No Response Is a Response: How Nonresponders Can Influence Your Data
Presenters

**Nashville, TN - June 6–7, 2022**
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Carol Seay, IDEA Data Center
Jennifer Story, Washington Office of Superintendent of Public Instruction

**Virtual - June 21–23, 2022**
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Participant Outcomes

• Describe the impact that nonresponse bias has on the quality and usefulness of state data
• Identify strategies to assess if nonresponse bias is affecting survey results
• Identify strategies to reduce potential bias and improve data quality
Agenda

• Overview of nonresponse bias
• Discussion and state presentation
• Group activity
• Strategies and resources
• Wrap-up
Overview of Nonresponse Bias
What Is Nonresponse Bias?

• A significant number of people do not respond to the survey
• Nonresponders have different characteristics from those who do respond
• These characteristics are important to the study
  – Bias is most likely to influence the results of a study when nonresponders differ in ways that are related to the outcome you are interested in (e.g., parental involvement, post-school outcomes)
How Does Response Rate Factor In?

• Response rate
  – The most widely used indicator of survey quality
  – A valuable data quality measure because of its relation to nonresponse bias
• High response rate limits the maximum nonresponse bias
• Low response rate increases the likelihood of potential for nonresponse bias in the survey
• However, response rate ≠ bias
Why Is Data Representativeness Important?

• Indicates extent to which the data that we collect reflect the population we are surveying on specific characteristics
• Informs if the results are generalizable (i.e., reflect reality for the entire target population) and can be interpreted meaningfully
Why Does Nonresponse Bias Matter?

- Our ability to generalize from the results is limited
- The data are not as complete, accurate, or useful
- Decisions we make based on the data are misinformed
- Considering response rate, data representativeness, and nonresponse bias helps to strengthen data use and data collection processes, including survey design
## An Example: Indicator 8

<table>
<thead>
<tr>
<th>Race</th>
<th>Percentage of child count</th>
<th>Percentage of survey respondents</th>
<th>Percentage agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian/Alaska Native</td>
<td>3.0%</td>
<td>2.5%</td>
<td>79.5%</td>
</tr>
<tr>
<td>Asian</td>
<td>5.9%</td>
<td>2.0%</td>
<td>77.3%</td>
</tr>
<tr>
<td>Black</td>
<td>39.5%</td>
<td>19.3%</td>
<td>80.5%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>18.3%</td>
<td>8.9%</td>
<td>65.2%</td>
</tr>
<tr>
<td>Native Hawaiian/Pacific Islander</td>
<td>1.1%</td>
<td>0.9%</td>
<td>70.5%</td>
</tr>
<tr>
<td>Two+ Races</td>
<td>8.0%</td>
<td>6.0%</td>
<td>78.2%</td>
</tr>
<tr>
<td>White</td>
<td>25.3%</td>
<td>61.3%</td>
<td>89.8%</td>
</tr>
</tbody>
</table>

**Overall percentage agreement**: 78.6%

**What potential for nonresponse bias do you see?**
Discussion
OSEP Requirements Related to Nonresponse Bias

• Describe strategies that will be implemented that are expected to increase the response rate year over year, particularly for those groups that are underrepresented.

• Describe the analysis of the response rate including any nonresponse bias that was identified, and the steps taken to reduce any identified bias and promote response from a broad cross section of parents of children with disabilities/youth who are no longer in secondary school and had IEPs in effect at the time they left school.
Indicator 8 in Washington State

- NCSEAM Survey (26 questions)—since 2006
- Paper/pencil, 12 languages
- Tied to monitoring
- 10,000–30,000 surveys per year
- Results analyzed by region, school building, race/ethnicity, home language, grade level, disability category, least restrictive environment (LRE) category, & school type
Current Strategies to Increase Representativeness

• Survey is available in the 12 most common languages in the state
• District partners send information to parents ahead of the surveys going out
• Several reminders are sent to parents during the survey window
• Collection of feedback from parents who have completed the survey
## Washington’s Indicator 8, 2020–21

<table>
<thead>
<tr>
<th>Race/ethnicity</th>
<th>Percentage of total surveyed</th>
<th>Percentage of survey respondents</th>
<th>Percentage agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian/Alaska Native</td>
<td>1.7%</td>
<td>1.2%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Asian</td>
<td>1.5%</td>
<td>2.3%</td>
<td>46.4%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>2.8%</td>
<td>2.4%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>15.3%</td>
<td>12.9%</td>
<td>44.0%</td>
</tr>
<tr>
<td>Native Hawaiian/Other Pacific Islander</td>
<td>0.7%</td>
<td>1.0%</td>
<td>75.0%</td>
</tr>
<tr>
<td>Two or more races</td>
<td>10.4%</td>
<td>10.9%</td>
<td>38.5%</td>
</tr>
<tr>
<td>White</td>
<td>67.6%</td>
<td>69.3%</td>
<td>41.4%</td>
</tr>
</tbody>
</table>

**Overall percentage agreement:** 42.0%
## Washington’s Indicator 8, 2020–21

<table>
<thead>
<tr>
<th>Disability</th>
<th>Percentage of total surveyed</th>
<th>Percentage of survey respondents</th>
<th>Percentage agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autism</td>
<td>12.9%</td>
<td>18.4%</td>
<td>41.4%</td>
</tr>
<tr>
<td>Communication disorder</td>
<td>15.5%</td>
<td>15.3%</td>
<td>55.6%</td>
</tr>
<tr>
<td>Developmental delay</td>
<td>12.3%</td>
<td>14.8%</td>
<td>45.9%</td>
</tr>
<tr>
<td>Emotional disturbance</td>
<td>3.1%</td>
<td>2.7%</td>
<td>24.2%</td>
</tr>
<tr>
<td>Intellectual disability</td>
<td>3.6%</td>
<td>3.2%</td>
<td>43.6%</td>
</tr>
<tr>
<td>Multiple disabilities</td>
<td>2.3%</td>
<td>3.2%</td>
<td>35.0%</td>
</tr>
<tr>
<td>Other health impairment</td>
<td>19.8%</td>
<td>18.5%</td>
<td>36.2%</td>
</tr>
<tr>
<td>Specific learning disability</td>
<td>29.1%</td>
<td>22.3%</td>
<td>38.5%</td>
</tr>
</tbody>
</table>

*Overall percentage agreement: 42.0%*
Moving Forward—State Design Team

### Washington State
- Asian: 67.3%
- African American: 0.6%
- Am Ind/AK Native: 3.9%
- Hispanic: 3.9%
- Native HI/Pac Isl: 1.1%
- White: 2.0%
- Two or more: 4.9%
- NA: 8.9%

### Parent Engagement
- Asian: 71.1%
- African American: 6.7%
- Am Ind/AK Native: 2.2%
- Hispanic: 4.4%
- Native HI/Pac Isl: 6.7%
- White: 2.2%
- Two or more: 2.2%
- NA: 0.6%
Group Activity
Group Activity: Thinking About Survey Nonresponse

• Scenario: Making decisions based on data
• True–False activity on representativeness and nonresponse bias
Another Example: Indicator 14

<table>
<thead>
<tr>
<th>Exit reason</th>
<th>Percentage of total leavers</th>
<th>Percentage of survey respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Diploma</td>
<td>53.8%</td>
<td>76.3%</td>
</tr>
<tr>
<td>Certificate</td>
<td>7.2%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Dropped Out</td>
<td>38.9%</td>
<td>20.2%</td>
</tr>
</tbody>
</table>

Overall response rate: 54.8%

Indicator results:
14A: 35.6%
14B: 58.9%
14C: 84.6%
How does your state collect post-school outcome data?

Source: Third-party application (Mentimeter).
Strategies and Resources
Strategies Before/During Data Collection

• Remember: Prevention is the best remedy!
• Assess risk of nonresponse so you can mitigate it
• Design your sample for best coverage/representativeness
• Use good survey design
• Use collection and follow-up best practices
Strategies After Data Collection

• Assess nonresponders through follow-up or level of effort analysis
• Use postsurvey adjustment techniques to help reduce nonresponse
  – Statistical weighting
  – Imputation of missing data
Resources

• **SEA Data Processes Toolkit** (Protocols for Indicators 8 and 14)
• **Parent Involvement Data: How to Measure and Improve Representativeness for Indicator B8**
• **Post-School Outcomes: Response Rates and Nonresponse Bias**
• **Response Rate, Representativeness, and Nonresponse Bias—They All Matter**
• Forthcoming: IDC Nonresponse Bias Analysis Tool
Contact Us

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What actions will you take to commit to being a Data Quality Influencer?
For More Information

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