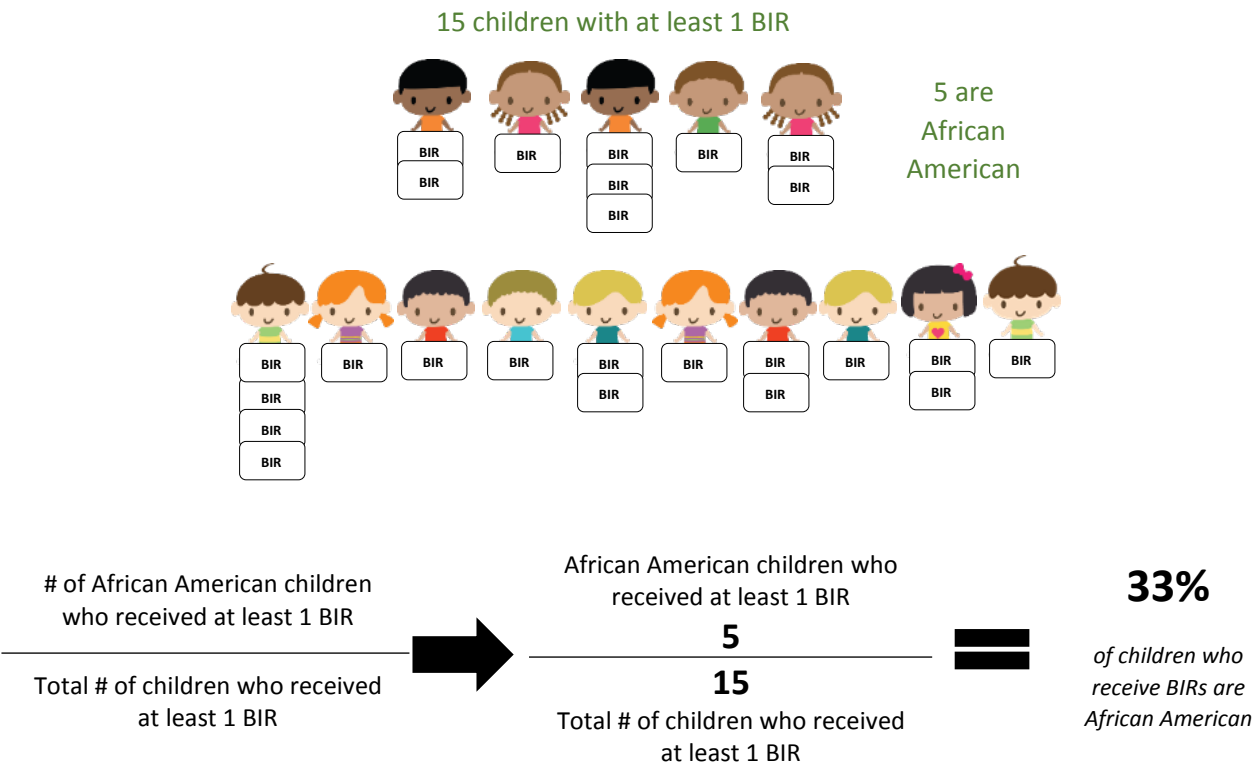


Defining Disproportionate Discipline Understanding Common Measures

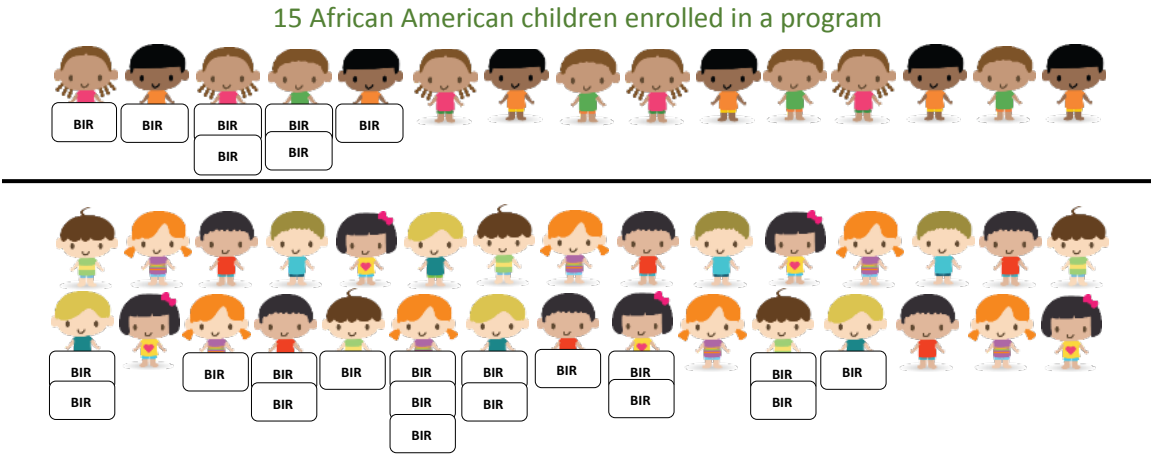
Child Composition

Percentage of children who receive BIRs who belong to a specific group



Risk Ratio

Risk of one group compared to the risk of another group; best single measure to summarize a group's risk
At least 15 children are needed in the focal & comparison groups in order for the risk ratio to be stable and meaningful.

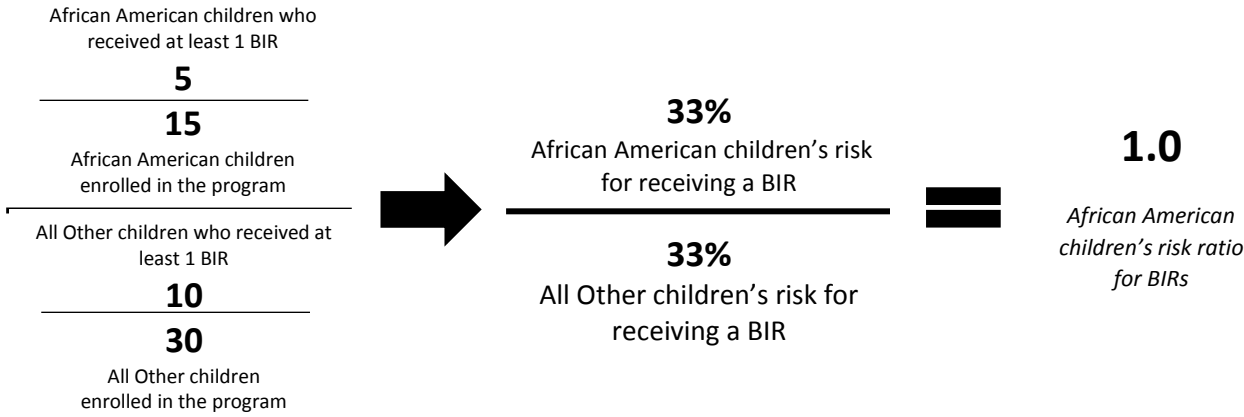


"All Other" children, 10 with at least 1 incident derived from:



Defining Disproportionate Discipline

Understanding Common Measures

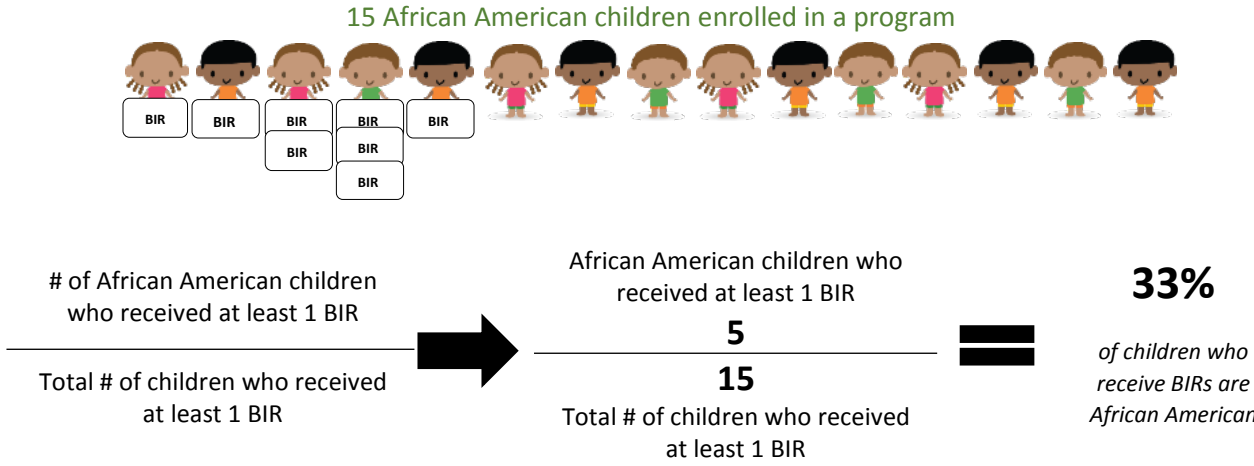


Risk Ratio Value	Level of Disproportionality
1.0	Equal risk
1.25	25% higher risk
1.50	50% higher risk
2.00	Two times higher risk
2.50	2.5 times higher risk
3.00	3 times higher risk
>3.00	Yikes!

Check for small n if your ratio exceeds 7.0

Risk

Percentage of children in a specific group who have at least one incident



BIR Composition

Percentage of BIRs generated by a specific group; Impacted by children who receive multiple BIRs

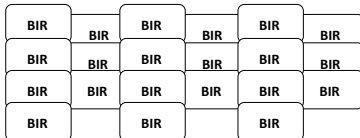


Defining Disproportionate Discipline

Understanding Common Measures



9 BIRs from African American children



30 BIRs total, 15 children with at least 1 BIR

$$\frac{\text{\# of BIRs from African American children}}{\text{Total \# of BIRs}} = \frac{9}{30} = 30\%$$

of BIRs were generated by African American children

Additional Metrics

Multiple metrics are needed to measure disproportionality since it may occur in terms of students who receive discipline, and/or in terms of the amount of discipline received. Multiple metrics help teams understand how to intervene.

BIR Ratio

Rate of BIRs for a specific group divided by the BIR rate of all other children; 1.0 is equal

BIR Rate

Total number of BIRs for a group divided by the number of children enrolled in that group

Difference in Child Composition

Child composition minus the percent of child enrollment; Positive values suggest disproportionality

Difference in BIR Composition

BIR Composition minus the percent of child enrollment; Positive values suggest disproportionality

E-Formula

If a group's child Composition is greater than or the E-Formula value, disproportionality is indicated

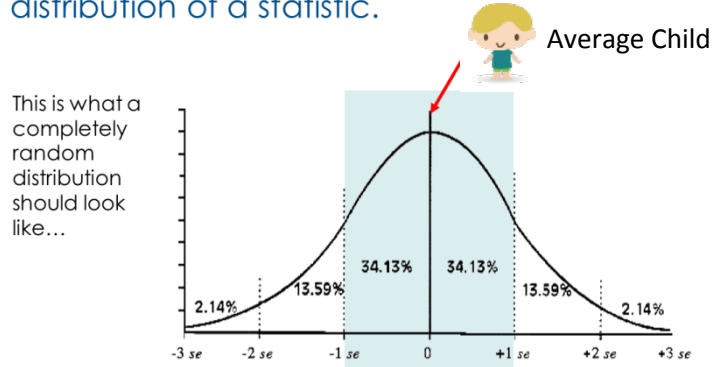
- Designed for "small-n" scenarios; Standard error for Composition (the percent of children who received a BIR who belong to a specific group)

Defining Disproportionate Discipline

Understanding Common Measures

- The “upper bounds” for a specific group’s composition given the size of their population and the total number of children who received a BIR.

Standard error is the standard deviation of the sampling distribution of a statistic.



$$E = A + \sqrt{A * \frac{100 - A}{N}}$$

E = Upper bounds of what is expected given the proportionality

A = % of children in a category (i.e., race/ethnicity, gender, IEP status, DLL status)

N = Total number in the classification (i.e., total incidents, suspension events, dismissal events)

BIR System View

Guiding Question 1: Are outcomes equitable for all groups?		Guiding Question 2: How big are the disparities?				Guiding Question 3: How much of your target group is affected by disproportionate discipline?		
Child Composition	BIR Ratio	BIR Rate	Risk Ratio	Difference in Child Composition	Difference in BIR Composition	BIR Composition	Risk	E-Formula / Composition
The % of Children with BIRs who belong to a target group; RED cells suggest disproportionality	BIR Rate for group divided by the BIR Rate for all other Children; 1.0 is equal	Total number of BIRs for group divided by the number of enrolled Children from that group	Group’s risk of receiving a BIR compared to all other Children; 1.0 is equal	Child Composition minus the Percent of the Child Enrollment; Positive values suggest disproportionality	BIR Composition minus the Percent of the Child Enrollment; Positive values suggest disproportionality	% of BIRs accounted for by Children of a particular group	% of Children in a group who have at least one BIR	(The upper bound of what would be expected given the size of the population. Compare to “composition” [column E], and if F is less than K that means the composition is within expected values)