











# Restart Partners Social Media Campaign To Encourage Mask Use, Support Small Businesses and Increase Vaccine Adoption

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Date: August 10, 2021

This work was funded by the Washington State, Department of Commerce and Facebook (in kind Facebook ads)

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# **Objective**

Demonstrate how social media marketing techniques, historically used to sell products, may be effective in encouraging people to adopt certain behaviors during the COVID-19 pandemic that would lead to better physical and mental health, and eventually to wide-scale social change and improved public health.

#### **Abstract**

**Introduction:** The severity of the rapidly-evolving COVID-19 pandemic warrants a creative, novel, and sustained approach to encourage public health protocol, keeping people safe and the economy open.

**Objectives:** The primary objective of these studies were to increase mask wearing, vaccine uptake, and awareness of safe business patronage through employing social media marketing techniques.

**Methods:** With support from the Washington State Department of Commerce, Facebook, and Upswell partners, Restart partners was able to undertake three major social media campaigns to improve public health outcomes and more safely reopen the economy. The campaigns were aimed toward changing the behavior of parents with children, white rural audiences, spanish speakers, and young adults. The impact of these interventions were measured by analyzing the "lift" in pro-public health attitudes within the intended audiences. The three campaigns were as follows:

Mask Adoption Campaign: Restart Partners in partnership with Kantar Research conducted a national mask survey in September which helped identify common themes surrounding mask adoption and allowed individuals to be sorted into three groups based on their sentiments surrounding wearing masks. From here Restart over a 9-week period from Sept 30-Nov 30 ran several social media message testing campaigns on Facebook and Instagram to change masking behaviors through rapid development of digital ads, and continuous analysis of the campaign allowed the Restart team to determine which message types received the most pushback and which were most effective in delivering the nudge and ultimately changing behaviors. 154 different ads were run reaching an estimated 1.489 million residents in Washington state. A separate 'lift study' focused on the importance of wearing masks in small gatherings with people outside your household resulted in a 4.3 % lift, moving people to likely or very likely on wearing a mask when

getting together with friends and family members they do not live with. The study estimated that 55,000 people in Washington state changed their behavior in response to the campaign.

**Small Business Campaign:** In an effort to support small businesses during the pandemic, 88 different ads were run on Facebook and Instagram during the months of April and May. These ads used various types of messaging such as direct, humorous/cute, instructive/information, solidarity/mutual, etc. to test which technique received the most engagement. The campaign reached 900,000 people with 5.1 million impressions.

**Vaccine Campaign:** In order to encourage vaccine adoption behavior, an additional 88 ads were run on Facebook and Instagram between April and May of 2021. After the initial vaccine campaign, a vaccine hesitancy campaign was run to target those groups who were identified as most hesitant to receive the COVID-19 vaccine based on additional data-driven research. The 5-week campaign had a reach of 1.4 million people with a brand awareness lift of 3.8% where around 53,000 people recalled seeing the post about Covid vaccines from Restart partners and a 3% lift for knowledge where 43,6000 people had a better knowledge of where to access the Covid vaccine. Finally, an additional ad series was used to assist the Association of Washington Business and 11 Chambers of Commerce with their incentive program to increase vaccination.

**Results:** The mask campaign achieved a 4.3% lift in making people more likely to wear a mask when getting together with folks outside of their household. This constitutes a behavioral change in 55,000 people. The small business campaign found that messaging with specific actions received better engagement, positive reinforcement was more widely accepted, and cause-and-effect syntax was most successful. The vaccine campaign achieved a 3.1% lift in ability and availability, a 1.8% lift in social approval of vaccine recipience, and a 1.9% lift in motivation as a result of safety perceptions.

**Conclusion:** These campaigns demonstrated the power that social media holds to effect positive social change and influence public health outcomes. This is significant as it has also been a vehicle for misinformation, threatening public health and costing lives. Organizations may leverage the lessons learned from these studies to create campaigns to optimally achieve organizational goals.

### **Background & Rationale**

Marketing directs the flow of goods and services from producers to consumers. One of the main goals of marketing is to convince consumers to buy a specific product or acquire a specific service. The same techniques of marketing are also effective in encouraging people to adopt certain behaviors that would lead to better physical and mental health, and eventually to wide-scale social change. As a hybrid theory that proposes to induce positive social change, social media marketing borrows interdisciplinary concepts from psychology, sociology, communication, and preventive medicine. Social marketing campaigns are simultaneously directed at two audiences - individuals and groups, and policymakers. Social media sites are already so deeply embedded in our daily lives that people rely on them for every need, ranging from daily news and updates on critical events to entertainment, connecting with family and friends, reviews and recommendations on products/services and places, workplace management, and keeping up with the latest in fashion, to name but a few. Social media also leads to fulfilment of emotional needs of individuals or groups. As social problems have behavioral causes, social marketing campaigns target the individuals and groups who would benefit from a behavior change. And when time is of essence, behavior change models that can analyze and inform those social media marketing campaigns become critical. This paper reports on a year-long work done by Restart Partners under a contract from the Department of Commerce, Washington State that documents the process of how a social marketing program was created and the positive impact this campaign has had in influencing COVID-safe behaviors.

#### **Theory of Change**

In May of 2020 a few concerned citizens of WA State connected virtually to discuss how they could help the Covid-19 response undertaken by the State. The initial theory of change was that if we would provide PPE to every citizen of the state we would all be protected and the economy would not be impacted. Save lives and livelihoods became the driving approach. The group coalesced itself as Restart Partners with the goals of keeping Washington State safe using science, data, and policies that empower communities with tools to save lives and livelihoods, protect the most vulnerable, increase public trust, and enable all sectors of our economy to safely open and remain open. At the request of colleagues working with the Governors Covid-19 response task force, the Restart Partners team developed a modelling tool to validate PPE purchases being made by the state. Sixty plus epidemiological models to predict infection and twenty plus econometric and mobility models to predict costs were utilized. We quickly learned that without sustained persuasion efforts for mask adoption and practice safe distancing it would be very hard to keep people

safe and business open. This led to the development of a sustained effort with the support of WA State Department of Commerce, Facebook and Upswell partners to undertake 3 large social media campaigns in WA State to promote mask adoption, keep small businesses open and reduce vaccine hesitancy. Here we report on the effort, the partnerships built, surveys conducted, marketing campaigns designed, social media promotion efforts undertaken, measurement of impact of our efforts, lessons for future such initiatives, and the effectiveness of social media campaigns during a public health care crisis.

#### **Stakeholder Partnerships**

To test the social media marketing theory as a medium of change, The Restart Partners board gathered to hear whether through the support of the Department of Commerce and that of Facebook, they could collectively accomplish this goal of influencing mask adoption. There could be three possible outcomes: stop the social media ad campaign push because it would be a failure, to keep continuing with the ad campaign and the results would be inconclusive, or to continue and immediately apply for more ad credits to further encourage and promote mask wearing because the theory of behavior change for covid safe behaviors, worked. It took a wild-goose-chase challenge, fast thinking, rapid, open-minded iterative testing approach, stakeholder cooperation, liberation from bureaucracy and most of all hard work from everyone at Restart Partners.

At the start of May 2020, Restart partnered with the University of Washington Communication Leadership program to promote the adoption of masks and face coverings through social media campaigns on Facebook and Instagram. While Restart initiated this collaboration, it was becoming clear that widespread promotion of mask adoption could effectively reduce disease spread. The creative director of the University of Washington Communication Leadership program, Alex Stonehill, began virtualizing operations to account for a student team to run these campaigns. A two-prong goals approach to guide the campaign was released. The students at the University of Washington Communication Leadership Program were to design the campaign on Facebook and Instagram with the following objectives.

- 1. Increase mask use and vaccination rates by leveraging people's enthusiasm to support their local community and businesses.
- 2. Increase consumer confidence and aid small businesses by encouraging COVID-safe consumer activity.

The student peers in a cooperative effort suggested that they share the research and information to inform the creatives, share insights and tools along with associated data analysis once the campaign results come in, and marshal the team to create further campaigns as an iterative testing approach. Thereby the student team roles were defined – the creative team to start generating creative, and get ads approved. The visual storyteller to identify community partners and small business spokespeople to record their views. A social media content and comments moderator, and the ads managing team to build target audience profiles, set the ads budget, schedule, and run ads and weekly reports back on analytics. And the work of the advisor and creative director – to manage the whole project initiative, set high level strategy, and keep the spirits high for the team. Drew Bernard from Upswell and also Senior Strategist and Advisor to Facebook's social impact team, played an important role and helped the team set and navigate complex Facebook Business Manager processes and help them measure the impact of the campaigns through a tool called brand lift study. After thorough discussion with the stakeholders and accounting for relevant costs and resources, the team decided to initiate the campaign. We did not want the decisions to be driven by the need for metrics alone. Saving lives by encouraging mask adoption – was the top priority.

# Impact at a Glance

	Mask Adoption campaign	Small Business campaign	Vaccine campaign
Reach	1,500,000	960,000	1,481,632
Impressions	7,300,000	5,840,000	12,502,364
Total Cost	\$75,000-\$110,000	\$74,000	\$78,600

See appendices A-D for additional summarized results.

# Research Methodology & Theory of Change

#### **Campaign research (Audience and Sub-Topics)**

The adoption of a mix-method methodology (quantitative and qualitative findings) helped form a clear understanding of the target audience and sub-topics of the campaign. The

Restart team learned more about the existing Facebook communities and the target communities. The first steps taken were to tap into publicly available Facebook and Instagram data to provide a clear picture in a short amount of time.

This process helped the team:

- 1. Understand who is part of Restart's current Facebook and Instagram communities.
- 2. Determine the depth and breadth of Facebook and Instagram in high vulnerability populations.
- 3. Identify potential influencers and patterns that may inform campaign strategy.
- 4. Identify high-performing mask-related content.

Before the launch of the campaign, Kantar Research helped conduct a survey of 1000+ participants to learn about mask wearing behaviors. The survey included 12 questions about mask use and motivating factors, as well as 13 questions about respondent demographics. One of the findings was that most people were already masking in public settings as there were mask mandates in the state, so the biggest potential for behavior change was in more private settings and social gatherings. This helped us understand the current behaviors and the factors influencing the current behaviors of the target audience.

There were four different audiences' groups that we decided to target:

- 1. Parents with Children (25–64-year-olds in Washington, filtered based on interests related to children and parenting)
- 2. White Rural Moderates (35-65+ year olds in rural areas of Washington, filtered based on political leanings moderate and conservative)
- 3. Spanish Speakers (13-65+ year olds Spanish-speakers, in Washington) and
- 4. Social Gatherings (18-65+ year olds in all of Washington, general population)
- 5. Young Audiences on Instagram (18–34-year-olds based in Washington)

#### **Mask Adoption Campaign**

The process was iterative as each week, the team and its campaign partners used insights from audience research and content performance analytics to continually model organic campaign content to improve engagement and empower communities. Throughout the length of the project, the team has emphasized ad monitoring and performance to ensure that they are using ads as effectively as possible to reach the campaign goals.

The team was further supported by Facebook brand lift studies throughout this project. Facebook brand Lift tests provide a quick and practical measurement tool to help organizations understand the impact of Facebook advertising on brand awareness. They assess the campaign's overall impact on the intended audience. In our case a set of survey questions were collectively arrived at by the team, that would measure the knowledge, attitudes, and practices of people around mask use and other and other important health behaviors.

Throughout early winter, data slowly filtered in for the lift study that was conducted to measure the efficacy of the mask adoption campaign ads, that even went to rural places in Eastern Washington where the coronavirus was picking up steam. There have been little hiccups including challenges in securing creative approvals at times, but we were on track to produce a massive number of 187 ads (154 unique) in 9 weeks.

Emulating the success of the mask adoption campaign, we pushed the flu vaccination promotion and expanded the mask campaign to 20 other states in the South and Middle West of the US, ready by Thanksgiving, when flu season was expected to spike during the holidays. Everyone knew it would be an enormous perhaps unattainable task, but we all knew after the mask adoption success in Washington state, this was another health initiative we were obligated to take on as a theory of change through social media and reached more than 21 million people.

#### Fogg Behavior Model for Mask Adoption campaign

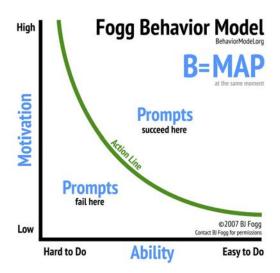
The Fogg Behavior Model can be used as A framework to map out effective and measurable social media-based behavior change campaigns. This behavior change theory shows that three elements must converge at the same moment for a behavior to occur: Motivation, Ability, and a Prompt. When a behavior does not occur, at least one of those three elements is missing. All three components must be present at the same moment for mask wearing behavior to occur.

Motivation is key to most behavior change campaigns. There are three types of motivation according to Fogg Behavior model, each with two sides:

- 1. Sensation pleasure or pain
- 2. Anticipation Hope or Fear
- 3. Belonging social acceptance or rejection

Ability includes factors like time, money, physical effort, mental effort, and routine and thinking about access and availability that will seem doable to the target audience.

Prompt, the third factor is often a missing piece as written by Fogg in A Behavior Model for Persuasive Design. Regardless of motivation and ability, a prompt - that is a trigger or a cue that is needed for a behavior to take place.



In this visual representation of the Fogg Behavior Model, target behaviors are most likely to occur in the upper right-hand corner, where both motivation and the ability to take action are high. Here is where the prompt stands the greatest chance of success above the action line curve.

#### **Small Business Campaign**

After the success of mask adoption and flu vaccination campaigns, the goals of Restart's leadership board further evolved to leveraging people's enthusiasm to support their local community and businesses, and then next to increase vaccination rates. Further through a grant from the Department of Commerce in Washington state and the continued support of Facebook through ad credits, the team agreed to initiate the small business campaign across Seattle and decided to engage as many small businesses as possible. They were happy to be involved and the masking message was intertwined with small business owners' ads. To produce the same quantity of creatives, the speed of building these partnerships with small businesses was critical but not at the expense of cooperation with business owners and what best suited their customers in the given situation. Some of our team members have been doing hard work on the ground, talking to these small business owners, coordinating shoots with them. These outreach initiatives have involved a lot of trust building and several meetings with the small business owners to be able to show value creation for them in collaborating with Restart and its goals for the upliftment of their businesses.

The ads were targeted to the following audiences for small business campaigns-

- 1. Suburban/Urban Residents (areas with a population of 10,000+)
- 2. Rural Area Residents (areas with a population of < 10,000)
- 3. Parents with Children (25–64-year-olds in Washington, filtered based on interests related to children and parenting)
- 4. Young Audiences on Instagram (18–39-year-olds based in Washington)
- 5. Spanish Speakers (13-65+ year old Spanish-speakers, in Washington)
- 6. Spanish Speakers on Instagram

For our Spanish speaking audience, we created original Spanish language content as well as translations of English language content to expand understanding and consequent actions. The socioeconomic impacts of Covid-19 pandemic are far reaching but not equitable. In Washington state, the vulnerable essential worker population is composed of people of color, and this population faces a higher number of infection and mortality rates from the virus. As we began to realize the diversity in Washington state, we then expanded our work where we translated our messaging in seven different languages namely English, Spanish, Mandarin, Korean, Russian, Tagalog, and Vietnamese.

#### **Vaccine Adoption Campaign**

Next was the humongous task of moving the needle to motivate the holdout audiences to get vaccinated. In the past many decades, there have been extensive studies that study the psychological factors for vaccine acceptance and hesitancy. However, it was also important to study the current vaccination landscape in the wake of this pandemic that would help us inform our public health messaging strategies and our audiences. We studied various national surveys that were conducted and published by Surgo Research, CMU Delphi data, and the UW vaccine capstone project from Evans School of Public Policy to name just a few of them. We arrived at the following audiences for our vaccine campaign -

- 1. General Washington (16–59-year-old Washingtonians)
- 2. Young Audiences on Instagram (18–39-year-old based in Washington)
- 3. Spanish Speakers (13-65+ year old Spanish-speakers, in Washington)
- 4. Rural and Conservative populations (for the final phase)

The 8-week long vaccine ad campaign was launched on 19th April to continue till 11th June and the lift study to run till May 21<sup>st</sup>. Though the student team and all the stakeholders had

been working harder than ever to meet the accelerated 3-month timetable of the vaccine ad campaign, they all faced immense pressure from the dynamically changing guidelines regarding the phases from the government and health authorities. But the team remained clear about one thing: We would move logically according to public health policy and public welfare. The team undertook the approach to encourage mask adoption and vaccination in Washington State through targeted advertising on Facebook and Instagram while continuously evaluating and honing the most effective messaging for different groups. In addition to this, Facebook provided us with useful tools to tackle the misinformation spread by antivax audiences, and our social moderation team has been on their toes to execute that. One of the best ways to combat vaccine hesitancy has been to connect people to reliable information from health experts. As members of the community, we see this opportunity to follow through our commitments to tackle and crack down on life-threatening misinformation. The campaign's impact on the intended audiences was measured, and the captured learnings have provided a replicable framework for other organizations in other states and regions.

Furthermore, two more campaigns branched out from the vaccine campaign - Amplify and Cheerity. Cheerity is a platform for cause-based and purpose-driven social sharing at scale. Restart Partners & Cheerity teamed up on a peer-to-peer social campaign to give audiences a safe and compelling way to add their voice, show confidence and inspire friends to encourage healthy COVID-safe behaviors from both consumer and small business owner perspectives. We want people to use the photo templates to show that they care about masking up, getting vaccinated, and supporting small businesses. The target audience for this were 18-65+ Washington State community members and small business owners who show interest in community issues, social change issues, and charities and causes. The targeted ads generously funded by Facebook were used to seed peer-to-peer participation with the following messaging types: "Got Vaxxed, still Masked", "We got our SHOT", "We MASK UP". Some of the metrics of the Cheerity campaign with the current spend of just \$6000 have shown great results like the email acquisition rate of 54% and social share rate at 76% and a total reach of 221,500.

We next worked to launch an Amplifier #Vaccinated social media campaign to help encourage COVID-19 vaccinations and vaccine equity. Amplifier is a Seattle-based nonprofit design lab started by Aaron Huey that builds art and media experiments to amplify the most important movements of our times through free and open-source art. It deploys artist-created visual content to shift culture of vaccine apprehension and increase adoption. We partnered with Facebook on this campaign who offered free post-boosting to any partner who posts this rich content. This campaign, through a creative use of media

and powerful visual storytelling, has been reaching vast audiences and that shifts culture and changes the national narrative towards vaccination.

# **Findings and Campaign Highlights**

#### **Mask Adoption Campaign Analysis**

To measure and analyze our findings we developed multiple metrics to offer different perspectives for looking at data both qualitatively and quantitatively. We used the Facebook learning campaign to understand which ads were the most effective and the Facebook lift campaign to understand how people are retaining information and changing their behaviors. From the learning campaign, a diverse range of quantitative metrics (as shown below) were used to assess the receptiveness of messaging for our target populations.

The 9-week (Sep 21- Nov 30, 2020) Mask Adoption campaign results -

Total reach: 1.5 million

Total impressions: **7.3 million**Total post reactions: 389,042
Total comments: 18,306

Total shares: 51,586

Approx Spending: \$75000 + \$11000

The lift study content focused on the importance of wearing masks in small gatherings with people outside your household — which the Kantar survey had determined as the biggest area of opportunity for behavioral change. (The learning content was more exploratory, beyond our specific lift questions).

The result was a **4.3% lift**, moving people to likely or very likely when asked "How likely are you to wear a mask when getting together with friends and family members you don't live with" (other options were "not likely" and "very unlikely"). A 4.3% lift just through messaging was astounding. With a total lift audience of 1.26 million, we can estimate **55,000 people in Washington changed their behavior** in response to the campaign.

We took an iterative, audience-informed approach to the messaging, deploying a broad range of lower-budget creative, observing its performance, and then refining based on what we learned. Our ads comprised still images and videos and we increased engagement

and interaction with tactics like asking questions, using rhymes and puns, catchy slogans, seasonal themes, and including diverse groups of people in the ads. Over the course we tracked which messages worked the best, and then adjusted in response. We experimented with various types of messaging - humorous/cute, instructive/informative, solidarity/mutual respect, protecting family/relatives, technical/statistical on a broad scale. Below is a table that depicts the breakup of results of the different messaging ads.

Message Analysis		Reach Engagement				Cost Per Engagement	Engagements to impressions ratio
		Impression	Like	Comment	Share		
Commanding/Scolding	•	13,670	1,481.25	93.75	222.67	\$0.16	13.91%
Humorous/Cute	¥	61,760	821.96	641.46	175.04	\$0.15	20.02%
Indirect/Masks worn but other msg	*	29,179	687.41	121.45	73.00	\$0.22	14.41%
Instructive/Informative	*	37,574	1,165.90	116.79	234.72	\$0.15	16.27%
Protecting Family/Relatives	*	23,484	1,988.08	148.58	268.00	\$0.08	19.88%
Solidarity/Mutual Respect	*	24,587	2,875.24	237.76	421.43	\$0.12	16.48%
Technical/Statistical	*	6928	380.67	89.33	69.67	\$0.12	8.31%

Ultimately, we found that the ads that promoted themes of Solidarity and Mutual Respect performed best. The humorous and pleasing messaging also performed adequately. An effective messaging technique was the use of a tone that was supportive, encouraging, and actionable such as "Thank someone...", "Why do you wear a mask?".

#### Campaign Ads to make it easier to get access to wearing a mask

To make access to mask wearing easier, the student team designed ads to help ensure that people are well stocked at their touch points wherever, whenever a mask is needed and that they know where they can easily get the masks from. They were reminded through ads where to store their masks every time they venture out in their cars, bags, and jacket pockets so that whenever they need an extra mask they can be carried and pulled out easily.





In addition to that if masks do not reach the end point in the distribution chain, it would become more difficult to encourage as then otherwise people may have to travel farther to buy them. One of the above ads - about buying a mask at the 'ghost-ery' store requires understanding of audience dynamics (e.g., who does the shopping, who makes the financial decisions, who makes the buying decisions) and these factors can help to decide whether it is worthwhile to focus of factors for ability - like provide training, offering tools and resources. Here the tool and resource that has been provided in the ad is that masks are easily available at the grocery store and hence we ran campaign ads for masks availability at the grocery stores so that people are able to access them easily.

#### Campaign Ads to increase motivation to wear a mask

There are some groups of audiences for whom fear of becoming infected and infecting others with the coronavirus has resulted in motivating people to wear masks. Restart used targeted social media posts towards this audience, by asking people to tell why they wear a mask. We received a plethora of responses from the public for their reasoning behind wearing a mask and used that in our ads to motivate others.

To further increase motivation to wear a mask we also launched some ads which even had children showing even they are wearing masks and asking their motivations to wear a mask which revealed many factors of motivation like safety for themselves, for others, for elders, and for the larger community- in the form of both hope and fear (to be safe). Apart from safety there were other motivational factors that came out like respect (social acceptance)

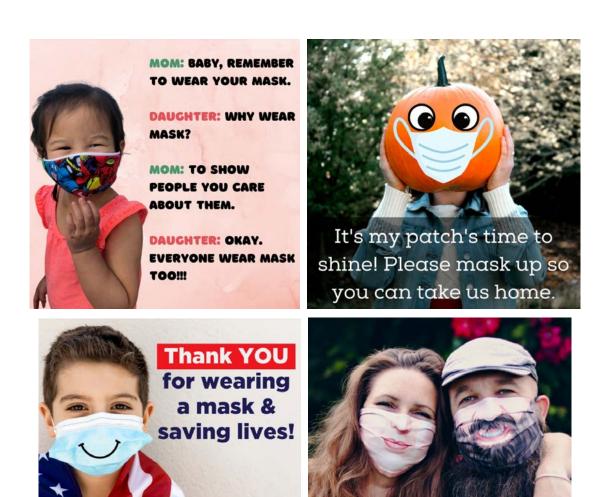
and care towards others and even for fun (pleasure). We can also measure increases in motivation on social media by tracking engagement metrics. For example, an ad below - 'I wear a mask to keep you safe' garnered 360+ comments and 480+ shares with a lot of heart and wow reactions. Hence this way of looking at motivation is also helpful by analyzing the results and to assess whether the audience made any meaningful changes in their behavior, to create a meaningful impact.











#### Campaign Ads that act as prompts or triggers to wear a mask

To encourage people who are motivated to wear a mask and able to easily obtain one, Restart created a series of ads to act as triggers or prompts, to remind people that covid-19 is still there and hence consequently to follow covid safe behaviors. These prompts were designed as spontaneous reminders, many in the form of questions or that require an action. For example - 'Attending a small gathering? Wear a mask', 'Meeting with a friend? Wear a mask', or some seasons or events related prompts like 'How are you masking up this Halloween?' and some other direct action related prompts like 'Masks are required on public transit' or tag someone and say 'Thank you for wearing a mask' which would bolster the mask wearing habit.

EAR A MASK

ND MAKE IT FUN!

















#### **Small Business Campaign Analysis**

The results were reflected by the steady decrease in the Covid-19 graph of Washington and an increase in the footfall at small businesses.

Some of the Small Business campaign results (still ongoing from 15th March) -

Total reach: 960K

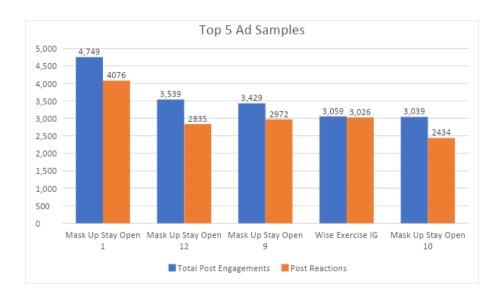
Total impressions: **5.84 million**Total post engagement: **534,395**Total post reactions: 157,791

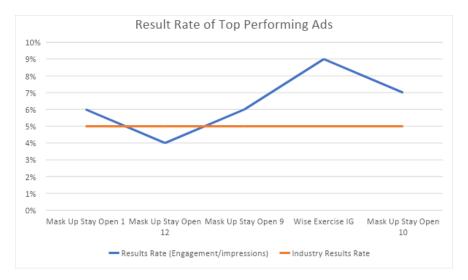
Total comments: 5,627 Total shares: 6,893

Cost per post engagement: \$0.14

Total spending: \$74K

Below are graphs depicting some of the top performing commerce campaign ads (intertwined with masking messages) in March 2021 on the x-axis that received 3000+ post reactions, and another graph that depicts the result rates of those ads versus that of the average industry standards.





The small business campaign sought to influence mask adoption and other Covid-prevention behaviors to help communities stay healthy, while also fostering environments for small business commerce to continue during the pandemic. Also like the mask adoption campaign, it was found that the ads with positive reinforcement tactics worked best. Direct messaging ads that encouraged the audience to do **something specific** (e.g., "Buy Local, Buy a Gift Card") had better engagement. "Thank you" messages from local businesses did well as **embedded commands** in neurolinguistic programming that entailed crafting the action we wanted the people to take. Using messaging of **cause-and-effect syntax** using the linguistic bind as psychological trigger worked well in many successful small business campaign ads, like – "When you mask up, we stay open". Some of the results of the messaging type for the small business campaign is as follows.

Audience	Type of Messaging	Total Impressions	Total Shares	Total Likes	Total Comments	Average Result rate (sum of engagement/sum of impressions)
Description	Direct Statement	60279	158	2349	441	4.89%
Rural Audiences	Solidarity	12430	24	487	41	4.44%
Addiences	Supportiv e	5605	23	213	129	6.51%
Suburban/ Urban	Direct Statement	231237	698	3678	2363	2.91%
Area Residents	Solidarity	63549	208	941	252	2.20%

Some of the successful small business campaign ads are the following -













#### Other successful translated campaign ads -



#### **Vaccine Adoption Campaign Analysis**

The results were analyzed to see the campaign performance to increase vaccination rates by leveraging people's enthusiasm to support their local community and businesses and emphasizing safety and peer support.

#### Some of the Metrics:

o Reach: 1,481,632

• Impressions: 12,502,364

Cost per Result (Ad Recall): \$0.44
 Cost per 1000 impressions: \$6.29
 Cost per Post Engagement: \$0.16
 Total spend since launch: \$78,600

We tested 7 different messaging types and honed in on the best performing creatives as the campaign moved forward, keeping in mind the state- and national-level public health changes to push out timely content. Messaging Types Include Instructive/informative, Technical/Statistical, Engagement/asking a question, Messages of solidarity, Humorous/cute, Direct statement, Protecting family.

We implemented a Brand Lift Study to measure the effectiveness of our content and brand recall which provided a lift of **3.8% in ad recall**. There were other questions too that were conducted as part of the lift study - like for **ability** and availability we achieved 3.1% lift. **Prompt** of whose opinion you value and how much would they approve getting the vaccine received 1.8% lift. And the **motivation** to take the vaccine regarding safety got a 1.9% lift.

#### Fogg Behavior Model for Vaccine Adoption campaign

Unlike mask adoption, covid vaccination is a one-time behavior (two shots and you are done). In behavior design this is called a DOT behavior (done one time). Like all behaviors, the one-time behavior of getting vaccinated against covid-19 is a function of Motivation, Ability and Prompts as per the Fogg Behavior Model. Let us study in the reverse order how each of these functions were used in our campaign ads.

#### Campaign Ads that act as prompts or triggers to get vaccinated

A prompt for vaccination is anything that would tell a person to get vaccinated now. Prompts can come from friends, doctors, TV news. And sometimes, people can prompt themselves "Oh I need to get vaccinated". To encourage people to get vaccinated, Restart created a series of ads to act as triggers or prompts, to remind people that they need to get vaccinated, emphasizing the urgency of getting it and we also shared posts by local government health authorities as our ads to take that action. Some of the prompts were also in the form of the question - 'Have you scheduled your second covid-19 vaccine appointment' and another in the form of a call to action as shown below.









#### Campaign Ads to make it easier to get access to vaccines

For vaccines, the audience was reminded through ads that they would require just 2 shots and would be hassle free. Also, there were some successful ads which conveyed the availability of vaccines at mass vaccination sites plus how easy the process is to get an appointment online to schedule the vaccine, which enabled comfortable access to get the vaccines. The first ad was targeted towards more rural populations as there is lack of easy access to get a vaccine, and the second was targeted for walk-in clinics in Washington state. The last image also conveys a very important point of cost of the vaccine which is free and hence makes access easier to vaccines. Hence ability was addressed by providing tools and resources to help people get vaccinated.



When you find out there are free walk-in vaccine clinics in Washington state.

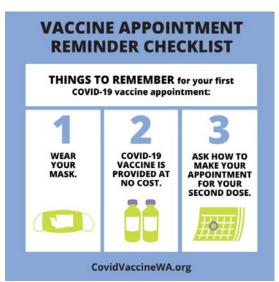




Having to call to schedule your vaccine appointment



Visiting doh.wa.gov to schedule an appointment online



#### Campaign Ads to increase motivation to get vaccinated

For covid-19 vaccination, motivation has been the main function as that has been the most critical and variable component. If someone lacks motivation to get vaccinated, they won't do this behavior even if vaccination is really easy to do (high ability) and prompts are plentiful. A lot of primary and secondary research studies and surveys have been conducted and let us first understand some of the motivators to get vaccinated through some of the ads that were created.



A.

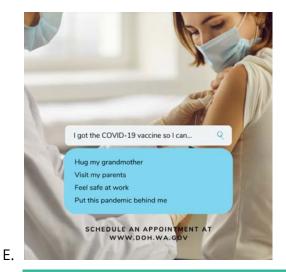
C.



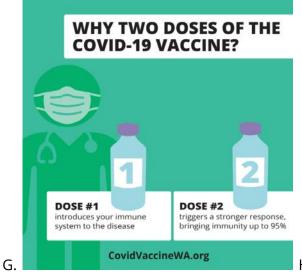


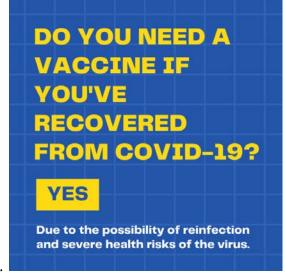


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- 1. Other people with shared backgrounds and identities are being vaccinated, like Latinx population. (Campaign ad A)
- 2. Trusted community members are encouraging them like owners of local small businesses. (Campaign ad A and B)
- 3. Feeling happy about getting back to normal life after getting covid-19 vaccine. (Campaign ad C and D)
- 4. The altruistic idea of getting vaccinated to protect other people who may be more vulnerable. (Campaign ad E and F)
- 5. Feeling informed about vaccine benefits, risks, and supply. (Campaign ad G and H)
- 6. Receiving meaningful, relevant information about the vaccination that has crowded out the misinformation (Campaign ad G, H, and I)
- 7. People they know or admire are cooperating or promoting vaccine use. (Campaign ad J)

Below are some more sets of ads which were created to address the de-motivators to get vaccinated.













- 1. Concern that the vaccine will have significant side effects (Campaign ad A, B and C)
- 2. Belief that the vaccine is not effective (Campaign ad D)
- 3. Fear of needles (Campaign ad E and F)

There are three graphics of the Fogg Behavior model shown below with respect to hope and fear of the motivation function.



In the first graphic above, the overall motivation level is relatively low because fear is stronger than hope. In this scenario the person will not get vaccinated when prompted. The second middle graphic above shows a person who is experiencing hope and fear in equal amounts. As a result, this person is undecided about getting vaccinated, and people like him form a group called the holdout audiences. In the third graphic above on the right, the overall motivation is relatively high because hope is stronger than fear. In this scenario, the person will get vaccinated when prompted. The overall campaign strategy has been, first, to move the undecided holdout audiences to the graph on the right where they are highly

motivated to get a vaccine when prompted. The second, has been to try and address the fears of the people in the first graph and move them to an undecided audience group, where some of them then would lean towards getting vaccinated when prompted.

### **Learnings and Future Uses of Research**

This study helped Restart Partners identify 8-steps which can be adopted by any mission-driven group who is looking to use social media to undertake a behavioral change campaign. The steps we have identified are:

- 1. Develop a Theory of Change
- 2. Identify Strategic Partners
- 3. Conceptualize Rapid Response
- 4. Engage Community Partners
- 5. Conduct Actionable Research
- 6. Create Targeted Actions
- 7. Test Actions
- 8. Refine, Share, and Repeat

#### **Step 1: Develop a Theory of Change**

"The theory of change helps organizations prioritize what to measure and helps ensure credible data collection and analysis. The theory of change also helps ensure responsible data collection and transportability by laying out an explicit story about how a program works."

-The Goldilocks Toolkit

As described by the Goldilocks Toolkit, Theory of Change aims to provide an overall framework for monitoring and evaluating a particular program or strategy and creating a pathway outlining how a process will achieve specific outcomes and create impact. It begins by defining the problem the program aims to overcome using existing literature and evidence. It is critical to consider the equity implications in defining the problem and potential inequitable outcomes of the desired program activities. The theory also identifies assumptions, the conditions that must be in place for a particular part of a program to work as expected, and potential risks in implementation. The framework then links the day-to-day activities required to achieve the outputs (the products and services, deliverables) and outcomes (the intended results or the overall change it seeks to create). Organizations can develop a theory of change at the start of a program and implement it to assess a current program. Working backward from envisioning the impact/outcome organization hopes to achieve to then identifying the initial inputs needed helps guide the organization to take appropriate steps of running a successful program.

#### **Step 2: Engage Strategic Partners**

At the start of projects or at times of crisis, it often becomes difficult navigating through the system with the uncertainty prevailing around. However, the period creates opportunities where organizations can reimagine who they are and what they do and what they need to accomplish their goal. One way of efficiently achieving this goal is to create strategic partnerships to help guide the strategy and support for the project, ideally from the onset. A well-developed ability to create and sustain fruitful collaborations gives companies a significant collaborative advantage in the global economy.

These partnerships can span between the public, private and non-profit sectors. However, the question arises, when organizations from different sectors, who potentially have varying missions and priorities, endeavor to collaborate, how should leaders approach the partnership-building process? Therefore, the orientation of any partnerships should answer two overarching questions; "What unserved need are we fulfilling together?' and "Jointly, can we increase impact in a specific area?" After establishing the purpose, we can then ask what will we need from the strategic partners and what can we offer to the strategic partners? The next phase of the partnership process will determine the medium of engagement, level of engagement, and sectoral composition. The key to successful strategic partnerships is recognizing the long-term relationship and nurturing the relationship with continuous efforts. A strategic partnership must be able to encourage innovation, foster cohesion between teams, and communicate expectations.

#### **Step 3: Conceptualize a Quick Response**

Every successful solution starts with a process of navigating through a sheer volume of ideas, thought processes and trial and error. After much refinement we are able to center our focus on one or two primary outcomes and viable solutions. To be able to narrow down to a solution, a key starting point is to combine perspectives from the strategic partnerships that we formed earlier. The added advantage of consulting the partnerships is that it helps prevent groupthink as homogenous teams face the risk of approaching the problem with the same mindset. Once we have a general understanding of the problem and needs of the target population in place to give us a sense of direction, partners should go forward and conceptualize an initial response to the situation. The added benefit of such a step is that it helps lay the foundation for what the organization is trying to achieve and the response can later be refined once the preliminary results are gathered.

#### **Step 4: Engage Community Partners**

We often say global change requires local action. In the last few years, we have recognized that lasting impact requires doing more than just siloed areas of charitable giving, volunteerism, and traditional grantmaking. The primary barrier in achieving the desired goals is the gap between the organization and the target population. Therefore, to leverage even more significant change and equitable response, organizations should focus on gaining local knowledge to understand the population's needs better and then defining and addressing the solutions eventually. Local partners can provide an in-depth understanding of the past and present efforts, the challenges, the resources available, and potential areas where intervention by the organization can have a multiplier impact. Their partnerships can be as simple as inviting relevant local parties to engage in conversations to more formal partnerships where an organization can contract an appropriate service or offer a seat at the table. Involving local partners has the added advantage of building trust in the efforts towards the target population; it helps prevent duplication of resources and strengthens awareness for the community and the organization itself. Similar to building strategic partnerships, the overall purpose of community partnerships should be aligned. In addition, organizations will need to determine what they need from the partnership and what they can offer. The medium of communication and level of engagement will also be decided for smooth collaboration.

#### **Step 5: Conduct Actionable Research**

Researchers and organizations agree that we ultimately want to base our policies and programs based on sound evidence. Therefore, it is pertinent to collect and analyze data to understand values, beliefs, underlying factors, and resulting behaviors of communities around. Making research actionable requires an organization to reflect on and incorporate the findings to help change their program's process. Before starting an initiative, organizations should develop research questions to guide their project. Good research questions tend to be clear, concise, and relatively open-ended, and changes can occur over time.

Moreover, technology and innovation have made it easier to access large amounts of data and interpret it rather than practicing instinctive decision-making. However, organizations do get overwhelmed with the resources around, and some critical questions remain unanswered, such as which evidence/information is most valuable and reliable? How much data is sufficient to make informed decisions? And most importantly, what areas to research and what information to collect? A starting point to answer these questions is to

map out the underlying factors that have the power to influence or disrupt the outcomes that we are trying to achieve. These factors should cover a diverse range and comprehensively understand internal and external factors such as motivations, values, behaviors, beliefs, policies, and influencers. Mixed methods consisting of qualitative and quantitative findings will be able to outline the theory and empirical findings. To conclude, organizations must keep seeking new information and respond accordingly as the research phase is never truly concluded.

Following the similar strategies highlighted above, Restart also invested sufficient time and resources to conduct actionable research. With the support and expertise from Kantar, a national market research firm, Restart surveyed over 1,000 participants from across the US to identify common motivations for wearing masks, barriers to mask use, and the best ways to encourage mask use. The survey included 12 questions about mask use and motivating factors and 13 questions about respondent demographics. Our messaging strategy was informed by our survey findings and by other recognized primary and secondary research data. Moreover, Restart reviewed existing national and global mask surveys for a holistic and deeper understanding of the behaviors. Restart found it necessary to keep themselves up-to-date with new informational flows and literature related to Covid-19 and small businesses. Constant engagement with strategic and community partners was essential to incorporate their professional input based on ground realities into our research.

Additionally, to understand vaccination patterns in Washington, the team has analyzed the state's vaccination landscape and carried out an extensive literature review on vaccine adoption and public health messaging strategies. Finally, to bridge the information gap within the small business community, Restart further carried out choice experiment surveys to understand how to improve consumer confidence in the economy. At Restart, we constantly displayed efforts to remain dynamic and ensure research is updated and reviewed frequently to ensure accuracy in response.

#### **Step 6: Create Targeted Actions**

On the road to create a significant impact, we must rethink the one-size-fits-all approach. A targeted approach is motivated by a particular set of goals and subjected to shifting social, political, and economic concerns. Selectively providing resources to those most in need requires an accurate and reliable method of identifying these individuals. The next step is to match the sub-groups of the target population to appropriate interventions. This approach could address differences in values, ethics, language, and even political

affiliations, which are a prominent driving force for people in the United States. The information gathered in the previous step becomes essential in generating tweaks and customizations to the intervention. While a broader or universal approach seems feasible and administratively less burdensome, organizations can take advantage of the strategic partnerships to gain expertise about best practices and simultaneously benefit from the community partnerships to lay the foundation, consolidate findings and redirect towards the targeted community/area. A targeted approach also helps in outcome monitoring and analyzing results and helps systematically address noise in the process. It helps identify what works and what does not work and helps improve the utilization of resources. A targeted-based strategy also has the added advantage of maximizing impact by reaching the community sooner than later.

#### **Step 7: Test Actions**

Rapid assessment is a form of formative evaluation where continuous data helps effectively examine a program or process to estimate its function, effect, and implementation feasibility. The rapid assessment builds the capacity of organizations as the assessment is ongoing and real-time adaptations and modifications to aid in the development of empirically developed and empirically informed instruction or intervention practices. The assessment procedure can involve both qualitative and quantitative findings and emphasize the developing needs and changes to the programs to allow for intervention. Organizations must map out their outcomes and develop appropriate metrics that can actively be used to assess program effectiveness. Some popular and effective strategies of developing metrics involve benchmarking outcomes with general standards or acceptable ranges suggested by the literature. Metrics can also measure ratios of outcomes in terms of inputs such as return on investment or return on a recourse. The advantage of using benchmarks or ratios in addition to general trends is that they can contextualize the findings.

#### **Step 8: Refine, Share, and Repeat**

It is often common for leaders and organizations to be interested in scaling programs and projects to increase the impact and potentially explore more areas where they can further work. However, there are important considerations before this can take place. How to scale ("pathways"), whom to involve ("partnerships"), and retention of program quality ("fidelity") are three strategic decisions that can be critical to the scale-up of programs. Once again, the process would require forming strategic and community partnerships to reassess capacity, roles, goals, and feasibility. Implementation guidance should be available, and

adaptation and change should be encouraged to help make the program successful. Similarly, to help the initiative make an even more significant impact, organizations should share their approach and learnings with partner organizations or those working in the same sector. This form of sharing promotes knowledge creation through informal and formal collaborations, as others can learn from multiple models and build on them.

Evaluation should be a way to engage in ongoing learning and continuous feedback to policymakers, stakeholders, businesses, and communities to facilitate improvements to policy and response. Reimaging and refining the approach requires organizations to take into consideration the critical feedback accumulated in the earlier eight steps. The role of strategic and community partners extends to carrying out open communication with the organizational leaders to suggest changes of what works, what does not work and what their new role can be. In addition, as highlighted previously, organizations must continue to respond to evidence-based research, rapid assessment and testing and changing internal or external circumstances to remain relevant and effective in the given scenario. The adaptability to the various factors will then lead to readjustment of the theory of change to help guide the process further. Eventually, as organizations reexamine the process, progress and the landscape, any or all steps can be revisited, improved and repeated where appropriate. The success of the initiative lies in recognizing that the process is ongoing, iterative and requires continuous efforts to sustain it.











#### RESTART PARTNERS

# **Adoption Strategy**

8 STEPS TO ENCOURAGE MASK USE AND COVID-19 VACCINE ADOPTION

#### 1. DEVELOP A THEORY OF CHANGE



Define the problem, state assumptions, identify potential risks, and determine necessary conditions and activities needed for the program to achieve desired outcomes.

#### 5. CONDUCT ACTIONABLE RESEARCH

Identify clearly defined research questions which utilize qualitative and quantitative data to understand values, beliefs, underlying factors, and resulting behaviors of communities.



#### 2. IDENTIFY STRATEGIC PARTNERS



Establish relationships with stakeholders from various sectors who have a shared purpose and determine the frequency and extent of engagement.

#### 6. CREATE TARGETED ACTIONS



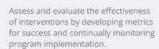
Create targeted interventions using a collaborative evidence-based approach to determine the best course of action to create change.

#### 3. CONCEPTUALIZE RAPID RESPONSE



Refine an initial response to the situation through consulting strategic partners, coming to an informed consensus about the solution and needs of the population.

#### 7. TEST ACTIONS





#### 4. ENGAGE COMMUNITY PARTNERS



Gain knowledge of present efforts, challenges, and resources from local partners to better define the problem and create solutions.

#### 8 REFINE, SHARE AND REPEAT

Recognize that this process is ongoing, iterative, and requires continuous effort for success. Share findings with community partners and other organizations working in the same sector to continue improving the process.





#### **Future Uses**

Our research has shown that social media has the potential to quickly change human behaviors in the context of public health emergencies when executed correctly and targeted to the appropriate audience.

Although the public has been skeptical of social media in recent years, due to the uncontrolled spread of misinformation over various issues, including COVID-19, social media has still proven to be a powerful medium for affecting change. As long as organizations like Restart are willing and able to mobilize their exceptionally talented partners and engage key stakeholders to address barriers that could directly influence public health, this tool can continue to benefit the nonprofit sector. Looking forward, other mission-driven organizations should consider partnering with businesses to utilize social media campaigns and motivate behavioral change. The findings of this research should also be considered by other nonprofit entities so that creative efforts can be streamlined and ads can be targeted successfully.

### **Acknowledgements**

We are enormously grateful to the Department of Commerce, Washington State for their financial support to undertake this work. To Facebook for their in-kind ad support, to Upswell and Drew Barnard for their support in understanding the intricacies of running such a campaign and undertaking lift studies to measure the impact of the work, and Mitch Eggers and Kantar for undertaking the survey to measure mask adoption sentiment to get the work going. Finally, our deep appreciation to Alex Stonehill and his team of students at the University of Washington, Department of Communication Leadership, they spent countless hours on developing the creatives, managing all of the various feedback (both negative and positive) that we received, and undertaking the measurement studies to effectively understand the impact.

#### **Team of Partners**

Facebook

Kantar

Upswell

Washington State Department of Commerce

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Marisol Morales

### **UW Communication Leadership Team**

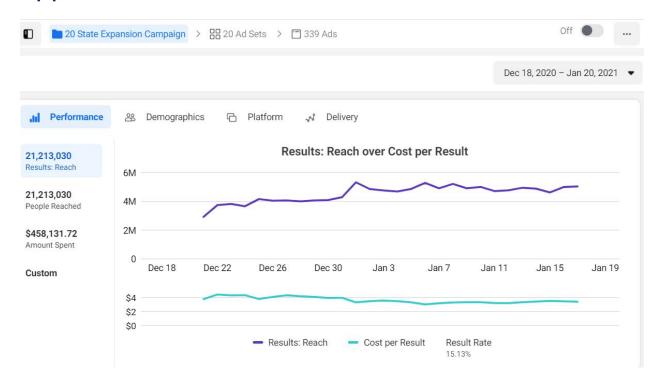
Niharika Arora Ikram Navia

Marina Baur Alyssa Seng
Sasha Buz Isabel Shen

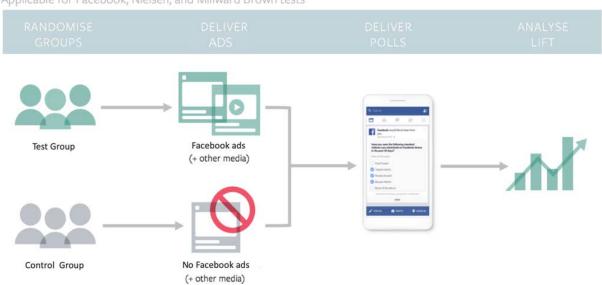
Mo Herbert Stasea Stewart

Ashley (Ai Heng) Lee Alex Stonehill
Jordan Melograna Audrey Widner

# **Appendix**



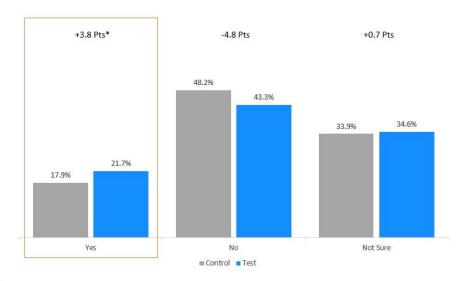
# Brand Lift tests rely on experimental design Applicable for Facebook, Nielsen, and Millward Brown tests



Note: Response rate is -10x higher than other solutions; people won't get polled again for 7 days (unless a follow-up question); in test group, we poll actual exposed population; in control group, we poll people after they have had their first opportunity to see an ad. Control/Treatment polls delivered between 4-48 hours post exposure.

### Standard Ad Recall - lift results



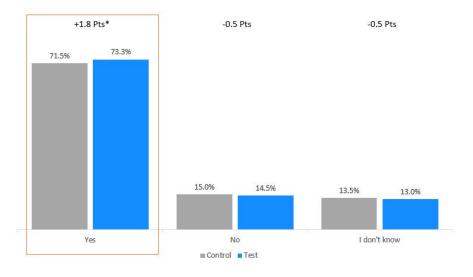


Sample size (Control, Test): Standard Ad Recall (480, 480)

Standard Ad Recall: Do you recall seeing a post about COVID-19 vaccines from Restart Us online or on a mobile device in the last 2 days? \*Chance of brand lift 90% or greater | ^Chance of brand lift 80% or greater

### Where to access vaccines

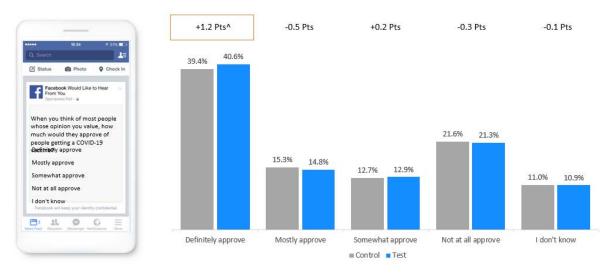




Sample size (Control, Test): Custom (485, 479)

Custom: Do you know where people in your local community can go to get a COVID-19 vaccine? \*Chance of brand lift 90% or greater  $\mid$  \*Chance of brand lift 80% or greater

### Social acceptance

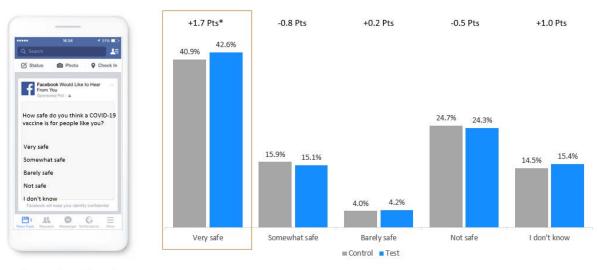


Sample size (Control, Test): Custom (484, 484)

Custom: When you think of most people whose opinion you value, how much would they approve of people getting a COVID-19 vaccine?

\*Chance of brand lift 80% or greater | ^Chance of brand lift 80% or greater

### Safety - lift results



Sample size (Control, Test): Custom (488, 497)

Custom: How safe do you think a COVID-19 vaccine is for people like you? \*Chance of brand lift 90% or greater | \*Chance of brand lift 80% or greater

### Project Limitations, Risks & Mitigation and

### **Assumptions**

One of the limitations of applying the Fogg Behavior Model as a theory of change brings out its own limitations of assessing creatives based on individual drivers of motivation, ability and prompt. Further limitations arise in the research when the Facebook algorithms are designed to cater to just either to one of the Awareness, Interest, Desire, Action (AIDA) funnel objectives. If a campaign's objective was chosen as Reach to increase awareness, then the campaign did not garner as much engagement as it would have if the campaign objective would have been chosen as Engagement in the consideration stage of the funnel. However there are advantages to this limitation so that campaign planners are able to see the bigger impact on the customer journey. In addition to this there are some other limitations for the brand lift measurements where the responses are a percentage of the population surveyed and the results have been extrapolated on the audience based on the number of people to whom the ads were served.

### **Bibliography**

- 1. Fogg, B. J. (2010). *The Behavior Wizard* | *GreenDot Behaviors Preview*. The Behavior Wizard.
  - http://www.behaviorwizard.org/wp/all-previews-list/greendot-behaviors-preview/
- Fogg, B. J. (2020). Optimizing COVID-19 Vaccination Rates | Behavior Design Lab. Stanford University. Retrieved July 1, 2021, from <a href="https://behaviordesign.stanford.edu/vaccination">https://behaviordesign.stanford.edu/vaccination</a>
- 3. Fabrega, M. (2017, July 19). *A Failproof Model for Triggering Behavior Change*. Daring to Live Fully. <a href="https://daringtolivefully.com/the-fogg-behavior-model">https://daringtolivefully.com/the-fogg-behavior-model</a>
- 4. Wood, S., PhD. (2021, June 22). *When Vaccine Apathy, Not Hesitancy, Drives Vaccine Disinterest*. Shared Decision Making and Communication | JAMA | JAMA Network. <a href="https://jamanetwork.com/journals/jama/fullarticle/2780792?resultClick=1">https://jamanetwork.com/journals/jama/fullarticle/2780792?resultClick=1</a>
- 5. Cyr, D., Head, M., Lim, E., & Stibe, A. (2018). Using the elaboration likelihood model to examine online persuasion through website design. *Information & Management*, *55*(7), 807–821. <a href="https://doi.org/10.1016/j.im.2018.03.009">https://doi.org/10.1016/j.im.2018.03.009</a>

- 6. Caltabiano, G. (2018). *The psychology behind content: how to trigger your usersâ behaviour and how to map psychology principles to the buyer journey*. LinkedIn. <a href="https://www.linkedin.com/pulse/psychology-behind-content-how-trigger-your-users-map-buyer-giuseppe/">https://www.linkedin.com/pulse/psychology-behind-content-how-trigger-your-users-map-buyer-giuseppe/</a>
- Cherry, K. (2021). How Can Our Attitudes Change and Influence Behaviors? Verywell
  Mind.
  <a href="https://www.verywellmind.com/attitudes-how-they-form-change-shape-behavior-27">https://www.verywellmind.com/attitudes-how-they-form-change-shape-behavior-27</a>
   95897
- 8. Paul, S. (2018). START Researchers Assess the Fogg Behavior Model in the Context of Condom Use in Urban Pakistan | START Center. UW Start Center. http://uwstartcenter.org/start-researchers-assess-the-fogg-behavior-model-in-the-context-of-condom-use-in-urban-pakistan/
- 9. *Fogg Behavior Grid*. (n.d.). Behaviorgrid. Retrieved July 1, 2021, from <a href="https://www.behaviorgrid.org/">https://www.behaviorgrid.org/</a>
- 10. *References* | *behaviormodel Fogg Behavior Model*. (2020, September 15). Behaviormodel. https://behaviormodel.org/references/
- 11. Meekers, D., Onuoha, C., & Olutola, O. (2020, September 24). *Applying the Fogg Behavior Model to improve contraceptive social marketing during the COVID-19 lockdown in.* . . Gates Open Research. <a href="https://gatesopenresearch.org/articles/4-141">https://gatesopenresearch.org/articles/4-141</a>
- 12. Behavior Design. (2020, August 2). Behaviordesign. https://behaviordesign.info/
- 13. *References* | *behaviormodel Fogg Behavior Model*. (2020, September 15). Behaviormodel. <a href="https://behaviormodel.org/references/">https://behaviormodel.org/references/</a>
- 14. Badshah, A. (2020). *Purpose Mindset: How Microsoft Inspires Employees and Alumni to Change the World (Microsoft Alumni Network)*. HarperCollins Leadership.
- 15. Yang, X., & Smith, R. E. (2009). Beyond Attention Effects: Modeling the Persuasive and Emotional Effects of Advertising Creativity. *Marketing Science*, *28*(5), 935–949. <a href="https://doi.org/10.1287/mksc.1080.0460">https://doi.org/10.1287/mksc.1080.0460</a>

- 16. Norman, J. (2021, April 27). *COVID-19 induced behavior change*. The Flip Africa. https://theflip.africa/Covid-19-behavior-change/
- 17. *Learning healthy habits is vital in the time of COVID-19*. (2020). Auburn University. https://ocm.auburn.edu/experts/2020/04/070958-healthyhabits-Covid19.php
- 18. Tiny Habits. (2021, June 26). BJ Fogg. https://tinyhabits.com/
- 19. Fitzsimons, J. (2020). Quality and safety in the time of Coronavirus: design better, learn faster. *International Journal for Quality in Health Care*, *33*(1). https://doi.org/10.1093/intqhc/mzaa051
- 20. *How To Design Healthy Habits*. (2020). Vera Whole Health. https://www.verawholehealth.com/blog/how-to-design-healthy-habits
- 21. Forget big change, start with a tiny habit: BJ Fogg at TEDxFremont. (2012, December 5). YouTube. https://www.youtube.com/watch?v=AdKUJxjn-R8
- 22. Liu, Y. (2016). *Clustering of Five Health-Related Behaviors for Chronic Disease Prevention Among Adults, United States, 2013.* Centers for Disease Control and Prevention. https://www.cdc.gov/pcd/issues/2016/16\_0054.htm
- 23. Rappaport, S. M. (2016). Genetic Factors Are Not the Major Causes of Chronic Diseases. *PLOS ONE*, *11*(4), e0154387. https://doi.org/10.1371/journal.pone.0154387
- 24. Gard, A. (2020, August 17). *Using the Fogg Behavior Model to Increase Productivity During COVID-19*. Peace Innovation Institute. https://www.peaceinnovation.com/blog/using-the-fogg-behavior-model-to-increase-productivity-during-Covid-19
- 25. COVID-19 Response. (2021, April 22). Viamo. https://viamo.io/Covid-19-response/
- 26. Short-Term Changes in Behaviors Resulting from COVID-19-Related Social Isolation and Their Influences on Mental Health in Ghana. (2020). PubMed Central (PMC). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7543965/

- 27. Groenewegen, A. (2020, September 16). *BJ Fogg model explained*. SUE | Behavioural Design. https://suebehaviouraldesign.com/bj-fogg-model/
- 28. Manca, S., Altoè, G., Schultz, P. W., & Fornara, F. (2019). The Persuasive Route to Sustainable Mobility: Elaboration Likelihood Model and Emotions predict Implicit Attitudes. *Environment and Behavior*, *52*(8), 830–860. https://doi.org/10.1177/0013916518820898
- 29. Attitude and Behavior Changing attitudes to change behavior, Changing behavior to influence attitudes. (n.d.). Cognitive Therapy Techniques, Adolescence, Social, and Constructs JRank Articles. Retrieved July 1, 2021, from https://psychology.jrank.org/pages/52/Attitude-Behavior.html
- 30. Albarracín, D., & McNatt, P. S. (2005). Maintenance and Decay of Past Behavior Influences: Anchoring Attitudes on Beliefs Following Inconsistent Actions. *Personality and Social Psychology Bulletin*, *31*(6), 719–733. https://doi.org/10.1177/0146167204272180
- 31. Ivory, D., Leatherby, L., & Gebeloff, R. (2021, May 13). *Least Vaccinated U.S. Counties Have Something in Common: Trump Voters*. The New York Times. https://www.nytimes.com/interactive/2021/04/17/us/vaccine-hesitancy-politics.html
- 32. Abrams, Dominic, et al. *Knowing What to Think by Knowing Who You Are:*Self-Categorization and the Nature of Norm Formation, Conformity and Group

  Polarization\*. British Journal of Social Psychology, vol. 29, no. 2, 1990, pp. 97–119.,

  doi:10.1111/j.2044-8309.1990.tb00892.x.
- 33. Brewer, Noel T., et al. *Increasing Vaccination: Putting Psychological Science Into Action.* Psychological Science in the Public Interest, vol. 18, no. 3, 2017, pp. 149–207., doi:10.1177/1529100618760521.
- 34. Buttenheim, Michael Hallsworth and Alison, et al. *Challenges Facing a COVID-19 Vaccine: A Behavioral Science Perspective By Michael Hallsworth & Description Michael Hallsworth & Description Buttenheim.* Behavioral Scientist, 11 Aug. 2020, behavioralscientist.org/challenges-facing-a-Covid-19-vaccine-a-behavioral-science-perspective/.

- 35. Fischbacher, Urs, et al. *Are People Conditionally Cooperative? Evidence from a Public Goods Experiment*. Economics Letters, vol. 71, no. 3, 2001, pp. 397–404., doi:10.1016/s0165-1765(01)00394-9.
- 36. Glanz, Jason M., et al. *A Mixed Methods Study of Parental Vaccine Decision Making and Parent–Provider Trust.* Academic Pediatrics, vol. 13, no. 5, 2013, pp. 481–488., doi:10.1016/j.acap.2013.05.030.
- 37. Gust, Deborah A., et al. *Parents With Doubts About Vaccines: Which Vaccines and Reasons Why.* Pediatrics, vol. 122, no. 4, 2008, pp. 718–725., doi:10.1542/peds.2007-0538.
- 38. Hoffman, Jan. *Mistrust of a Coronavirus Vaccine Could Imperil Widespread Immunity.* The New York Times, The New York Times, 18 July 2020, www.nytimes.com/2020/07/18/health/coronavirus-anti-vaccine.html.
- 39. Jolley, Daniel, and Karen M. Douglas. *The Effects of Anti-Vaccine Conspiracy Theories on Vaccination Intentions*. PLoS ONE, vol. 9, no. 2, 2014, doi:10.1371/journal.pone.0089177.
- 40. Larson, Heidi J., et al. *Understanding Vaccine Hesitancy around Vaccines and Vaccination from a Global Perspective: A Systematic Review of Published Literature, 2007–2012.* Vaccine, vol. 32, no. 19, 2014, pp. 2150–2159., doi:10.1016/j.vaccine.2014.01.081.
- 41. Navin, Mark C., et al. *Vaccine Education, Reasons for Refusal, and Vaccination Behavior.* American Journal of Preventive Medicine, vol. 56, no. 3, 2019, pp. 359–367., doi:10.1016/j.amepre.2018.10.024.
- 42. Politico, Morning Consult. National Tracking Poll 200797. 24-26 July 2020. Web.
- 43. Redelmeier, Donald A., and Robert B. Cialdini. *Problems for Clinical Judgement: 5. Principles of Influence in Medical Practice.* CMAJ, 25 June 2002, www.ncbi.nlm.nih.gov/pmc/articles/PMC116157/.

- 44. Rieger, Marcoliver. *Triggering Altruism Increases the Willingness to Get Vaccinated against COVID-19.* Social Health and Behavior, vol. 3, no. 3, 2020, p. 78., doi:10.4103/shb.shb\_39\_20.
- 45. Schoch-Spana, M, et al. The Public's Role in COVID-19 Vaccination: Planning Recommendations Informed by Design Thinking and the Social, Behavioral, and Communication Sciences, 2020, www.centerforhealthsecurity.org/our-work/pubs\_archive/pubs-pdfs/2020/200709-T he-Publics-Role-in-COVID-19-Vaccination.pdf.
- 46. Sommer, Will. *QAnon-Ers' Magic Cure for Coronavirus: Just Drink Bleach!* The Daily Beast, The Daily Beast Company, 28 Jan. 2020, www.thedailybeast.com/qanon-conspiracy-theorists-magic-cure-for-coronavirus-is-d rinking-lethal-bleach.
- 47. van Bavel, J. J. (2020, April 30). Using social and behavioural science to support COVID-19 pandemic response. Nature Human Behaviour. https://www.nature.com/articles/s41562-020-0884-z?error=cookies\_not\_supported&code=ec73622a-0020-480e-b7c5-53bf01525355
- 48. Covid Cases Vaccination Rates. (2021, June 14). *Washington Post*. https://www.washingtonpost.com/health/2021/06/14/Covid-cases-vaccination-rates/
- 49. *Pockets of Unvaccinated Americans Threaten to Prolong Pandemic*. (2021). Bloomberg. https://www.bloomberg.com/news/articles/2021-06-16/pockets-of-unvaccinated-americans-threaten-to-prolong-pandemic
- 50. Goldstein, J. (2021, May 21). *They're Reluctant to Get Vaccinated. Will a Knock on the Door Help?* The New York Times. https://www.nytimes.com/2021/05/20/nyregion/vaccine-hesitancy-outreach.html?re ferringSource=articleShare
- 51. Sgaier, S. K. (2021, May 22). *Opinion* | *Meet the Four Kinds of People Holding Us Back From Full Vaccination*. The New York Times. https://www.nytimes.com/interactive/2021/05/18/opinion/Covid-19-vaccine-hesitancy.html?referringSource=articleShare

- 52. Mandavilli, A. (2021, June 23). *Reaching 'Herd Immunity' Is Unlikely in the U.S., Experts Now Believe*. The New York Times. https://www.nytimes.com/2021/05/03/health/Covid-herd-immunity-vaccine.html?ref erringSource=articleShare
- 53. Westneat, D. (2021, May 2). *The political vaccine divide in Washington state is widening and COVID rushes in*. The Seattle Times.

  https://www.seattletimes.com/seattle-news/politics/the-political-vaccine-divide-in-w ashington-state-is-widening-and-Covid-rushes-in/?utm\_source=referral&utm\_mediu m=mobile-app&utm\_campaign=ios
- 54. Keating, D. F. N. (2021, April 22). *U.S. sees significant drop in vaccinations over past week*. Washington Post. https://www.washingtonpost.com/health/2021/04/21/vaccinations-downturn-jj-paus e-soft-demand/
- 55. Sgaier, S. (2021, June 16). *Report: The Challenge of Our Time: Achieving High Vaccination Coverage during the COVID-19 Pandemic*. Surgo Ventures. https://surgoventures.org/resource-library/the-challenge-of-our-time-achieving-high-vaccination-coverage-during-the-Covid-19-pandemic