# Data Suppression Requirements for Public Reporting

## Overview

The purpose of data suppression is to ensure the protection of personal data on individuals when releasing summary data in public reporting. Reporting of data must first and foremost adhere to legal requirements to protect individuals' personally identifiable information (PII) under federal and state law. Recognizing this challenge, student disaggregation by grade and student group may not be provided publicly if the results would yield PII about an individual student. There is a balance required to protect privacy while also providing as much information as possible to families, local communities and interested stakeholders. [1]

### WHAT IS DATA SUPPRESSION?

Data suppression is a disclosure avoidance method that is used to protect the identities, privacy, and personal information of individuals. Disclosure avoidance refers to the efforts made to reduce the risk of disclosure, such as applying statistical methods to protect PII in aggregate data tables. These safeguards, often referred to as disclosure avoidance methods, can take many forms (e.g., data suppression, rounding, re-coding, etc.).

### WHY ARE DATA SUPPRESSED?

The Family Educational Rights and Privacy Act (FERPA), 20 U.S.C. §1232g, 34 CFR Part 99, is a federal law that protects the privacy of student education records. Under FERPA, states are responsible for protecting students' PII from disclosure when reporting. Even data that are reported in aggregate have the potential to disclose PII.

Any release of demographic or performance information derived from students' education records, even in aggregate form, carries some level of risk of disclosure. No disclosure avoidance methodology can completely eliminate that risk; however, the U.S. Department of Education has instructed States to assess the risk of disclosure considering FERPA's confidentiality standard. U.S. Dep't of Educ., Privacy Technical Assistance Center, Frequently Asked Questions—Disclosure Avoidance (May 2013). That standard prohibits the release of information that would permit a "reasonable person in the school community ... to identify [an individual] with reasonable certainty." 34 CFR §99.3.

To abide by the regulation outlined in FERPA and protect student's PII, MSDE applies suppression rules to any aggregated student data that is connected to student education data and outcomes. This includes, but is not limited to, any reporting on student assessment results, graduation rates, or any student group disaggregation such as race/ethnicity, economically disadvantaged, and special education and English language services. [2]

[1] https://studentprivacy.ed.gov/sites/default/files/resource_document/file/FAQs_disclosure_avoidance.pdf
[2] https://nces.ed.gov/pubs2011/2011603.pdf

## MARYLAND STATE DEPARTMENT OF EDUCATION (MSDE) SUPPRESSION METHODS

MSDE has a long history of reporting data to the public and values the transparency such reporting provides. MSDE implements the following suppression rules when reporting aggregate level data to the public:

- Minimum N size, and
- Top and Bottom Coding

Below is a sample data set for School A that reports assessment data for grades 3, 4 and 5 in math. Performance Level (PL) 3 and PL 4 combined are considered proficient. For School A, no data suppression is needed because the tested count for each grade tested is greater than 10 (Minimum N size) and no percentages are equal to or less than 5% nor equal to or greater than 95% (Top and Bottom Coding).

| School | Tested Grade and Subject | Tested Count | PL 1 | PL 2 | PL 3 | PL 4 | Proficient (PL 3 and PL 4) |
|---|---|---|---|---|---|---|---|
| School A | Grade 3 Math | 75 | 27% | 33% | 27% | 13% | 40% |
| School A | Grade 4 Math | 100 | 35% | 35% | 15% | 15% | 30% |
| School A | Grade 5 Math | 100 | 50% | 20% | 15% | 15% | 30% |

## MINIMUM N SIZE EXAMPLE

Minimum N Size reporting is when data must have a sufficient number of students for the data to be reported. Maryland applies across most reporting a minimum N size of 10 when reporting student outcome results. Below is a sample data set for School B that reports assessment data for grades 3, 4 and 5 in math. In the unsuppressed data, the minimum N size has been met in all rows of data except for grade 3 math, in which only 5 students were tested. The suppressed data demonstrates the minimum N size suppression rule, which replaces the entire row of data with an asterisk (*) because the minimum N size has not been met for grade 3 math.

### Unsuppressed Data

| School | Tested Grade and Subject | Tested Count | PL 1 | PL 2 | PL 3 | PL 4 | Proficient (PL 3 and PL 4) |
|---|---|---|---|---|---|---|---|
| School B | Grade 3 Math | 5 | 100% | 0% | 0% | 0% | 0% |
| School B | Grade 4 Math | 30 | 33% | 17% | 40% | 10% | 50% |
| School B | Grade 5 Math | 20 | 25% | 25% | 35% | 15% | 50% |

### Suppressed Data

| School | Tested Grade and Subject | Tested Count | PL 1 | PL 2 | PL 3 | PL 4 | Proficient (PL 3 and PL 4) |
|---|---|---|---|---|---|---|---|
| School B | Grade 3 Math | * | * | * | * | * | * |
| School B | Grade 4 Math | 30 | 33% | 17% | 40% | 10% | 50% |
| School B | Grade 5 Math | 20 | 25% | 25% | 35% | 15% | 50% |

## TOP AND BOTTOM CODING EXAMPLE

Top and Bottom Coding consists of suppressing very high and very low percentages. Unless otherwise noted, percentages that are less than or equal to 5% and greater than or equal to 95% have top and bottom coding suppression applied. In the example below, the Diploma Percent is 100% and the Certificate Percent is 0%. Top coding replaces the 100% with >=95%, and bottom coding replaces the 0% with <=5%. The associated student counts are replaced with an asterisk (*).

### Unsuppressed Data

| Total High School Completers | Diploma count | Diploma Percent | Certificate Count | Certificate Percent |
|---|---|---|---|---|
| 100 | 100 | 100% | 0 | 0% |

### Suppressed Data

| Total High School Completers | Diploma count | Diploma Percent | Certificate Count | Certificate Percent |
|---|---|---|---|---|
| * | * | >=95% | * | <=5% |