**A1: Survey Questions and Simulation Assumptions**

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| **Variable** | **Question** | **Answers** | **Simulation Assumptions** |
|  | **Vaccination Status and Intention** | | |
| uptake | Have you received the COVID-19 vaccine? | - Yes  - No, but I have an appointment  - No | Baseline: 50% people received covid vaccination.  Endline: uptake is influenced by ‘treatment group’, ‘worry’, ‘safe’, ‘imp’, ‘family’, ‘belief’, ‘republic’ |
| likely | How likely are you to get the COVID-19 vaccine? | 1: Extremely unlikely, 2: Somewhat unlikely, 3:Neither likely nor unlikely, 4: Somewhat likely, 5: extremely likely | Follows a normal distribution. |
|  | **Attitude towards COVID-19** | | |
| worry | How worried are you about getting COVID-19? | 1: Not worried at all, 2: Slightly worried, 3: Somewhat worried, 4: Very worried, 5: Extremely worried | Follows a normal distribution. |
| safe | How safe do you think the COVID-19 vaccine is for you? | 1:Not at all safe, 2: A little safe, 3: Moderately safe , 4:Mostly safe, 5: Very safe | Follows a normal distribution. |
| imp | How important do you think getting a COVID-19 vaccination was for your health? | 1: Not at all important, 2: Slightly important, 3: Moderately important, 4: Very important, 5: Extremely important | Follows a normal distribution. |
| family | How much do you think getting a COVID-19 vaccine for yourself will protect other people in your family and community from COVID-19? | 1: None at all, 2: A little, 3: A moderate amount, 4: A lot, 5:A great deal | Follows a normal distribution. |
|  | **Attitudes towards social media** | | |
| belief | How much do you belief the information about Covid-19 in social media? | Scale 1-5.  1: Do not believe at all, 3: neutral, 5: I completely believe | Follows a normal distribution. |
|  | **Party Affiliation** | | |
| republic | Are you republican? | - Yes  - No | 50% participates are republic |
|  | **Demographic Information**  **(\*roughly the same as real US demographic distribution)** | | |
| male | What is your gender? | - Male  - Female | 50% people is male |
| state | Where do you live? | Dropdown list of 50 states & 1 District | The sample size of each state is roughly the same |
| race | What is your race? | - White  - Black  - Asian  - Hispanic  - Not listed | - White: 65%  - Black: 15%  - Asian: 6%  - Hispanic: 10%  - Not listed: 4% |
| edu | What is your highest degree? | - High school  - Some college  - Bachelor  - Postgraduate  - Not listed | - High school: 35%  - Some college: 25%  - Bachelor: 15%  - Postgraduate: 5%  - Not listed:20% |
| age | How old are you? | - Age 15-24  - Age 25-34  - Age 35-44  - Age 45-54  - Age 55-64  - Not listed | - Age 15-24: 25%  - Age 25-34: 25%  - Age 35-44: 15%  - Age 45-54: 15%  - Age 55-64: 15%  - Not listed: 5% |
| occ | What is your occupation? | - Management and professional  - Service  - Sales and office  - Farming, fishing and forestry  - Construction, extraction and maintenance  - Not listed | - Management and professional: 30%  - Service: 20%  - Sales and office: 30%  - Farming, fishing and forestry: 10%  - Construction, extraction and maintenance: 5%  - Not listed: 5% |
| work | In which way do you work most of the time? | - I work from home  - I work onsite  - Hybrid | - I work from home: 20%  - I work onsite: 50%  - Hybrid: 30% |