

**Response Rates and Non-Response Bias:  
How Representative are Your Respondents?**

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**OSEP Data Managers Meeting**

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# Starting Right...

- Establish target group (census or representative sample)
- Get contact info for **ALL** in target group
- Test respondents for “representativeness”
- Discuss results in context of missing data and bias

# What we'll share:

- Focus on Part B, Indicator 14
- Response rates and “representativeness”
- Tools and resources

# IDEA Purpose

To ensure that all children with disabilities have available to them a free appropriate public education that emphasizes special education and related services designed to meet their unique needs and prepare them for further education, employment, and independent living;

Source: IDEA Final Regulations Sec. 300.1 (a)

# **National Post-School Outcomes Center: Who we are, what we do**

NPSO is a national technical assistance and dissemination center funded by the U.S. Department of Education Office of Special Education Programs (OSEP).

University of Oregon  
SSET and TACS/WRRC  
Subcontract with Westat

# NPSO Charge

Assist State Education Agencies  
to develop practical and rigorous  
data collection systems to describe  
the **further education and competitive  
employment** experiences of youth with  
disabilities as they transition from high school  
to adult life

(Part B, Indicator 14)

## **Indicator 14:**

Percent of youth who had IEPs, are no longer in secondary school and who are competitively employed, enrolled in some type of postsecondary school, or both, within one-year of leaving high school.

(20 U.S.C. 1416(a) (3) (B))

# Indicator 14 Calculation

## **NUMERATOR =**

Unduplicated sum of:

# competitively employed (CE)

+

# enrolled in postsecondary school (PSS)

+

both CE and PSS

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## **DENOMINATOR =**

# of respondents to survey/interview

**(always provide #s)**

# SPP/APR Instructions Specify:

When sampling is used, a description of the sampling methodology outlining how the design will yield **valid and reliable** estimates must be submitted to OSEP...

Description must also include how the State Education Agency **addresses any problems with:**

- **response rates;**
- **missing data; and**
- **selection bias (emphasis added)**

(Source: Part B SPP/APR Instruction Sheet - Section 1-2)

# **NPSO/Westat Document Purpose:**

- Introduction to the nonresponse bias relative to Indicator 14
  - Applicable to any SPP/APR indicator based on survey data
- Heighten awareness of the importance of
  - Reporting response rates
  - Identifying and discussing nonresponse bias
- Not a “how to” statistical cookbook

# Document's Organization:

**Practical** answers to five questions:

- What is a response rate?
- How high a response rate?
- What is nonresponse bias?
- How do you know if there is nonresponse bias?
- What to do to address nonresponse bias?

# Survey Challenges

- Accurate contact information
- Locating former students - Dropouts
- Honesty of responses
- “Representativeness of respondents (bias)

# What is a Response Rate?

- Measure of response achieved in collecting survey data
- The ratio of the number of completed surveys to the total number of surveys that were intended to be completed

# Response Rate Calculation

**NUMERATOR =**

# of respondents  
to the survey/interviews

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**DENOMINATOR =**

# of school leavers including those who graduate, leave with certificate (etc), age out, drop out in the school year **minus** drop outs who returned and those who died

**(always provide #s)**

# How High a Response Rate?

- What is important is whether respondents are representative!
- States must use their data regardless of response rate
- Describe respondents
- Use data with caution

# What is Nonresponse Bias?

- Respondents are **different** from the target population
- Limits use of data to make inferences about the target population
- Results cannot be generalized to entire target population

# How Do You Know When There Is Nonresponse Bias?

- Assess how survey respondents are different from target population
- Key characteristics:
  - gender
  - race/ethnicity
  - disability category
  - type of exit
  - age

# NPSO Response Calculator

Compares similarity/differences of respondents to target group

(either census or sample)

Access Excel calculator, instructions and demo at:

<http://www.psocenter.org/analysis.html>

# NPSO Response Calculator

The following two slides contain screen shots of the Response Calculator (Excel)

For **each** district in the sample or census:

1. Enter demographic data for all target leavers
2. Enter demographic data for all respondents
3. Calculator identifies response rates for each demographic
4. Calculator identifies differences between Respondent and Target Leaver Groups for each demographic (+/-3%)

Access Excel calculator, instructions and demo at:

<http://www.psocenter.org/analysis.html>

# **Address Problems with Response Rates, Missing Data, Selection Bias**

- Consider improved data collection efforts
- Share what you know
- Reflect on sources of bias
- Caution users to the limitations
- Identify improvement activities for response rate and representativeness
- Consider applying sample weights

# **Additional NPSO Tools and Resources**

- Strategies to Increase Response Rate
- Training Interviewers
- Teachers as Partners
- Parent Flyers
- Monthly community calls

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# Questions ???

Would teleconferences be helpful for sharing strategies to:

- enhance response rate
- reduce missing data
- reduce selection bias
- Improve representativeness

# Contact Info...

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