

# TBI Survey Design Experiments

The following memo outlines the survey design experiments and/or updates that were implemented in the second half of the 2018-2019 TBI to address sample representativeness and overall survey response. RSG has included an update on the relative cost and timing of each experiment. These items were not within the scope or contract. However, given the projected additional budget available, RSG recommended implementing a combination of the following experiments to improve the long-term effectiveness of the TBI program.

## ITEM 1: Offer higher incentive to hard-to-reach demographic groups after recruit

<b>ACTION</b>	After collecting information on a household in the recruit/signup survey, a \$50 incentive was offered to households meeting hard-to-reach demographic criteria. This was only implemented for households that recruited either online or through the call center.
<b>GOAL</b>	<p>Improve <u>conversion</u> rates for hard-to-reach demographic groups.</p> <ul style="list-style-type: none"> <li>NOTE: It's guaranteed that the higher incentive was only offered to hard-to-reach demographic groups, so the goal was to increase the proportion of hard-to-reach persons in the overall sample.</li> </ul>
<b>COST</b>	Approximately \$28,395 in incentive expenses.
<b>TIMING</b>	First travel date with differential incentives was 6/24/2019
<b>RESULTS</b>	The higher incentives increased the conversion rate of hard-to-reach households by 5.7% <sup>1</sup> . Based on the conversion rates observed before and after the higher incentive offering approximately 68 additional hard-to-reach completes were obtained by offering a higher incentive of \$50 rather than \$10 or \$15.

**TABLE 1 CONVERSION RATE ANALYSIS BEFORE AND AFTER DIFFERENTIAL INCENTIVE OFFERING**

TIMEFRAME	HOUSEHOLD DEMOGRAPHICS	RECRUITS	COMPLETES	CONVERSION RATE
Before Offering	General Pop (not hard-to-reach) HHs	8,628	4,118	48%
	Hard-to-reach HHs	2,774	1,283	46%
After Offering	General Pop (not hard-to-reach) HHs	2,650	1,244	47%
	Hard-to-reach HHs	1,088	568	52%
<b>Total</b>		<b>15,140</b>	<b>7,213</b>	<b>48%</b>

<sup>1</sup> Increase is statistically significant at  $\alpha = .05$

**TABLE 2 SUMMARY OF INCENTIVE COSTS BASED ON INCENTIVE AMOUNT OFFERED**

PARTICIPATION GROUP	INCENTIVES DISTRIBUTED (per adult for group 1, per HH for group 2)	INCENTIVE COST WITH \$50	INCENTIVE COST IF \$15 OR \$10 WAS MAINTAINED	HH COUNT	INCENTIVE COST PER HH (\$50)	INCENTIVE COST PER HH (\$15 OR \$10)
1 (rMove diary)	601	\$30,050	\$9,015	385	\$78.05	\$23.42
2 (rSurvey diary)	184	\$9,200	\$1,840	184	\$50.00	\$10.00
<b>TOTAL</b>	<b>785</b>	<b>\$39,250</b>	<b>\$10,855</b>	<b>569</b>	<b>\$68.98</b>	<b>\$19.08</b>
		<b>Difference</b>	<b>\$28,395</b>			

**ITEM 2: Targeted oversampling for hard-to-reach HHs based on previous sample orders**

Oversample specific block groups within the hard-to-reach BG segment with the highest completion rate for hard-to-reach households. A hard-to-reach household has been defined as a household with either:

- Non-white household member(s)
- And/or a household income less than \$35,000.

**ACTION**

The intention of this oversample segment is to reach more non-white persons and households with incomes less than \$35,000. While this oversample will not result in the study matching ACS demographics for race, ethnicity, and income for the region, it will increase the overall number of hard-to-reach households in the final sample

**Increase the number of complete low-income households and minority persons in the sample.**

Estimated Outcome:

**GOAL**

- 368 additional completes (approximate)
- 176 of these additional completes (48%) would meet hard-to-reach criteria for race and income (approximate)

**COST**

Approximately \$29,000 in expenses *(based on sending 15,000 additional mailings and paying incentives for 393 additional completes in the oversample segment)*

**TIMING**

Sample Order 4 (first mail drop 7/19/2019)

**RESULTS**

The targeted oversample segment yielded a total of 393 completes overall exceeding the its target of 368 completes and resulting in an additional 204 hard-to-reach household completes.

**TABLE 3 RESPONSE BY SAMPLE SEGMENT FOR SAMPLE ORDER 4**

Segment	Invites	Recruits	Recruit Rate	Conversion Rate	Completes	Complete Rate
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Oversample BGs	15,000	717	4.8%	55%	393	2.6%
Core Rural BGs	6,800	292	4.3%	39%	114	1.7%
Core Urban BGs	32,998	1,842	5.6%	50%	920	2.8%
Hard-to-reach BGs	10,000	461	4.6%	50%	230	2.3%
Rural Ring BGs	12,498	467	3.7%	48%	224	1.8%
<b>Total</b>	<b>77,296</b>	<b>3,779</b>	<b>4.9%</b>	<b>50%</b>	<b>1,881</b>	<b>2.4%</b>

**TABLE 4 COMPARISON OF HARD-TO-REACH HOUSEHOLDS IN OVERSAMPLE SEGMENT VERSUS REGULAR SAMPLE SEGMENTS FOR SAMPLE ORDER 4**

SEGMENT	DEMOGRAPHICS	FORECAST COMPLETES	ACTUAL COMPLETES
Oversample	Hard-to-reach HHs	176 (48%)	204 (52%)
	General population HHs	192 (52%)	189 (48%)
<i>Oversample Subtotal</i>		<b>368</b>	<b>393</b>
Regular Sample	Hard-to-reach HHs	1,601 (100%)	341 (25%)
	General population HHs		1,147 (75%)
<i>Regular Sample Subtotal</i>		<b>1,601</b>	<b>1,488</b>
<b>Total Sample Order 4</b>		<b>1,969</b>	<b>1,881</b>

### ITEM 3: Travel date reassignment for hard-to-reach demographic groups

	Reassigned travel dates for hard-to-reach HHs that recruited, but never completed.
<b>ACTION</b>	Made reminder emails/phone calls (depending on information participants previously provided) to give them a second chance to participate.
<b>GOAL</b>	Improve <u>conversion</u> rates for hard-to-reach demographic groups.
<b>COST</b>	No additional expense cost, labor cost only
<b>TIMING</b>	6/24/2019
<b>RESULTS</b>	Reassigned travel dates yielded a small number of additional completions. A total of 1,445 hard-to-reach households who recruited, but never completed were selected for travel date reassignment. However, only 1.1% of the reassigned households went on to complete the study yielding 16 additional completes.

#### ITEM 4: Door-to-door outreach in select block groups with high concentration of hard-to-reach demographic groups

<b>ACTION</b>	The outreach firm, NewPublica, received an address list (and invitation mailing dates) of households in block groups with a higher proportion of hard-to-reach households. The outreach team performed door-to-door outreach visiting these invited households to encourage them to participate in the study.
<b>GOAL</b>	<b>Improve response rates overall for hard-to-reach demographic groups in selected block groups.</b>
<b>COST</b>	<b>Worked within the existing outreach budget to accomplish the door-to-door outreach efforts.</b> As of 2/28/2019, NewPublica had used approximately one third of their allotted budget. Approximately \$60,000 remained sample orders 3 and 4.
<b>TIMING</b>	Round 1 of the door-to-door outreach effort was performed for mail groups 15 and 16 as part of sample order 3. Mail groups 15-16 had letter drops on 5/20/2019 and 6/3/2019. Round 2 of the door-to-door outreach effort was performed for mail groups 20 and 21 as part of sample order 4. Mail groups 20-21 had letter drops on 8/26/2019 and 9/9/2019. The number of block groups visited was increased substantially for round 2 as shown below in Table 6 by the increased number of invitations.
<b>RESULTS</b>	Door-to-door outreach did not improve response rates for hard-to-reach demographic groups in the selected block groups. There was no significant difference in conversion or completion rates based on the experimental treatment.

**TABLE 5 RESPONSE RATES FOR BLOCK GROUPS WHERE ROUND 1 OF DOOR-TO-DOOR OUTREACH OCCURRED**

Timeframe	Invites	Recruits	Recruit Rate	Conversion Rate	Completes	Complete Rate
Mail Groups 12-14	418	17	4.1%	65%	11	2.6%
Outreach Round 1 Mail Groups 15-16	291	16	5.5%	44%	7	2.4%

*\*Table only summarizes response for block groups where door-to-door outreach occurred.*

**TABLE 6 RESPONSE RATES FOR BLOCK GROUPS WHERE ROUND 2 OF DOOR-TO-DOOR OUTREACH OCCURRED**

Timeframe	Invites	Recruits	Recruit Rate	Conversion Rate	Completes	Complete Rate
Mail Groups 17-19	1,440	61	4.2%	49%	30	2.1%



Outreach Round 2 Mail Groups 20-21	990	46	4.7%	50%	23	2.3%
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*\*Table only summarizes response for block groups where door-to-door outreach occurred. The number of block groups included in door-to-door outreach efforts was increased for Round 2.*

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