

NH Preschool Outcomes Measurement System (POMs)

Cell Size Explanation

CELL SIZE

- ▶ The recommended number for stable cell size reporting is 25 children or more.
- ▶ NH has approximately 172 districts reporting for POMS.
- ▶ NH is unique in that many of our reporting districts have very small populations.
- ▶ At the state level the impact is not a significant concern.

2009 – 975 children reported

2010 – 1070 children reported

2011 – 1069 children reported

2012 – 1077 children reported

- ▶ At the district/local level cell size in NH does pose a significant concern:

2009-2012 – Statewide Data

“N” = number of children exiting	2009 # of Districts	2010 # of Districts	2011 # of Districts	2012 # of Districts
0-5	85	90	92	88
6-10	28	21	26	34
11-15	10	19	12	7
16-24	10	7	8	10
25-49	5	6	10	5
50+	2	2	1	2

- Of those districts with an N of 25 or greater, only Nashua, Manchester and Keene (reports as SAU instead of individual districts) consistently have an “N” of 25 or greater.
In 2009, NH had only 7 out of 140 districts reporting 25 or more children.
In 2010, NH had only 8 out of 145 districts reporting 25 or more children.
In 2011, NH had only 11 out of 149 districts reporting 25 or more children.
In 2012, NH had only 7 out of 146 districts reporting 25 or more children.
- By contrast, NH highest numbers of reported children is in the 0-5 category.
2009 = 85 out of 140 districts reported children in the 0-5 category.
2010 = 90 out of 145 districts reported children in the 0-5 category.
2011 = 92 out of 149 districts reported children in the 0-5 category.
2012 = 88 out of 146 districts reported children in the 0-5 category.

WHY CELL SIZE MATTERS

- ▶ There is always some degree of fluctuation in measurement.
- ▶ How do we take that fluctuation into account?
 - If we expect a lot of fluctuation we want to communicate that so stakeholders (administrators, school boards, public) are not surprised if they see big changes from year to year.
- ▶ The lack of precision in a number comes from measurement error and sampling error.
 - Measurement error differs across local areas and is estimated through studies of the reliability and validity that describe the accuracy of measurement – in this case AEPSi and TS GOLD.
 - Sampling error occurs even in perfect measurement and changes based on the number of children included in the estimate – Cell Size.
- ▶ For our purpose only sampling error matters.

SAMPLING ERROR

- ▶ When we compute a summary statement value for a program, this value is one of many that could have resulted given the same children and same program and same instrument.
- ▶ The degree to which an outcome measurement might change when the same children participated in the same programs and were measured using the same process is important to know.