

Center for Sustainable Behavior & Impact

Engaging Residents in Recycling through Motivational Interviewing

How to Plant Seeds of Engagement with Conversations

Hammonton, NJ • 2022

Public health experts recognize motivational interviewing as an important strategy for behavior change. Motivational interviewing is an evidence-based approach designed to resolve ambivalence and help people find the motivation to make positive changes in behavior. Can motivational interviewing also contribute to behavior change to increase tons and participation in residential recycling?

To answer this question, The Recycling Partnership's Center for Sustainable Behavior & Impact (The Center) conducted a study in the Town of Hammonton, New Jersey to determine if there would be an impact on recycling tons and participation after conducting motivational interviews door to door by recycling canvassers. This community is representative of community programs with relatively high recovery (over 500 pounds per household when the national average is 400 pounds per household for a community with curbside recycling in carts). Therefore, this was an exercise to test tactics in a higher recovery program versus a program that might be dramatically underperforming.

The Recycling Partnership is grateful for the generosity of the Town of Hammonton and the Atlantic County Utilities Authority for collaborating and graciously offering their staff time, resources, and ideas to strengthen this study. Without their partnership, this would not have been possible.

Key Takeaways



In the motivational interviewing canvassing group, **48% of residents opened their doors** to engage in conversations about recycling.



Households who ranked the importance of recycling as a 7–10 **contributed to more than 80% of recycling set outs** in the observed routes. This correlation could mean that changing perceptions on the importance of recycling could contribute to higher recycling set outs.



While there was not a detectable increase in recycling tons or set outs as a result of the interventions in the three months following the campaign, **motivational interviews could help increase the receptiveness and openness to recycling** in the future.



**47% OF RESIDENTS
THAT SPOKE WITH
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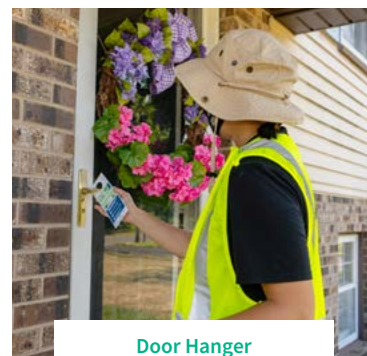
Study Design & Implementation

The Recycling Partnership, in collaboration with the Town of Hammonton, New Jersey and Atlantic County Utilities Authority conducted a pilot to learn if door to door motivational interviews would increase recycling participation or capture among single-family households. Motivational interviewing is an evidence-based person-centered counseling style that has proven to be effective addressing an individual's resistance or ambivalence to behavior change. If the resident answered the door, the canvasser attempted to engage the resident in a conversation about their thoughts on recycling, challenges, and motivations to recycling. The goal with motivational interviewing is not to tell the resident how and why to recycle, but to help them uncover their own challenges and motivations to recycling through an empathic and affirming conversation.

In this study, residents in Hammonton were divided into three groups: motivational interview group, door hanger only group and a control. By including a door hanger only group, this study design allowed us to isolate the impact of motivational interviewing. The use of a door hanger was also of interest because there is less competition for a resident's attention at the door than in the mail.



Motivational Interview



Door Hanger

The routes that received the recycling interventions were selected in partnership with Atlantic County Utilities Authority and the Town of Hammonton. The areas of town that were more densely populated were selected for efficiency since the field staff was going door to door and each group had a similar demographic makeup based on average household income, race, and level of education from the U.S. Census Bureau's 2019 American Community Survey 5-Year Estimates. The control group included all other routes within the Town.

Intervention Group	Tactics			Households
	Motivational Interview	Information Card	Door Hanger(s)	
Control	None	None	None	2,046
1 – Motivational Interview	Attempted at Each House	Provided if resident participated in interview	Up to two if door not answered and no interview conducted	1,367
2 – Door Hanger	None	None	One	1,419

Motivational Interviewing and The Partnership's Approach

Motivational interviewing is meant to move residents along a journey of behavior change and plant seeds of engagement. For people who are not open to recycling, it is unlikely they will change their behavior because of the motivational interview, but they will likely be more receptive to future engagement in recycling over time. For residents that already have some interest in recycling, the motivational interview can help move them forward in their recycling engagement and commitment.

The Center worked closely with Dr. Teresa Donegan, a PhD in Clinical Psychology and expert in motivational interviewing, to develop the motivational interview script and canvasser training. Canvassing was conducted by a team of two outreach staff that completed a six-hour training with Dr. Donegan on the science behind motivational interviewing, understanding the stages of change, how to conduct interviews and connect with residents so that they can uncover their own motivations and barriers to recycling. One of the staff members was bilingual in English and Spanish.

Motivational Interview Group: Door-to-Door Canvassing

The intention was to provide all households in the motivational interview group with a motivational interview.

- Canvassers empathetically described that some residents are confused about what to recycle or not sure how their recycling will make a difference and the canvasser offered residents an information card as a helpful tool.
- The resident was then asked to rank the importance of recycling in their community on the scale from one through 10, with one being the least important.
 - If the resident described the importance of recycling as a four or greater, then the resident was asked why it was not less. By asking why, the resident was encouraged to reason why recycling was important.

After describing their reason to the canvasser, the canvasser would then affirm their reason and ask for their thoughts on the information card and if there was any new information for them. If there was, then they would reaffirm that learning by asking how they would recycle differently moving forward.
 - If the resident ranked the importance of recycling in their community as a three or less, then the canvasser would kindly ask for their reason. After reflecting their understanding of the resident's reason, then they will provide the information card as a resource if they have questions on recycling in the future. This positive interaction plants the seed for future action.
- If the resident did not answer their door, the canvasser left a door hanger.

As expected, some households were inaccessible or did not answer their doors. Canvassers attempted motivational interviews with 1,367 households with 48% participating in an interview, sharing their concerns, feedback, questions about recycling, and in some cases, committing to improving recycling in their own homes.

Each canvasser averaged 18 homes per hour from 9-5PM, Monday through Saturday, and found that residents were more available before and after 12-1PM. In the first attempt, nearly 30% of households participated in the motivational interview. In the second attempt, the number of doors answered declined but nearly 24% of households still participated.



Info Card

Handed to residents that opened the door during canvassing.



Door Hanger

First door hanger left for motivational interview group, if the door was not answered.



Door Hanger

Second door hanger left for motivational interview group, if the door was not answered a second time. Only door hanger left for door hanger only group.



Door Hanger Group

In the door hanger group, the canvasser did not engage with residents and simply left a door hanger with information about accepted recyclable materials and a motivational message. The Partnership included a door hanger only group to allow for the impact of motivational interviewing to be isolated. The use of a door hanger was also of interest because there is less competition for a resident's attention at the door than in the mail.

Interventions Summary



The cost per household for the motivational interview group was \$20.00 per household and the door hanger-only group cost \$5.00 per household. These costs include the cost of materials, training, labor, and transportation.

Evaluation Methodology & Findings

The impact of the interventions was measured through route tonnage data, household set-out data and data collected by canvassers. Tonnage data was collected between May 2021 through November 2022 and set-out data was collected from June 2021 through November 2022.

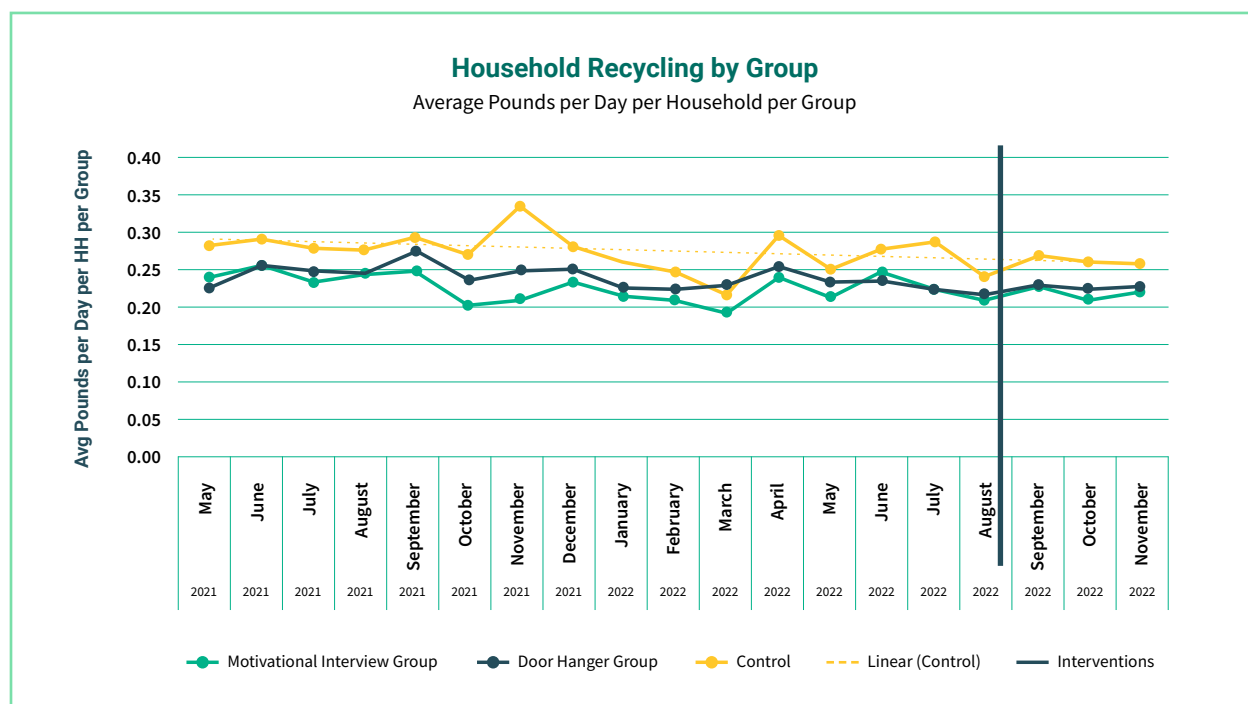
- Recycling tonnage was the primary metric used to determine if residents changed their behavior. Recycling tonnage data was collected using the scale house weights on collection trucks servicing the respective routes.
- The household set-out data was collected through an **on-truck software** that notes if a recycling cart was collected, set out, driven by, or not set out at each address. This data was used to determine recycling participation rate at the intervention group, route, and household level.
- Canvassers recorded motivational interview responses and the delivery of door hangers for each household on an app. Canvassers recalled and recorded interview responses after each conversation so that they would not look at their phone during the interview. This is because the purpose of motivational interviewing is to meaningfully engage in a conversation.



Onboard truck technology can be an invaluable tool for tracking participation and set outs. When using data to pilot education it is critical to make sure the technology is available on every truck, including possible back-up trucks that may be used on pilot routes.

Impact on Recycling Tonnage

The interventions did not have a detectable impact on the amount of route recycling tons collected or the average pounds of recycling collected per household per collection day. The average pounds per household per collection day has had a steady decline since May of 2021, and the interventions did not have a detectable impact on this trend.



Given the variability in the household recycling generation, it can be difficult to detect small shifts in route level recycling tons. It's possible that these tactics had an impact on route level recycling tons, but this change was too small to detect.

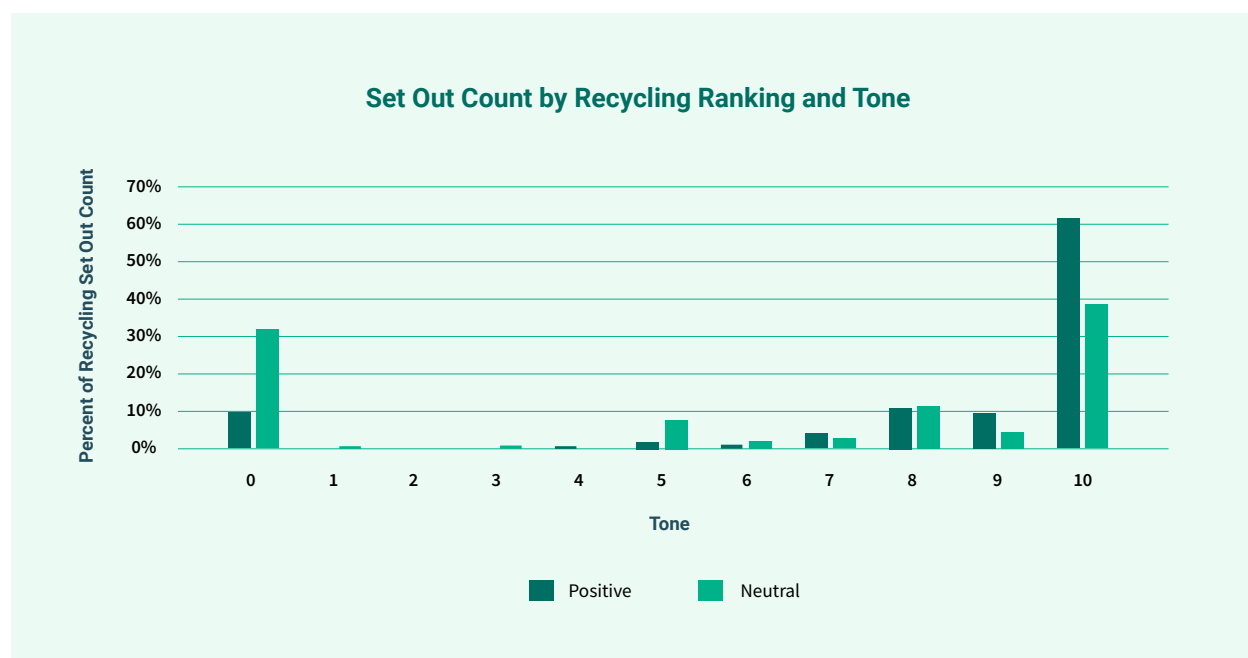
Impact on Community Participation

The interventions did not have a detectable impact on the recycling sets outs or participation in the motivational interview or door hanger group, nor at the household level for individuals that received interventions. One element to note is that there were gaps in the set-out data due to replacement trucks without tracking technology being used on many routes in the three months following the interventions.

For the motivational interview group, there was a strong correlation recognized between set-out rate and the discussion topics:

- 1 Households who ranked the importance of recycling higher (7-10) contributed to more than 80% of recycling setouts on the observed routes.
- 2 Household who spoke neutral or positively of recycling had a higher setout rate than those who spoke negatively. The correlation is particularly strong among households that give a higher rank of recycling importance (7-10).

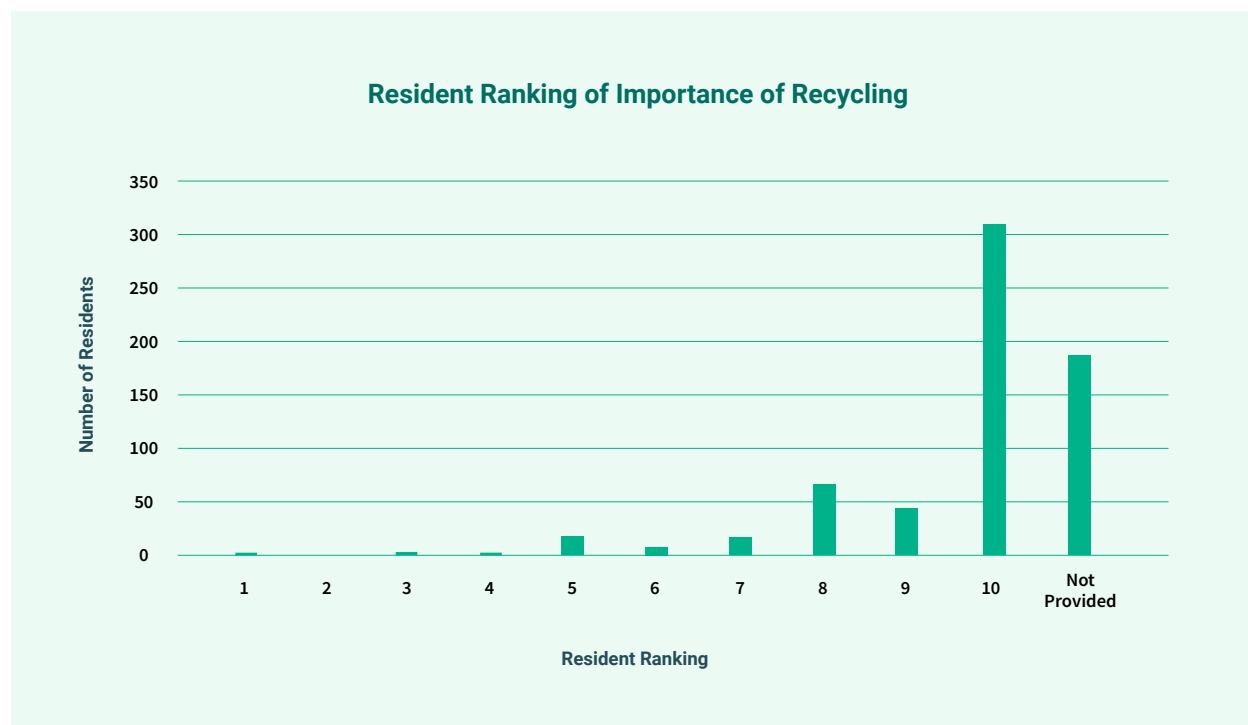
This correlation could mean that programs that seek to change resident perceptions on the importance of recycling and individual recycling behaviors could contribute to higher recycling set outs. Based on these results, The Partnership would suggest further research to better understand the correlation between behavior and action; to determine if changing resident perceptions is necessary to improve recycling set out and participation.



Findings from Motivational Interviews

Conducting motivational interviews allowed us to discover how residents viewed recycling in their community as well as their household's barriers and motivations to participating in their recycling program.

661 households, 48% of the motivational interview group, participated in a motivational interview. The overall positive perception of recycling also was reflected in how households ranked recycling in their community, as 66% of residents ranked the importance as a 7 or higher – 47% of whom ranked the importance as a 10. Canvassers reported that 59% of their conversations were described as positive, while 25% percent were described as neutral. Residents were more likely to report positive motivators than to describe barriers to recycling. The most cited motivators were having knowledge about recycling, believing it makes a difference, being a positive social norm and feeling a personal responsibility to recycle. Only one percent of residents rated recycling as a four or less or engaged in a negative tone conversation, indicating that recycling is important to residents in this community.



Canvassers provided residents with an info-card on how to recycle in the Town of Hammonton. After reviewing the info card, canvassers asked residents if they would commit to improving one recycling habit. Canvassers reported that many residents were surprised that they could not recycle plastic bags or bag their recyclables and committed to keeping those items out of the cart.

While some residents did not commit to a new habit because they felt as though they had been recycling correctly. Overall, 39% of residents committed to improving one habit. Commitments are an important strategy for behavior change. Research has shown that when people commit to taking an action, they are more likely to follow through in changing their behavior.

Conclusion

While there was not a detectable increase in recycling tons or set outs or participation, motivational interviewing could be effective at increasing receptiveness and openness to recycling in the future. In this study, motivational interviewing door to door with 48% of households participating in the interviews was not enough to detect a change. It is possible that a different outcome could be observed in a different community or with different measurement tactics. Given that this study utilized two rounds of canvassing, it is unrealistic to efficiently achieve a higher response rate than 48% because of the diminishing open rates with additional rounds of canvassing.

It is also important to draw a distinction between motivational interviewing and using motivational interviewing as a canvassing technique. It is possible that motivational interviewing could be a more impactful technique if applied at outreach events or other educational settings, instead of through canvassing. Further study is needed to determine if this tactic can contribute to increased participation and capture of recyclables.



There is no one-size-fits-all, clear roadmap to increase participation and capture in recycling but there are tools and resources that The Recycling Partnership believes can help communities, counties, and states along the way. In 2022, The Recycling Partnership conducted a series of pilot projects in communities across the country through its Center for Sustainable Behavior & Impact to test types of messages, methods for education, and interventions. The project in Hammonton, NJ, was conducted with support from the Walmart Foundation. The Recycling Partnership is grateful to each of the communities and counties that participated. Additional information about each can be found at recyclingpartnership.org.