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Introduction

To increase self-response rates and decrease survey costs, in 2017 the Census Bureau tested the replacement of envelopes and postcards with pressure seal mailers for American Community Survey (ACS) mailing materials. A pressure seal mailer is a one-page document with a pre-applied adhesive that is folded and sealed with pressure.

Pressure Seal Mailers:

- Ranked high in cognitive testing as being effective at getting participants to notice, open, or respond to the package.
- Are more cost effective than mailing a letter and an envelope.
- Provide more privacy to include sensitive information (such as a user login code), while postcards cannot.

Experimental Design

Table 1: List of Mailings by Treatment for the 2017 Pressure Seal Mailing Materials Test

	1st Mailing	2nd Mailing	3rd Mailing ¹	4th Mailing ¹	5th Mailing²
Production	Initial Package	Reminder Letter	Paper Questionnaire Package	Reminder Postcard	Additional Reminder Postcard
Treatment 1 (T1 - Control)	No change	No change	No change	No change	No change
Treatment 2 (T2)	No change	Pressure seal (trifold)	No change	No change	No change
Treatment 3 (T3)	No change	Pressure seal (trifold)	No change	No change	Pressure seal (trifold)
Treatment 4 (T4)	No change	Pressure seal (trifold)	No change	Pressure seal (bifold)	Pressure seal (trifold)

¹ Sent only if a return was not received prior to the third mailing.
² Sent only if a return was not received and the sampled unit was not eligible for telephone follow-up. Note: This field experiment was performed using the 2017 ACS May sample panel.

Research Methodology

Response Analysis:

To determine the effects of the pressure seal mailers on response we calculated self-response return rates using the following formula:

Self-Response Return Rates = Number of sample addresses that provided a self-response

Total number of mailable and deliverable sample addresses

This formula was calculated for the three different mailing universes seen below.

 Table 2: Unweighted Counts of Sample Addresses Used for Return Rate Calculations

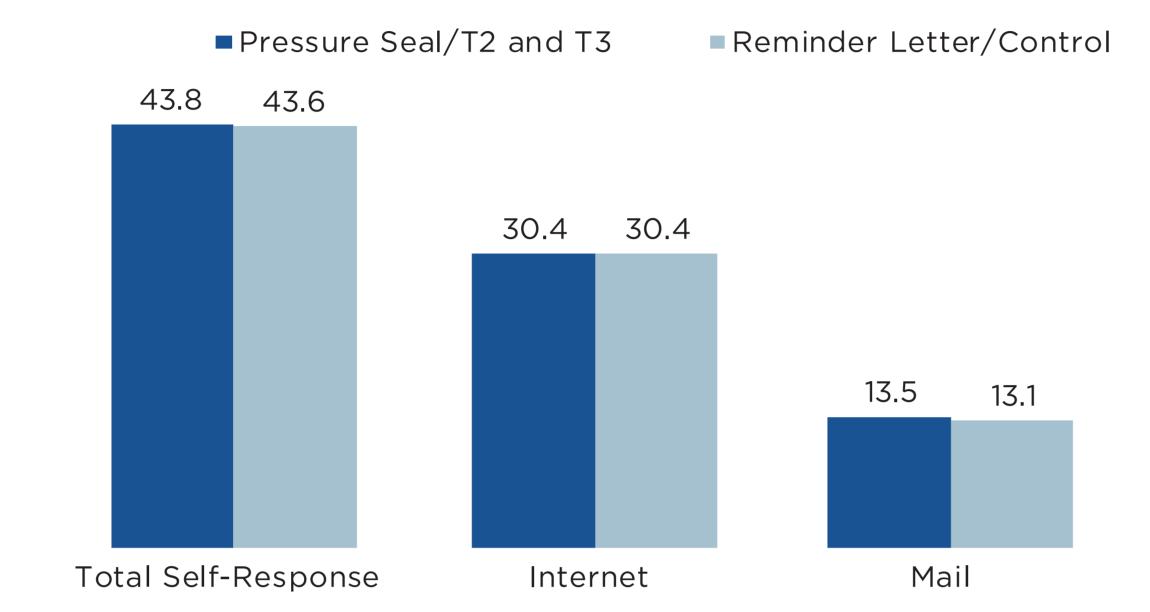
Mailing Universe	Comparison	T1 (Control)	T2	Т3	T4
Reminder Letter	Treatments 2 and 3 (Combined) vs. Control	19,689	39,540	39,508	N/A
Reminder Postcard	Treatment 4 vs. Treatment 3	N/A	N/A	31,676	16,099
Additional Reminder Postcard	Treatment 3 vs. Treatment 2	N/A	14,463	14,498	N/A

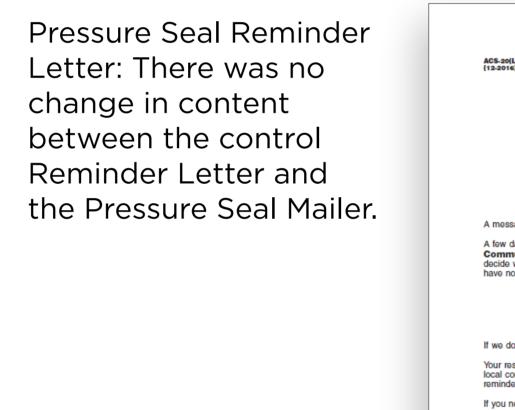
Results

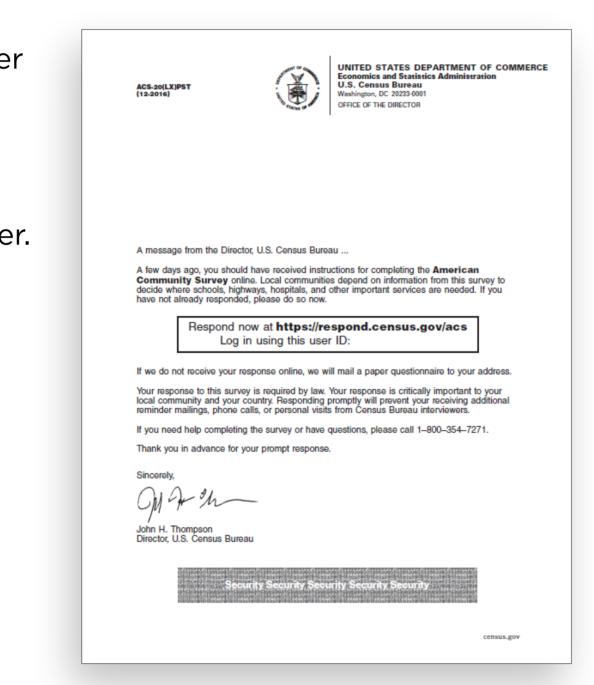
1. How do the pressure seal mailers affect self-response to the Reminder Letter mailing?

There was no significant change in response for the universe of addresses that were mailed the Reminder Letter mailing.

Figure 1. Self-Response Return Rates for the Reminder Letter Mailing Universe, Before Computer-Assisted Personal Interviews







Cost Analysis:

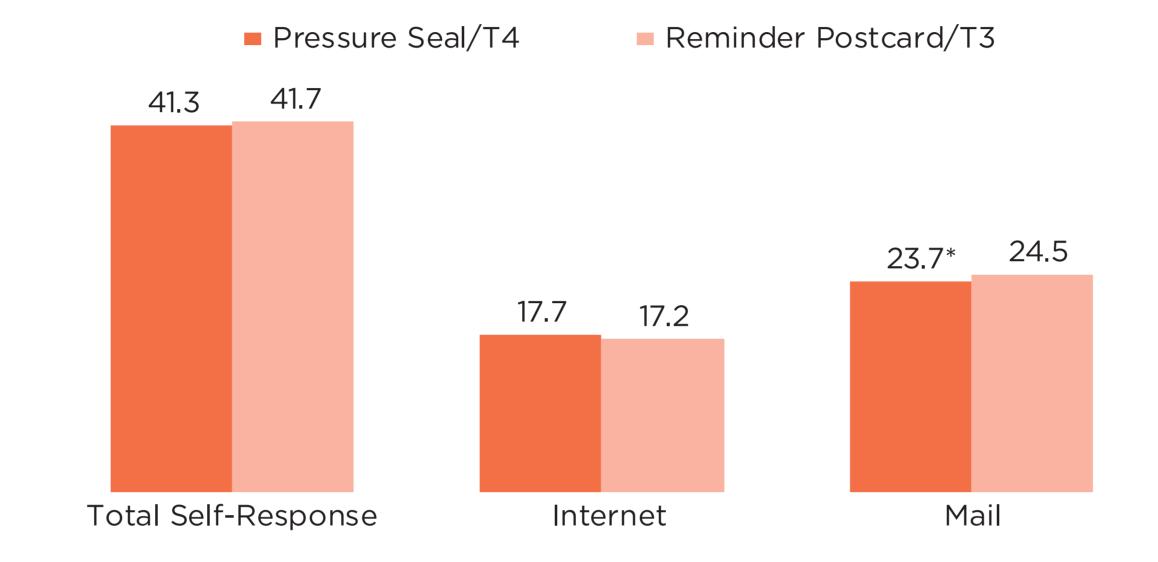
All costs presented were derived from fiscal year 2018 estimates. We used these estimates to calculate printing, assembly, and postage costs for each mailing, which were extrapolated for an annual production workload.

- Printing Costs Include: costs of paper, ink, and labor.
- Assembly Costs Include: quality assurance inspections, production rates of the machines, and the labor to support the assembly process.
- Postage Costs Include: USPS first-class postage rates.

2. How do the pressure seal mailers affect self-response to the Reminder Postcard mailing?

Mail response was significantly lower for the treatment that received the pressure seal mailing materials; however, total self-response was not significantly different for the universe of addresses that were mailed the Reminder Postcard mailing.

Figure 2. Self-Response Return Rates for the Reminder Postcard Mailing Universe, Before Computer-Assisted Personal Interviews



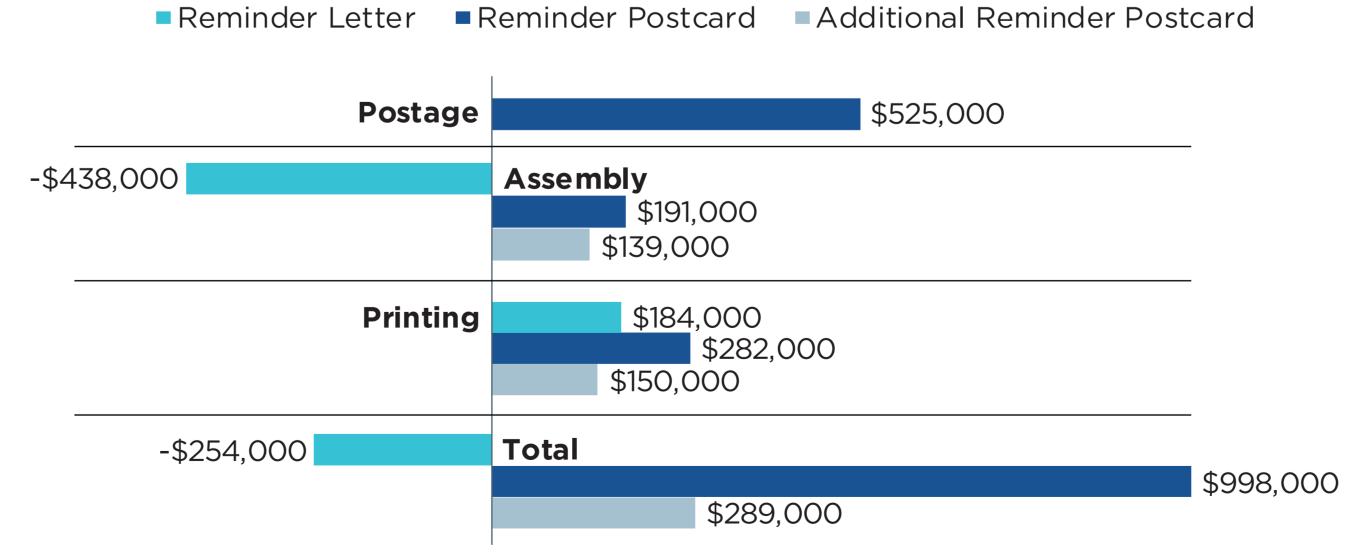
*Difference is statistically significant.

Experimental Pressure Seal Mailer Control Reminder Postcard UNITED STATES DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. Census Bureau Washigton, DC 20033-0001 OFFDIG OF THE DIRECTOR UNITED STATES DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. Census Bureau Washington, DC 20233-0001 ACS-29(LX)PST (12-2016) Within the last few weeks, the U.S. Census Bureau sent you several requests to complete the American Community Survey, **Now is the time to complete the survey if you have not already done so.** Please complete the questionnaire and return it now OR go to https://respond.census.gov/acs to respond online. message from the Director, U.S. Census Bureau. Your response to this survey is required by U.S. law. If you do not respond, a Census Bureau interviewer may contact you to complete the survey. Local and national leaders use the information from this survey for planning scholospitals, roads, and other community needs. If you need help completing the survey or have questions, please call our toll-free number (1–800–354–7271). Thank you. Respond now at https://respond.census.gov/acs Log in using this user ID: John H. Thompson Note: The Control Reminder Postcard is half the size of the Thank you. Control Additional Reminder John H. Thompson Director, U.S. Census Bureau

5. What are the projected annual cost differences for implementing the pressure seal mailing materials?

Below are the projected annual cost differences for each mailing piece to be replaced by a pressure seal mailer. Replacing the Reminder Letter with a pressure seal mailer would result in cost savings for the ACS program.

Figure 5. Estimated Annual Cost Differences for Each Mailing: Current Production Mailings vs. Pressure Seal Mailers

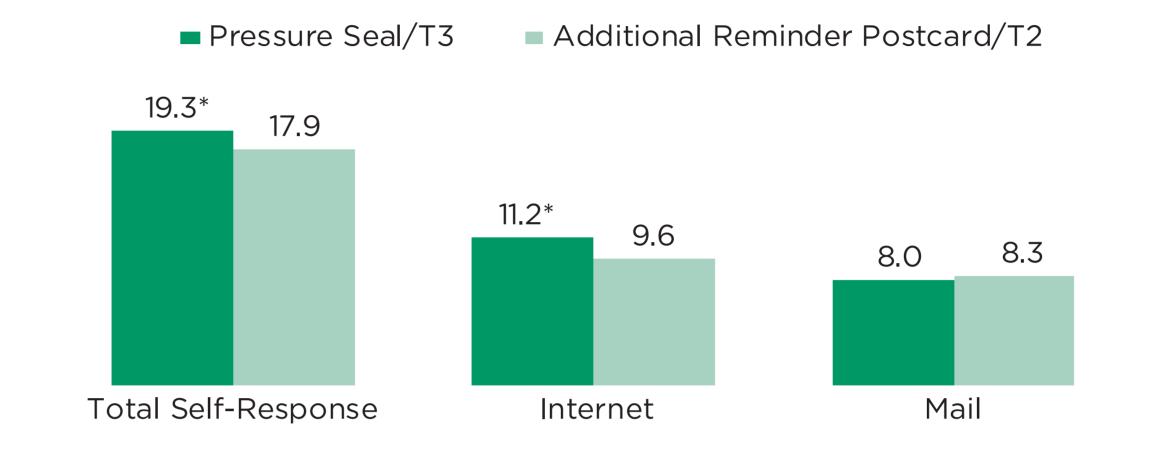


Note: Negative numbers represent cost savings. Only the Reminder Postcard has a difference in postage.

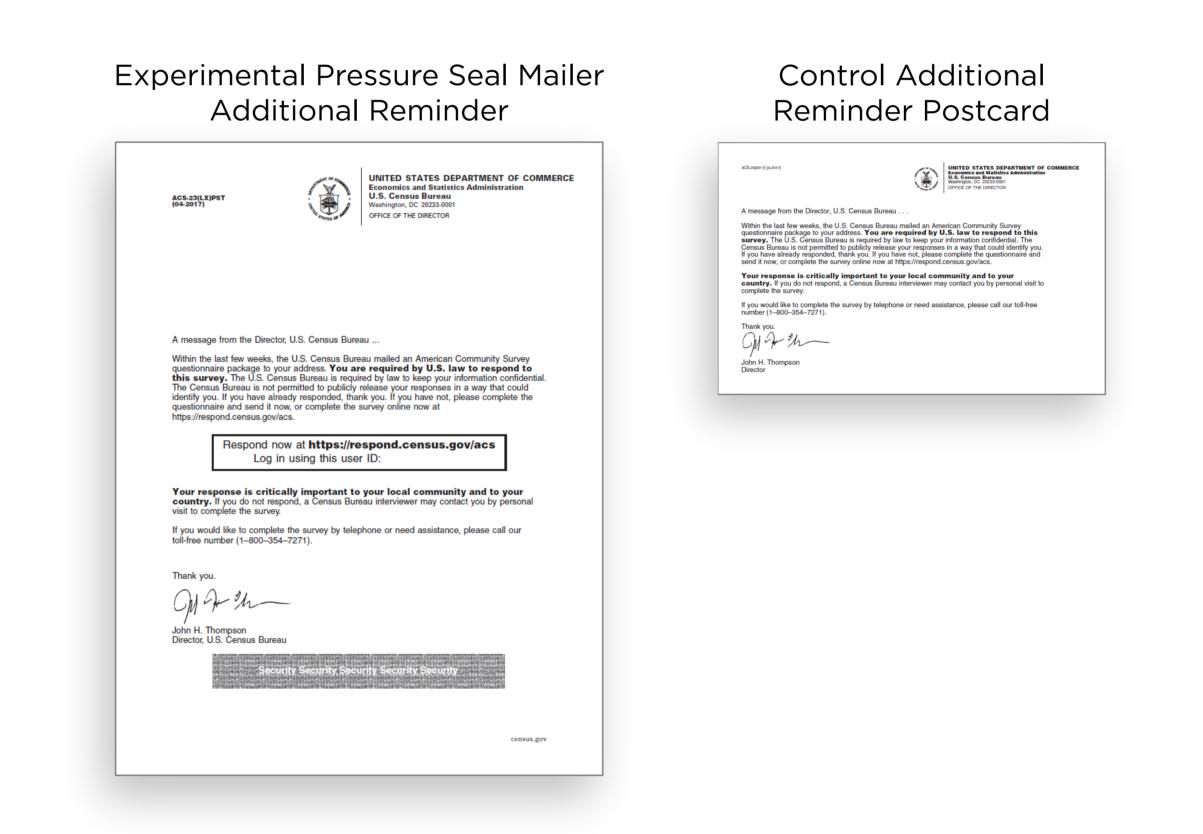
3. How do the pressure seal mailers affect self-response to the Additional Reminder Postcard mailing?

Total self-response and internet response were higher for the treatment that received the pressure seal mailing materials. However, the universe of those receiving this mailing is much smaller than the other two mailing universes.

Figure 3. Self-Response Return Rates for the Additional Reminder Postcard Mailing Universe, Before Computer-Assisted Personal Interviews



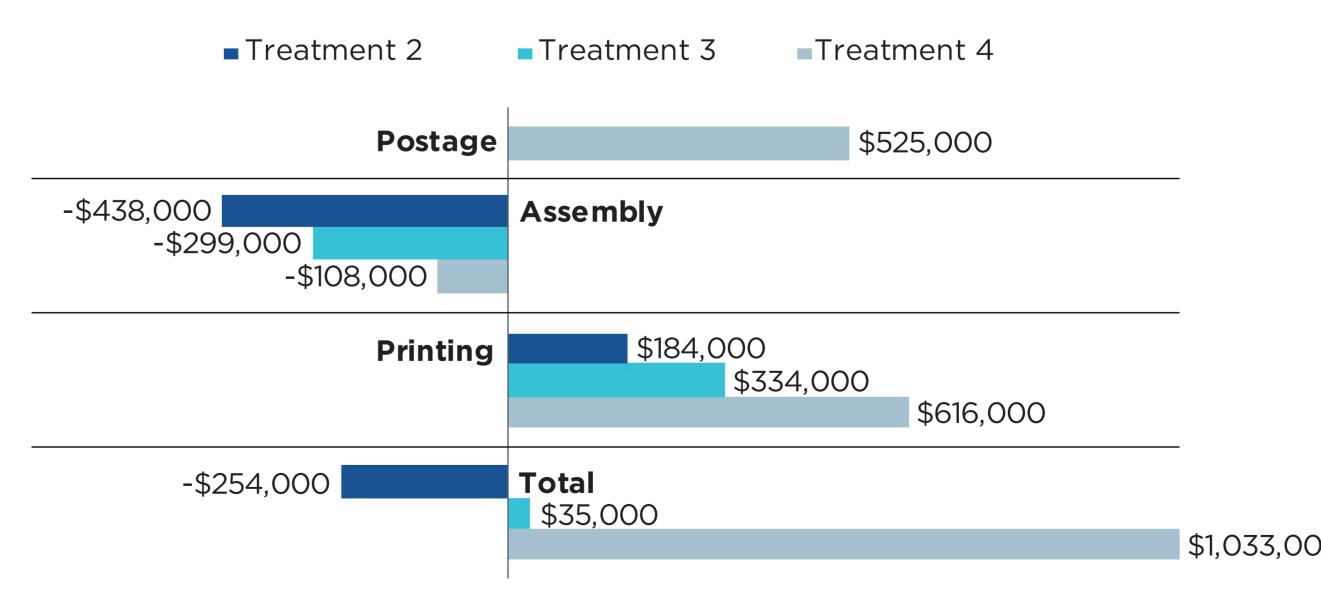
*Difference is statistically significant.



6. What are the projected annual cost differences for implementing each experimental treatment into a full production year?

Implementing Treatment 2 would be a cost savings, implementing Treatment 3 may result in a nominally higher annual cost, and implementing Treatment 4 would result in a cost increase for the ACS program.

Figure 6. Estimated Annual Cost Differences for Each Experimental Treatment: Current Production Mailings vs. Treatments 2, 3, and 4

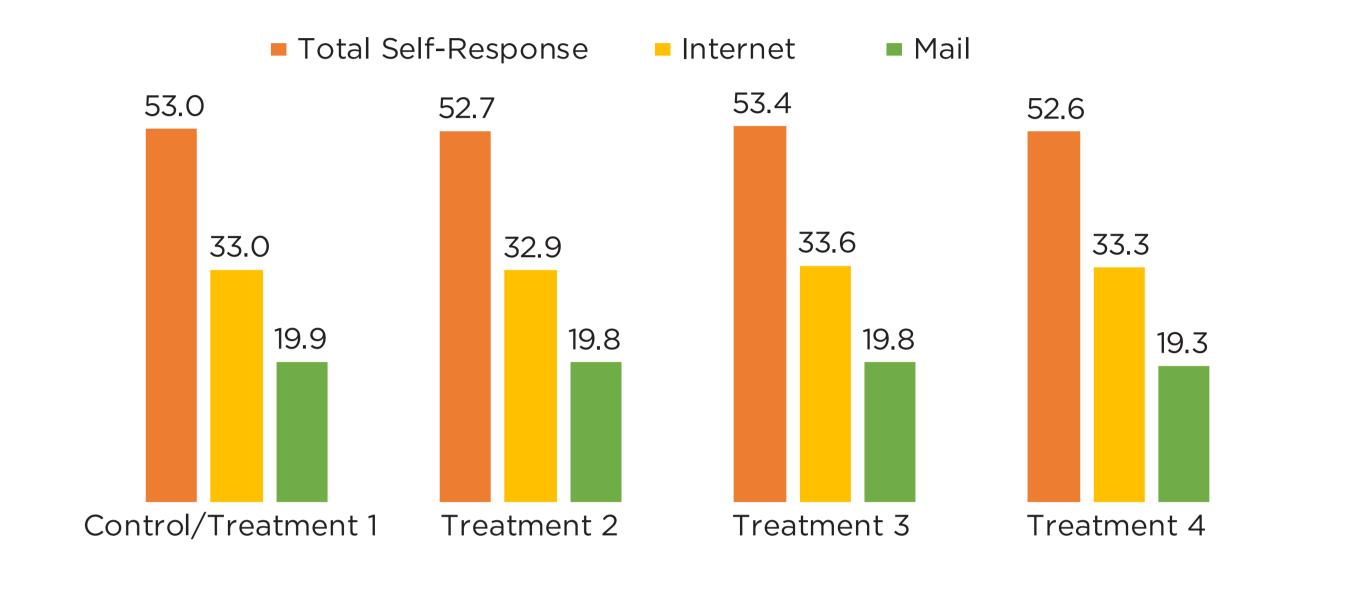


Note: Negative numbers represent cost savings. Only Treatment 4 has a difference in postage.

4. How do the pressure seal mailers affect self-response overall for each treatment?

There was no affect on self-response overall for any of the treatments when compared to the control treatment.

Figure 4. Self-Response Return Rates for the Initial Mailing Universe of Each Treatment, Before Computer-Assisted Personal Interviews



Conclusions

Pressure seal mailers do not affect overall selfresponse; however, for the ACS program:

- It is cost effective to replace a traditional letter with a pressure seal mailer.
- Replacing the Additional Reminder Postcard with a pressure seal mailer could be beneficial as there was a positive affect on internet response and the projected cost increase is minimal.

In general, the cost effectiveness of using pressure seal mailers for survey mail materials depends upon:

- The type and size of the mailing piece being replaced
 - Letters cost more than pressure seal mailers
 - The size of the postcard being replaced affects cost savings
- The type of paper (weight and color) chosen for the pressure seal mailer
- The size of the mailing universe
- The type of pressure seal machines to be used

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Source: 2017 Pressure Seal Mailing Materials Test, using data from the May 2017 ACS panel.

