Proposed B-13 Sampling Plan

Goals of the B-13 Sampling Frame

For this new sampling strategy, the Michigan Department of Education, Office of Special Education (OSE) is assuming a more homogenous response distribution of 90% (compared to the more conservative 50% used in the past). This 90% response distribution is based upon results from FFY 2007 and FFY 2008 data collection efforts, which saw Michigan's compliance rate with Indicator 13 increase to 87% in FFY 2007 and further still in FFY 2008 (Indicator 13 data was collected for internal state use during FFY 2008—using the previous checklist). Assuming a 90% response distribution allows the OSE to pull fewer records to achieve the targeted margin of error in each LEA. Further, using the 90% response distribution with a targeted margin of error is a more equitable means of providing more representative local data than other methods, such as oversampling.

The OSE anticipates that this level of investment will be necessary for at least a few years as a new baseline pattern is established. The OSE will monitor results and request approval from the Office of Special Education Programs (OSEP) to make appropriate adjustments to the sampling protocol.

The sampling strategy proposed here will provide statewide representative results within +/- 0.5% at the 95% confidence level and will include data from every LEA with eligible students every year.

This plan reflects Michigan's commitment to the importance of quality IEPs and the impact that this improvement strategy can have on other secondary transition indicators such as graduation (B-1), dropout (B-2), and post-school outcomes (B-14). This sampling strategy will continue to provide statewide representative results. It will also provide more timely and reliable local education agency (LEA) data for local improvement planning and professional development activities. In addition, this strategy will increase the number of LEAs that are included annually in the public reporting and Determinations process.

Sampling Frame

Beginning in FFY 2009, Michigan is proposing a statewide representative sample that is stratified by LEA. The sampling frame uses a 90% response distribution assumption and a 5-10% margin of error to determine sample size in each LEA:

- Any LEA with fewer than 50,000 enrolled students will be sampled to achieve a margin of error within +/- 10% at the 95% confidence level.
- Any LEA with 50,000 or more enrolled students will be sampled to achieve a margin of error within +/- 5% at the 95% confidence level.

Methodology

Michigan's sample of IEPs for Indicator 13 data collection is drawn from the annual special education child count of students. Any student with an IEP age 16-26 in this count is included in the eligible universe for sampling. For federal reporting, this is narrowed down to 16-21 year olds and weights by demographic strata are focused on this cohort, rather than the 16-26 year old cohort across the state.

Table 1 shows the sample size per LEA for the various sampling bands. LEAs with 7 or fewer eligible students include every student IEP in their sample.

Table 1: SPP-13 Sample by Number of Eligible Students per LEA.*

Number of Eligible Students for B-13 Data Collection in LEA	Sample Size
1-7	ALL
8	7
9-10	8
11	9
12-13	10
14-15	11
16-17	12
18-20	13
21-22	14
23-25	15
26-28	16
29-32	17
33-36	18
37-40	19
41-46	20
47-51	21
52-58	22
59-66	23
67-76	24
77-87	25
88-101	26
102-119	27
120-143	28
144-174	29
175-220	30
221-291	31
292-417	32
418-704	33
705-1991	34
1992+	134

*The sample size in this table is based upon a 10% margin of error, with one exception. When there are districts in the 1992+ sampling band and the districts have more than 50,000 enrolled students, the 1992+ sampling band uses the 5% margin of error (hence the jump from 34 to 134 sampled students).

For LEAs with eight (8) or more eligible students, the number of student IEPs to review in each LEA is determined using the following sample size calculation:

$$\frac{[(z)^2 \text{ X (p) X (Number of Eligible Students)}]}{[(z)^2 \text{ X (p)}] + [(\text{Number of Eligible Students} - 1) \text{ X (Margin of Error)}^2]}$$

- z is the standard deviation value, and reflects the desired confidence level
  - For a 95% confidence level, z = 1.96
- p is the probability value, and reflects the selected response distribution
  - For a 90% response distribution, p = [(.90) X (100 - .90)] = .09
- Number of eligible students is determined using the annual special education child count of students age 16-21 with an IEP in each LEA
- Margin of error is set based upon the total enrollment for the LEA:
  - For LEAs with fewer than 50,000 enrolled students, it is 10% (.10)
  - For LEAs with 50,000 or more enrolled students, it is 5% (.05)

For LEAs with fewer than 50,000 enrolled students, the sample size is based upon a 10% margin of error and the calculation is:

$$\frac{[(1.96)^2 \text{ X (.09) X (Number of Eligible Students)}]}{[(1.96)^2 \text{ X (.09)}] + [(\text{Number of Eligible Students} - 1) \text{ X } (0.10)^2]}$$

For LEAs with 50,000 or more enrolled students, the sample size is based upon a 5% margin of error and the calculation is:

$$\frac{[(1.96)^2 \text{ X (.09) X (Number of Eligible Students)}]}{[(1.96)^2 \text{ X (.09)}] + [(\text{Number of Eligible Students} - 1) \text{ X } (0.05)^2]}$$

The raw sample size calculations are then rounded up to the nearest whole number. The resulting whole number is the sample size used in each LEA. Using the calculated sample size for each LEA, a random sample of student IEPs is then generated using SAS software.

The list of student IEPs included in each LEA sample is then distributed through the secure website used for data collection and reporting of Indicator 13.

Because there is a gap between the annual special education child count date, and the date that the IEP is audited for compliance with SPP-13, a protocol exists to address this issue. Students who are no longer receiving services in the district they were sampled in are coded as having left the district and then filtered from the sample (for example, if the student moved to another district, exited special education, or graduated since the annual special education child count).

Because Michigan's ISD transition coordinators and LEAs are required to account for every IEP in their sample (either with data on the compliance of the IEP, or by indicating the student is no longer receiving services in their district), the response rate is very high (>90%). This reduces the need for oversampling to achieve target response levels. At the same time, because this sampling frame samples each LEA with eligible students every year, and uses a consistent margin of error criteria to randomly select student IEPs, the OSE anticipates that the sample will be

representative of the population of Michigan students eligible for Indicator 13 review. The OSE will ensure the sample is representative by using a differences in proportions test and applying post-stratification weights to the final sample. In addition to examining the statewide sample, each LEA with 50,000 or more enrolled students will be checked individually to ensure it is representative of the population.

After data collection is complete, students who are no longer in their sampled district are removed from the sample, and the final sample is checked for representativeness against the known universe of students with IEPs eligible for SPP-13 review (including age, race/ethnicity, gender, and primary disability). The differences in proportions test (z-test) will be used to look for any variation between the final sample and the known universe of students with IEPs (at the SEA level, and for each LEA with 50,000 or more enrolled students). A 95% confidence level will be used, and any statistically significant variation ($p<.05$) will be noted.

Beginning in FFY 2009, the OSE will be applying post-stratification weighting to the sample based upon the differences in proportions testing of population demographics. If there is a statistically significant variation between the final sample and the known universe of students with IEPs eligible for SPP-13 review, appropriate weights will be applied.

Both weighted and unweighted results will be reported in the APR, along with detailed tables showing the results of the representativeness testing, by SEA and for each LEA with 50,000 or more enrolled students. These tables will include the distribution and representativeness of the above demographics for the original sample, as well as the final sample (after removing students who are no longer in their sampled district), and will note any statistically significant variation used for the weighted analysis. If the sample is less representative than anticipated, the OSE will seek OSEP approval for any changes to the sampling protocol.

Regardless of weighting, since Indicator 13 is a compliance indicator, any non-compliant IEPs will be corrected according to the data collection protocol.