Additional Facts About Masking Rules

The Texas ERC does not allow small cell counts to be released from the ERC unmasked. This is true even for data that are not student performance measures. The Higher Education Coordinating Board (THECB) has provided guidance that ERCs have to go above-and-beyond the FERPA guidelines and what the state agencies do. The Texas Administrative Code regarding the ERCs specifically states, "All data cells containing between one and four individuals, inclusive, are confidential". Thus, even though the agencies release some small counts, the ERCs cannot.

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Texas Administrative Code

TITLE 19	EDUCATION
PART 1	TEXAS HIGHER EDUCATION COORDINATING BOARD
CHAPTER 1	AGENCY ADMINISTRATION
SUBCHAPTER A	GENERAL PROVISIONS
RULE §1.18	Operation of Education Research Centers

https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=19&pt=1&ch=1&rl=18

(5) Confidential information as applied to data in the P-20/Workforce Data Repository provided to an ERC includes all individual-level data, including any data cells small enough to allow identification of an individual. All data cells containing between <u>one and four individuals, inclusive, are confidential</u>.

  (A) Small data cells will be considered any cell containing between one and four individuals inclusive. Information may not be disclosed where small data cells can be determined through subtraction or other simple mathematical manipulations or subsequent cross-tabulation of the same data with other variables. Institutions may use any of the common methods for masking including:
  (i) hiding the small cell and the next larger cell on the row and column so the size of the small cell cannot be determined; or
  (ii) hiding the small cell and displaying the total for both the row and column as a range of at least ten; or
  (iii) any methodology approved by the cooperating agencies (TEA, THECB, and TWC).

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Note that though zeros are not mentioned in the Administrative Code, ", they also need to be masked to account for potentially using data to create percentages. When considering the ERC masking rules for percentages, zero is obviously undefined for a denominator (and has to be masked). Even for the numerator, if it is zero, it is 0% and therefore has to be bottom coded, with the counts masked so that the fact that it is 0% can't be determined.

Therefore, all small cell counts need to be masked, corresponding cells that would allow for unmasking to be masked, and percentages have to follow the small cell masking guide rules listed here. The full set of masking rules can be found in Masking Guidelines & Techniques.

Small Cell Masking Guide

Condition	Solution		
	Numerator	Denominator	Percent
If denominator is <5 including 0	Mask (*)	Mask (*)	Mask (*)
If percent is 100% or rounds to 100%	Mask (*)	Mask (*)	Top Code %
If percent is 0% or rounds to 0%	Mask (*)	Mask (*)	Bottom Code %
If the difference between the numerator and the denominator is fewer than 3	Mask (*)	Mask (*)	%
If the numerator is <5 including 0	Mask (*)	Mask (*)	%

Note: Based on Texas Education Agency Performance-Based Monitoring (2014b), but modified to include top and bottom coding requirements.