) + Multiple Ethnicities (23,947) + Pacific Islander (2,481)
 [Source: Statewide Indicator 9 – Special Education]

4,778,025 = American Indian (32,500) + Asian (721,394) + African American (340,841) + Hispanic (3,376,591) + Multiple Ethnicities (277,779) + Pacific Islander (28,920) [Source: Statewide Indicator 9 - General Education]

Indicator 10: Disproportionality by Disability

Example:

Specific Learning Disability	American Indian	Asian	African American	Hispanic	Multiple Ethnicities	Pacific Islander	White
Students with Disabilities (SWD)	0	0	5	15	0	1	10
General Education	23	21	58	226	63	2	633
Risk Ratio (Max = 3)	NC	NC	1.88	3.32	NC	NC	0.28
Disproportionate?	No	No	Yes	No	No	No	Yes

If the risk ratio is over 3, then the district is considered disproportionate.

The # of students with disabilities that are disproportionate with a primary disability of SLD in the race/ethnicity group of Pacific Islander is 1 (numerator), which is less than 10 and the # of general education students in the same race/ethnicity group of Pacific Islander is 2 (denominator), which is less than 20 so **no calculation (NC)**.

The # of students with disabilities that are disproportionate with a primary disability of SLD in the race/ethnicity group of American Indian is 0 (numerator), which is less than 2 so **no calculation (NC)** for risk ratio.

The # of students with disabilities that are disproportionate with a primary disability of Specific Learning Disability in the race/ethnicity group of Hispanic is 15 (numerator) which is over 10 and the # of general education students in the same race/ethnicity group of Hispanic is 226, which is over 20 so the **LEA Risk Ratio** is used.

$$\frac{\left(\frac{\text{\# of SWD in Hispanic}}{\text{\# of General Education in Hispanic}} \right) \times 100}{\left(\frac{\text{\# of SWD not in Hispanic}}{\text{\# of General Education not in Hispanic}} \right) \times 100} = \frac{\left(\frac{15}{226} \right) \times 100}{\left(\frac{16}{800} \right) \times 100} = \frac{6.63716}{2.00000} = 3.32$$

16 = American Indian (0) + Asian (0) + African American (5) + Multiple Ethnicities (0) + Pacific Islander (1) + White (10) [Source: SWD – Specific Learning Disability]
800 = American Indian (23) + Asian (21) + African American (58) + Multiple Ethnicities (63) + Pacific Islander (2) + White (633) [Source: General Education]

The # of students with disabilities that are disproportionate with a primary disability of Specific Learning Disability in the race/ethnicity group of African American (numerator) is 5, which is less than 10 but the # of general education students in the same race/ethnicity of African American is 58, which is over 20 so the **alternative risk ratio** is used.

The chart below displays the statewide data for this example:

Statewide – Indicator 10	American Indian	Asian	African American	Hispanic	Multiple Ethnicities	Pacific Islander	White
General Education	32,500	721,394	340,841	3,376,591	277,779	28,920	1,442,388
Autism	488	12,683	6,637	40,765	4,128	318	26,211
Emotional Disturbance	259	755	3,186	9,723	1,273	84	8,822
Intellectual Disability	254	3,115	3,507	24,263	1,095	195	7,416
Other Health Impairment	722	3,340	10,561	42,636	3,991	305	30,167
Specific Learning Disability	2,436	9,135	26,513	194,012	8,320	1,152	55,012
Speech or Language Disability	715	9,494	5,545	59,894	5,140	427	27,932

$$\frac{\left(\frac{\text{\# of SWD in African American}}{\text{\# of General Education in African American}} \right) \times 100}{\left(\frac{\text{\# of Statewide SWD not African American AND are SLD}}{\text{\# of Statewide General Education not in African American}} \right) \times 100} = \frac{\left(\frac{5}{58} \right) \times 100}{\left(\frac{270,067}{5,879,592} \right) \times 100} = 1.8767985 = 1.88$$

270,067 = American Indian (2,436) + Asian (9,135) + Hispanic (194,012) + Multiple Ethnicities (8,320) + Pacific Islander (1,152) + White (55,012)

[Source: Statewide Indicator 10 – Specific Learning Disability]

5,879,592 = American Indian (32,500) + Asian (721,394) + Hispanic (3,376,591) + Multiple Ethnicities (277,779) + Pacific Islander (28,920) + White (1,442,388)

[Source: Statewide Indicator 10 - General Education]