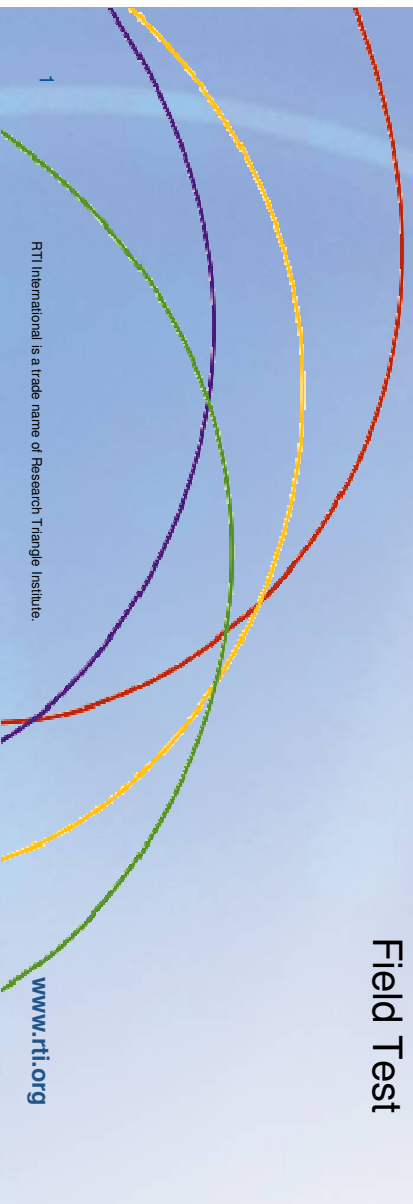


## 2008-12 Baccalaureate and Beyond Longitudinal Study

Selected Results of the B&B:08/12  
Field Test



### Propensity Modeling Design

- Model development used variables from NPSAS:08 to predict response to B&B:08/09
- A list of candidate variables was developed based on the propensity modeling literature and previous experience with this population
- Bivariate analyses were used to narrow candidate list
- Regression analyses were conducted to confirm multivariate relationships
- C&RT analysis was done to check for interaction effects in the initial list of candidate variables

## Propensity Modeling Design (continued)

Data from the base year study (NPSAS:08)

- Age
- **Interview response status (responded/did not respond) \***
- Responded during early completion period indicator
- **Responded before prompting started indicator \***
- Case received a prompting letter indicator
- Ever refused indicator
- **Call count \***
- Located for NPSAS:08 indicator
- NCOA match indicator
- ACCURINT match indicator
- **NSLDS match indicator \***
- Federal aid amount received
- CPS match indicator
- **TELEMATCH match indicator \***
- Institution control
- **Parents' education \***

3 \* Significant at  $p < .05$

## Propensity Modeling Design (continued)

Contact data available at the start of the first follow-up (B&B:08/09)

- Student address on file indicator
- Parent address on file indicator
- **“Other” address on file indicator \***
- Email address on file indicator
- Student phone number on file indicator
- Parent phone number on file indicator
- “Other” phone number on file indicator

4 \* Significant at  $p < .05$

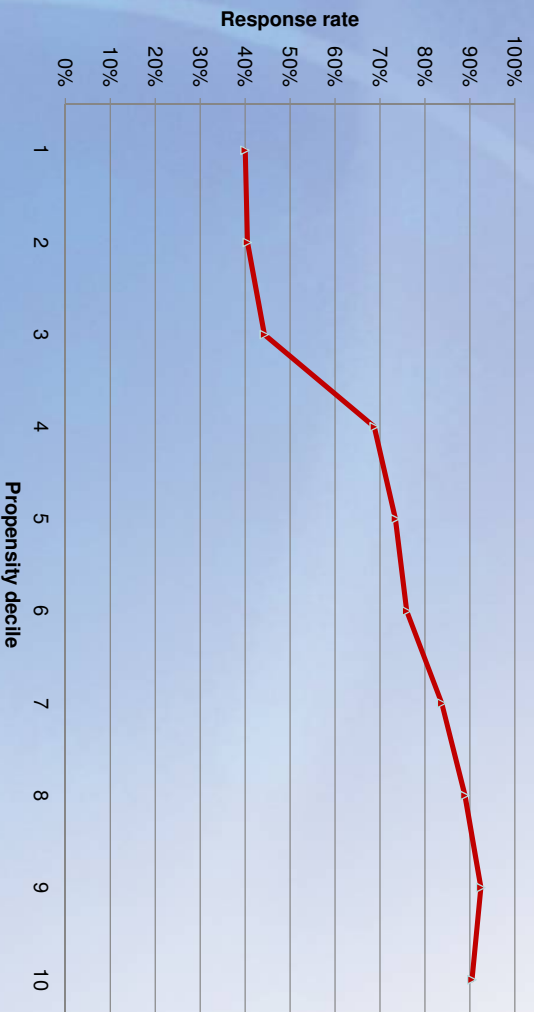
## Propensity Modeling Design (continued)

- B&B:08/12 sample was scored using B&B:08/09 variables and parameter estimates from the development model
- Predicted propensity scores were reviewed and a cut point determined
- Final distribution was 65% low propensity, 35% high propensity
- Propensity scores ranged from .36 to .96 with a mean of .77

5

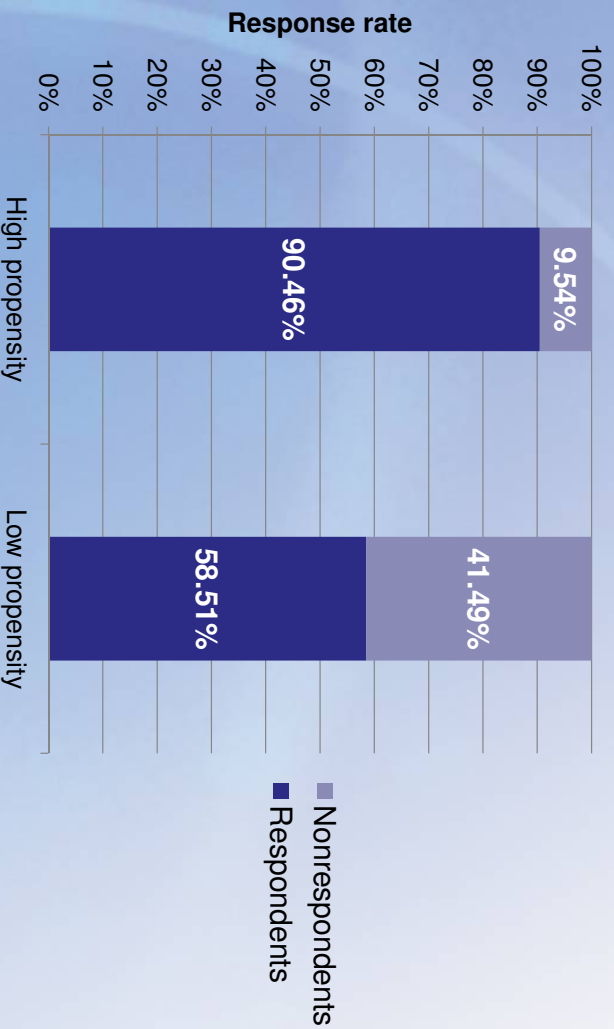
## Can We Predict Response?

Response rate by propensity decile for incentive experiment control group



6

## Did The Model Predict Participation?



7 Note: Control cases only.  $\chi^2 = 88.34$ ;  $p < .001$

## Unit Level Bias Analysis – B&B:08/12 FT

| Group  | Mean relative bias |
|--|--------------------|
| Overall  |                    |
| All  | 4.17               |
| All with low propensity cases treated as nonrespondents          | 6.84               |
| High propensity  | 7.29               |
| Low propensity   | 3.94               |
| Low propensity only  |                    |
| Incentive amount same as offered in B&B:08/09 (control)          | 4.08               |
| Incentive amount \$15 more than offered in B&B:08/09 (treatment) | 7.01               |
| High propensity with....   |                    |
| Low propensity control   | 4.22               |
| Low propensity treatment   | 7.05               |

## Unit Level Bias Analysis – B&B:08/09 FS

| Group  | Mean relative bias |
|--|--------------------|
| Overall  |                    |
| All  | 3.90               |
| All with low propensity cases treated as nonrespondents  | 9.40               |
| All with low and medium propensity cases treated as nonrespondents   | 17.89              |
| All with NPSAS:08 respondents who were B&B:08/09 nonrespondents excluded   | 3.72               |
| All with NPSAS:08 respondents who were B&B:08/09 nonrespondents treated as respondents and double nonrespondents treated as nonrespondents | 12.39              |

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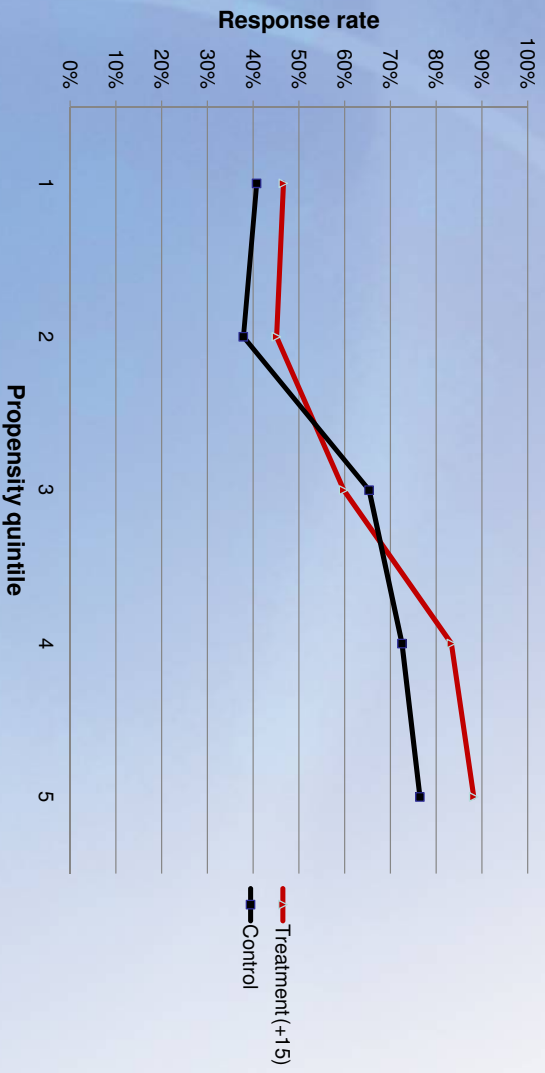
## Key Variables Analysis

|   | High<br>(Top 1/3) | Low<br>(Bottom 2/3) | Low<br>Control | Low<br>Treatment |
|---|-------------------|---------------------|----------------|------------------|
| Earned graduate degree                                  | 22.7              | 18.4                | 18.4           | 18.5             |
| Received industry certification or occupational license | 26.1              | 32.8                | 32.8           | 29.0             |
| Received vocational or technical certificate            | 12.4              | 12.9                | 12.9           | 15.8             |
| Amount of private student loans since bachelor's degree | \$18,839          | \$21,060            | \$21,060       | \$33,620         |
| Worked for pay since earning bachelor's degree          | 98.8              | 97.3                | 97.3           | 97.2             |
| Current employment: Salary                              | \$32,271          | \$35,613            | \$35,612       | \$39,602         |
| Current employment: Hours per week                      | 37.6              | 40.9                | 41.0           | 41.5             |
| Looking for a job                                       | 29.8              | 28.8                | 28.8           | 29.66            |
| Has retirement account                                  | 67.5              | 69.6                | 69.6           | 66.9             |
| Monthly rent or mortgage payment amount                 | \$867             | \$877               | \$877          | \$926            |
| Financial stress: Phone                                 | 6.3               | 8.6                 | 8.6            | 7.7              |
| Financial stress: Mortgage/rent/utility bill            | 14.6              | 15.5                | 15.5           | 13.0             |
| Financial stress: Food                                  | 17.7              | 23.2                | 23.2           | 16.7             |
| Married   | 42.3              | 40.6                | 40.6           | 43.6             |
| Citizen   | 99.6              | 97.0                | 97.0           | 97.5             |
| Number of dependent children                            | .3                | .5                  | .5             | .5               |

10  Significant at p < .10 Significant at p < .05

## Can We Successfully Target Low-propensity Sample Members With Increased Monetary Incentives?

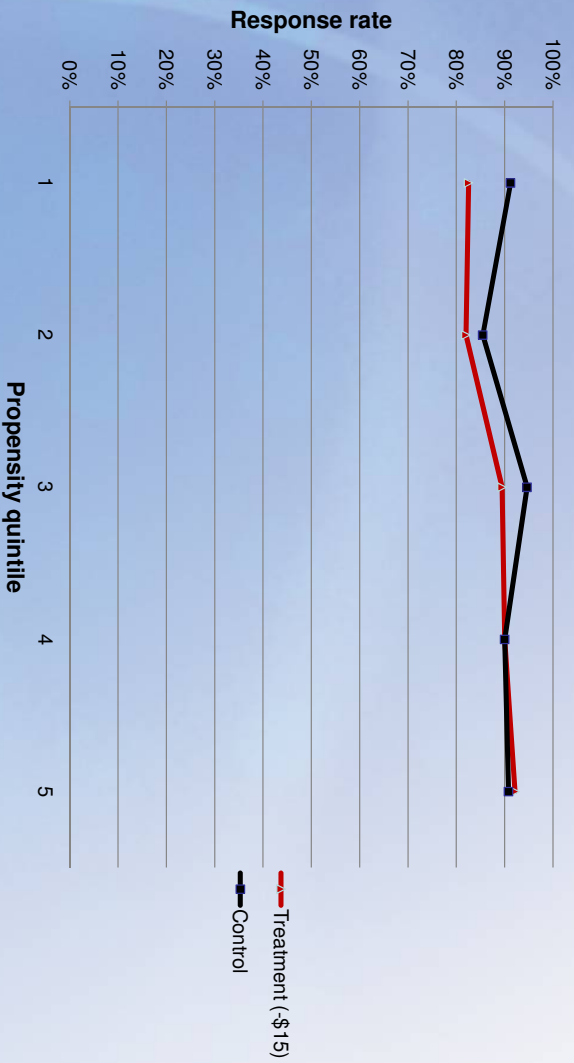
Response rate by propensity quintile for low-propensity treatment and control groups



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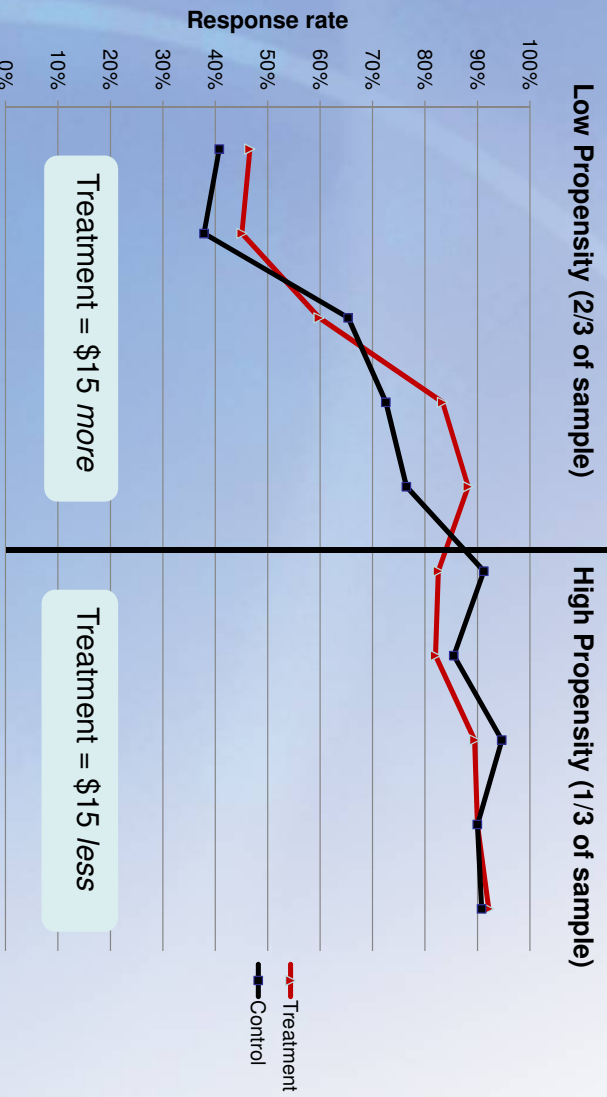
## Can We Lower Monetary Incentives for the High-propensity Cases Without Affecting Response Rates?

Response rate by propensity quintile for high-propensity treatment and control groups



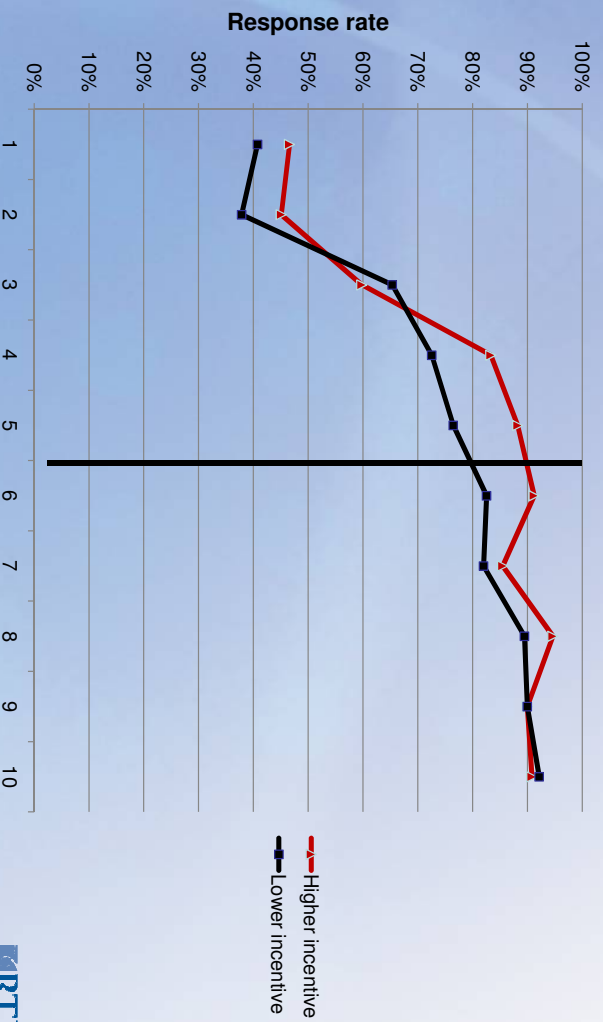
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## B&B:08/12 Field Test Response Rates, by Propensity Level and Experimental Condition



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## B&B:08/12 Field Test Response Rates, by Incentive Amount and Propensity Level



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## Propensity Experiment Conclusions

- We can predict propensity to respond well
- Low-propensity cases contributed a small amount to overall unit level bias but did not change parameter estimates significantly
- Higher monetary incentives are one way of targeting cases at the high end of the of the low-propensity group, but this may not reduce nonresponse error
- Higher monetary incentives are not very effective at increasing response among cases at the lowest end of the propensity continuum
- Overall response rates in the high-propensity group are not affected by a decrease in monetary incentives. However, the average call count (a measure of “level of effort” to obtain a complete interview) was significantly higher among the treatment group

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## Full-Scale Recommendations – Incentives

| Propensity Level | Percent of Full-scale Sample | Incentive Offer |
|------------------|------------------------------|-----------------|
| Low              | Lowest 30%                   | \$55            |
| Medium           | Middle 40%                   | \$35            |
| High             | Highest 30%                  | \$20            |

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## Full-Scale Recommendations – Survey Methods

- **Locating**
  - Pre-Intensive tracing
  - New tracing sources (Spokeo, Fast Data's Premium Address Service, etc.)
  - Consider increased use of the more costly interactive tracing searches, such as Choice Point
  - Revisit the utility of social network contacting/locating (has not been very effective in the past, but revisiting Facebook/LinkedIn, etc.)
  - \$10 incentive for address update prior to data collection

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## Survey Methods (continued)

- **Communication**
  - More frequent contacts
  - Contact parents
  - More tailored messages

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## Survey Methods (continued)

- Offering alternate data collection methods
  - CATI Strategy
    - Select pool of highly skilled interviewers
    - Closer monitoring of low-propensity cases
  - Consider targeted field effort
  - Abbreviated interview, after unsuccessful attempts to obtain a complete interview

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