Twilio Workflows

Phone Number Confirmation Workflow

This workflow is meant to be sent to all potential participants at the start of the experiment (1 time) to filter down to participants who are compliers. These participants are then referred to as "confirmed participants". This workflow is manually triggered at around 11AM in the participant's time zone and must be finished by 8PM in the participant's time zone.

Valid Execution of Workflow:

Text #	From	To	Message Content	Notes
1	Twilio	Participant	Hello {participant_name}! You are receiving this message from the W241 Eating Habits team (Laura, Diana, & Alex). As mentioned in the survey you took, we will periodically reach out to you via text messages from this number over the course of this study for the next 10 days.	This intro message is a full disclaimer on the nature of the study. We also begin the message with "hello" and with the participant's name to personalize the experience and make them more likely to respond.
2	Twilio	Participant	Please text "C" to confirm that we can reach out to you at this number.	We request confirmation to determine who can/will comply with the study (thus all who confirm here are deemed to be "compliers").
3	Participant	Twilio	C	We request a simple response of "C" to make barrier to entry small. This text has invalid response handling (see below).
4	Twilio	Participant	Thanks for letting us know!	We respond with "thank you" at the end to be conclusive in our workflow and leave a good final impression on the participant.

Note: In the event that the participant does not text "C" but some other content at step 3, Twilio will send a text to the participant with the content "I'm sorry, I didn't understand. " and then continue the workflow starting from step 2. This applies to this workflow all other workflows in the event of invalid content. We will refer to this action as "invalid response handling" in this workflow and the workflows below.

Outcome Measure Workflow

This workflow is meant to be sent to all confirmed participants every evening over the course of the study. This includes during the 3 days of baseline collection and the 7 days of experimental collection. In total, this workflow is automatically triggered for every participant across 10 days at around 8PM in the participant's corresponding time zone and must be finished by 11AM the following day in the participant's time zone. This workflow runs regardless of whether the participant is eventually assigned to treatment or control.

Text #	From	To	Message Content	Notes
1	Twilio	Participant	Good evening {participant_name} from the W241 Eating Habits team! This is your evening meal inquiry, where we will be asking you 4 questions tonight. First question:	This intro message is meant to prep participants from recording outcome measures and let them know to expect that they will be asked 4 questions. Notifying participants of this expectation is meant to help ensure we get full responses and participants don't leave mid-survey.
2	Twilio	Participant	How many times did you eat today (this includes both meals and snacks)? Please enter a number.	This is the first outcome measure question, meant to determine whether the number of times participants eat changes over the course of the study.
3	Participant	Twilio	4	We request a simple numerical response to make barrier to respond small. This text has invalid response handling.
4	Twilio	Participant	For every meal or snack you ate today, how many did you prepare yourself? Please enter a number.	This is the second outcome measure question, mainly meant to throw off participants (especially those in control) from realizing the experiment is focused on meat eating.
5	Participant	Twilio	2	We request a simple numerical response to make barrier to respond small. This text has invalid response handling.
6	Twilio	Participant	How many times did you eat a meal or snack with meat today (this includes meat from land animals only or foods derived from meat such as chicken stock or bacon bits)? Please enter a number.	This is the third outcome measure question, which is meant to determine whether the number of times participants eat land-based meat changes over the course of the study.
7	Participant	Twilio	3	We request a simple numerical response to make barrier to respond small. This text has invalid response handling.
8	Twilio	Participant	How many times did you eat a meal or snack with fruits and/or vegetables today? Please enter a number.	This is the fourth outcome measure question, which is meant to throw off participants (especially those in control) form realizing the experiment is focused on meat eating.
9	Participant	Twilio	1	We request a simple numerical response to make barrier to respond small. This text has invalid response handling.
10	Twilio	Participant	Thanks for letting us know!	We respond with "thank you" at the end to be conclusive in our workflow and leave a good final impression on the participant.

Treatment Administration Workflow

This workflow is meant to be sent to all confirmed participants that have been assigned to treatment every morning over the course of the experimental phase of the study. This includes only the 7 days of experimental study following the baseline. In total, this workflow is automatically triggered for every treatment participant across the 7 days of experimental study at around 11AM in the participant's corresponding time zone and must be finished by 8PM in the participant's time zone. Note that for each participant, the treatment message is the same on the same days, but we have distinct treatment messages for each of the 7 days.

Text #	From	To	Message Content	Notes
1	Twilio	Participant	Good morning {participant_name} from the W241 Eating Habits team! {treatment_message}	This message is meant to greet the participant and administer the treatment we have for the particular day of treatment. To see examples of these treatment messages, see the list following this table.
2	Twilio	Participant	Please text "C" to confirm that you have read the above message.	We request confirmation to determine whether or not participants saw the treatment.
3	Participant	Twilio	C	We request a simple response of "C" to make barrier to entry small. This text has invalid response handling.
4	Twilio	Participant	Thanks for letting us know!	We respond with "thank you" at the end to be conclusive in our workflow and leave a good final impression on the participant.

Treatment Messages

The treatment messages used in the study are a combination of two parts. The first part is a fact about the impact of eating meat on the environment. The second part is an alternative vegetarian recipe that is intended to give participants ideas for foods they can easily make to help reduce their meat consumption.

Treatment Number	Treatment Message	Fact Source
1	Did you know that emissions from livestock, largely from burping cows and sheep and their manure, currently make up almost 15% of global carbon emissions? Try this delicious Rajma (bean curry) instead: https://youtu.be/ROTwTz7Vm88	https://ourworld.unu.edu/en/eating-less-meat-essential-to-curb-climate-change-says-report
2	Did you know that if you don't drive or fly much, cutting down on your own personal meat consumption could be the single most effective action that you can do to help reduce green house gas emissions? Help the planet by eating this savory Hearty Veggie Casserole instead: https://www.vegetariantimes.com/recipes/three-sisters-casserole	https://skepticalscience.com/animal-agriculture-meat-global-warming.htm
3	Did you know that land-use changes to support meat consumption is the leading cause of species extinction? Try a coconut curry instead to help the future of precious species: https://www.veggiesdontbite.com/20-minute-vegan-coconut-curry-soup/	https://www.sciencemag.org/news/2015/08/meat-eaters-may-speed-worldwide-species-extinction-study-warns
4	Did you know that runoff from fertilizers to support animal agriculture causes roughly 1/3 of the acidification that is fundamentally altering ocean ecosystems? Go for falafel instead of meat to reduce your carbon footprint: https://youtu.be/aQD0ndQGpG0	https://www.wri.org/blog/2019/04/6-pressing-questions-about-beef-and-climate-change-answered
5	Did you know that the global livestock industry produces more greenhouse gas emissions than all cars, planes, trains and ships combined? Reduce your footprint by eating this beetroot hummus today: https://www.pickuplimes.com/single-post/2019/02/17/Vibrant-Roasted-Beetroot-Hummus	https://ourworld.unu.edu/en/eating-less-meat-essential-to-curb-climate-change-says-report
6	Did you know that the greenhouse gas emissions from eating beef are on average 50 times worse than from eating an equivalent amount of peas? Try a delicious pea soup and help save the planet: https://giftofhealth.org/recipe/maries-pea-soup/	https://www.sciencemag.org/news/2015/08/meat-eaters-may-speed-worldwide-species-extinction-study-warns
7	Did you know that without severe cuts, agricultural emissions will take up the entire world's carbon budget by 2050, with livestock as a major contributor? How about a Cajun Corn Chowder to spice things up?: https://www.gimmesomeoven.com/cajun-corn-chowder/	https://ourworld.unu.edu/en/eating-less-meat-essential-to-curb-climate-change-says-report

Complete Experiment Workflow

This workflow is meant to be sent after all 10 days of the study have been completed to all confirmed participants that participated in the study. This workflow is manually triggered at around 11AM in the participant's time zone on the 11th day of the study and is meant to encourage participants to participant in the final experimental survey to collect additional information about the participants' experience with the study. Unlike the other workflows, we do not request participants confirm they received the message in any way, but instead, we incentivize participants to respond to the final survey with the possibility of winning a $25 Amazon gift card. We allow participants 2 days to respond to the final survey that is sent to them via the email address they provided at enrollment.

Text #	From	To	Message Content	Notes
1	Twilio	Participant	Hello {participant_name} from the W241 Eating Habits team! We just wanted to let you know that this text marks the end of our text-message portion of the study. For the last step of the study, we have a survey that we've sent you via email at the address you provided to us, ({participant_email}). In the survey we've got a few follow-up questions and an opportunity for you to share your feedback about the study with us. If you want to qualify for the $25 Amazon gift card raffle, be sure to respond to the survey with the above email address. We will leave the survey open for the next 2 days, so be sure to respond in time to qualify. Thanks again for your participation!	This message is meant to inform participants that the texting-portion of the study is complete and that there is a follow-up end-of-study survey for them to complete. We incentivize completion of the survey with the possibility of winning a $25 Amazon gift card.