

Reporting Data: Suppression and Student Privacy

Deb Came, Ph.D.
Director of Student Information

Education Accountability System Oversight
Committee

November 17, 2014



- State law (N<10)
- Federal language (FERPA)
- Guidance from US Department of Education Privacy Technical Assistance Center
- OSPI's enhanced suppression approach

RCW 28A.655.090

Washington assessment of student learning — Reporting requirements

... (7) To protect the privacy of students, the results of schools and districts that test fewer than ten students in a grade level shall not be reported.

Family Educational Rights and Privacy Act (FERPA)

Cannot share information that “would allow a reasonable person in the school community, who does not have personal knowledge of the relevant circumstances, to identify the student with reasonable certainty.”

Reporting Challenges: Within Schools

If you report the school data and the larger race/ethnic groups ... then it may be possible to determine the results for a small subgroup.

	Total Students	Proficient	% Proficient
SCHOOL	100	85	85%
White	70	60	85.7%
Hispanic	29	25	86.2%
Asian	1	0	0%

Reporting Challenges: Across Schools

Similarly, one could determine results for one small school when district results and results for other (larger) schools in the district.

	Total Students	Proficient	% Proficient
DISTRICT	100	85	85%
Big Elementary	70	60	85.7%
Medium Elem.	25	21	84%
Little Elem.	5	4	80%

2013 Privacy Technical Assistance Center Review of WA Report Card

- “Washington’s current disclosure avoidance policy leaves students’ identities unprotected in some cases. Specifically, Washington does not top-code the results when 100 percent of students in a group score at the same performance level. In such cases, the scores of individual students are inadvertently disclosed.”
- “Further, while Washington suppresses subgroups of fewer than 10 students, it does not suppress complementary subgroups, so one can use the overall results and the results of a large unsuppressed subgroup to calculate the results of a complementary small suppressed subgroup.”

PTAC Suggestions

- Prevent identifying students by comparing data within and across tables and reports
- Consider implementing complementary suppression to ensure that the results of a smaller suppressed group cannot be revealed by using the results reported for other subgroups or for a larger group
- When the entire student group scores at the same performance level, consider top-coding the results to protect individual students' privacy

Disclosure Avoidance Options

- **Suppression** (not showing small Ns)
- **Blurring** (ranges, top-coding)
 - Show ranges for most data: “60-70%” or “60-80%”, depending on size of group
 - Cannot see small changes (e.g., improvement from 61% to 69%)
- **Perturbation**
 - Making small changes to data to introduce uncertainty for identifying students.
 - Used for statistical/research purposes. Is not appropriate for program reporting.

OSPI Disclosure Avoidance Approach

- Do not show results when a group has $N < 10$
- Top-code: reports “>95%” when result is 95% or more (or bottom-code for $< 5\%$)
- Subgroup: suppress next smallest group(s) (even if $N \geq 10$) until combination of suppressed groups is at least 10 students
- Cross-organization: same as subgroups, but across schools within a district

Top-Coding

- Reporting 100% proficiency reveals information about all (tested) students
- Report Card now shows high performance but is a range at the high end (>95%)
- Why not use a smaller range, like >99%?
 - For smaller reporting groups, would still imply 100% proficiency.
 - Suppose 50 students: >99% implies 100% (because if just one student didn't pass, it would be 98%.)

Report Card: Small N Suppression

Reading 3rd Grade		
	<u>Number</u>	<u>Percent</u>
Meeting Standard		
Level 4 (exceeds standard)		
Level 3 (met standard)		
Basic (met standard)		
Not Meeting Standard		
Level 2 (below standard)		
Level 1 (well below standard)		
No Score		
Unexcused Absence, Refusal		
Other*		
Total	1	
Meeting Standard excluding No Score		
Alternate Assessment (see WAAS)		
WAAS Portfolio		
WAAS DAW**		
Not included in test calculations		
Excused Absence		
Exempted**		
Total Enrollment		
Suppression Reason (Info)		N < 10 Suppression

Report Card: Complementary Suppression

Reading 6th Grade		Number	Percent
Meeting Standard			
Level 4 (exceeds standard)			
Level 3 (met standard)			
Basic (met standard)			
Not Meeting Standard			
Level 2 (below standard)			
Level 1 (well below standard)			
No Score			
Unexcused Absence, Refusal			
Other*			
Total		137	
Meeting Standard excluding No Score			
Alternate Assessment (see WAAS)			
WAAS Portfolio			
WAAS DAW**			
Not included in test calculations			
Excused Absence			
Exempted**			
Total Enrollment			
Suppression Reason (Info)		Cross Organization:	
		Re-Entry	
		Middle	
		School	

Report Card: Top-Coding

Reading 10th Grade		
	<u>Number</u>	<u>Percent</u>
Meeting Standard including PP†		
Meeting Standard		> 95%
Level 4 (exceeds standard)		
Level 3 (met standard)		
Basic (met standard)		
Not Meeting Standard		< 5%
Level 2 (below standard)		
Level 1 (well below standard)		
No Score		
Unexcused Absence, Refusal		
Other*		
Total	336	
Meeting Standard excluding No Score		
Alternate Assessment (see WAAS)		
WAAS Portfolio		
WAAS DAW**		
Not included in test calculations		
Excused Absence		
Exempted**		
Total Enrollment		
Suppression Reason (Info)		>= 95% Suppression

Balancing Act

**Maintaining Student
Data Privacy**

**Showing Student
Outcomes**

