Audience Segmentation for Vaccination

A practical guide to using segmentation to increase vaccine uptake

Why this toolkit?

1. Get familiar with basic concepts of segmentation.
2. Build on existing segmentation to develop messaging, campaigns and interventions.
3. Review real-world examples of segmentation in resource-constrained contexts.
4. Access robust tools to develop your own segmentation.

This toolkit is intended for use by social and behavioral change communication professionals to encourage vaccine acceptance and uptake by employing segmentation based on attitudes and behaviors of their target populations.

Take Notes

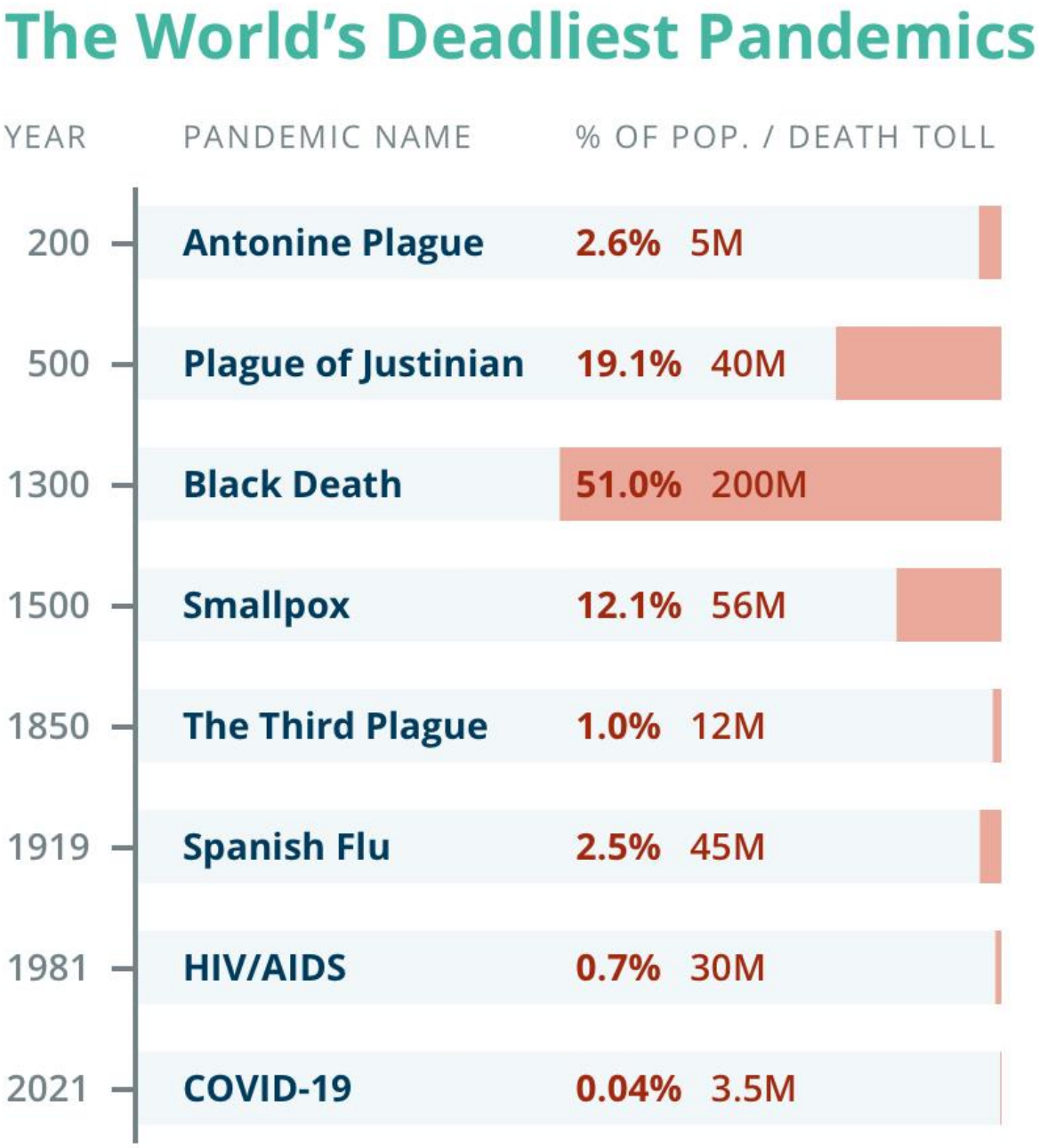
Download the worksheet and take notes digitally as you go through the toolkit.

Introduction

Why it Matters

Since the 1918 influenza pandemic, there have been at least six pandemics (including COVID-19).

Each of these crises has underscored the importance of public health systems preparedness, as well as the need for appropriate tools to respond. Health emergencies will continue (climate change, wildlife trade, damage to natural ecosystems) and states must prepare to respond and protect their populations. One critical element of preparation is understanding the population and having the appropriate knowledge and tools to apply targeted public health interventions. Segmentation is an ideal tool for policy-makers and other public health officials to increase vaccine uptake through targeted communication or tailored interventions. As of January 2023, there have been 661,545,258 confirmed cases of COVID-19, including 6,700,519 deaths, reported to WHO.



Objectives of this toolkit:

- Familiarize toolkit users with the concept of segmentation and how it can be employed to target messaging during epidemics;
- Provide resources for policy-makers and implementers;
- Support preparedness efforts to protect against and anticipate needs in the next pandemic.

Module A: An Introduction to Segmentation

Johnson & Johnson

In 2021 Johnson & Johnson conducted segmentation analysis in three African countries to understand why people were not getting vaccinated, in order to engage them in conversations on the topic to increase vaccine uptake. Three countries were selected to represent East, Southern and West Africa: Kenya, Zambia and Nigeria, respectively.

Working with Ipsos, a market research firm, Johnson & Johnson sampled approximately 800 respondents per country.

Each sample contained:

- 50/50 male and female split
- Equal split across low, medium and high poverty using Poverty Index scores
- At least 10% self-reporting one or more comorbidities
- Regional sampling proportional to country population

Key Questions

In order to understand current attitudes toward and acceptability of the COVID-19 vaccine in 3 countries in sub-Saharan Africa, Johnson & Johnson sought to answer the following questions:

- What proportion of people are currently aware of the vaccine?
- What proportion of people would take the vaccine if it were currently available?
- What attitudes and beliefs do people have about the vaccine?
- What are the drivers that motivate people to take the vaccine?
- What are the barriers that prevent people from taking the vaccine?
- What are the optimal communication channels to tell people about the vaccine?

Key Factors

Johnson & Johnson looked at a set of variables with which to analyze their respondents.

General perceptions
Level of trust in community groups/people and media sources, sources of advice for health matters, autonomy over health-related decisions

Demographics
Gender, Age, Region, Poverty Index, Household composition, Employment status, Place of work, Comorbid conditions

Perceived risk of COVID-19
Impact of COVID, perceived risk, perceived severity, personal experience, pandemic sentiment

Perceptions of the vaccine
Awareness, likelihood, speed of uptake, perceived ease of process, motivations to vaccinate, barriers to vaccination (perceptual and practical)

Communication channels
Media sources used for COVID-19 vaccine info, sources they would seek advice from for COVID-19 vaccination

Check your understanding

Which variables were the most important for differentiating the segments?

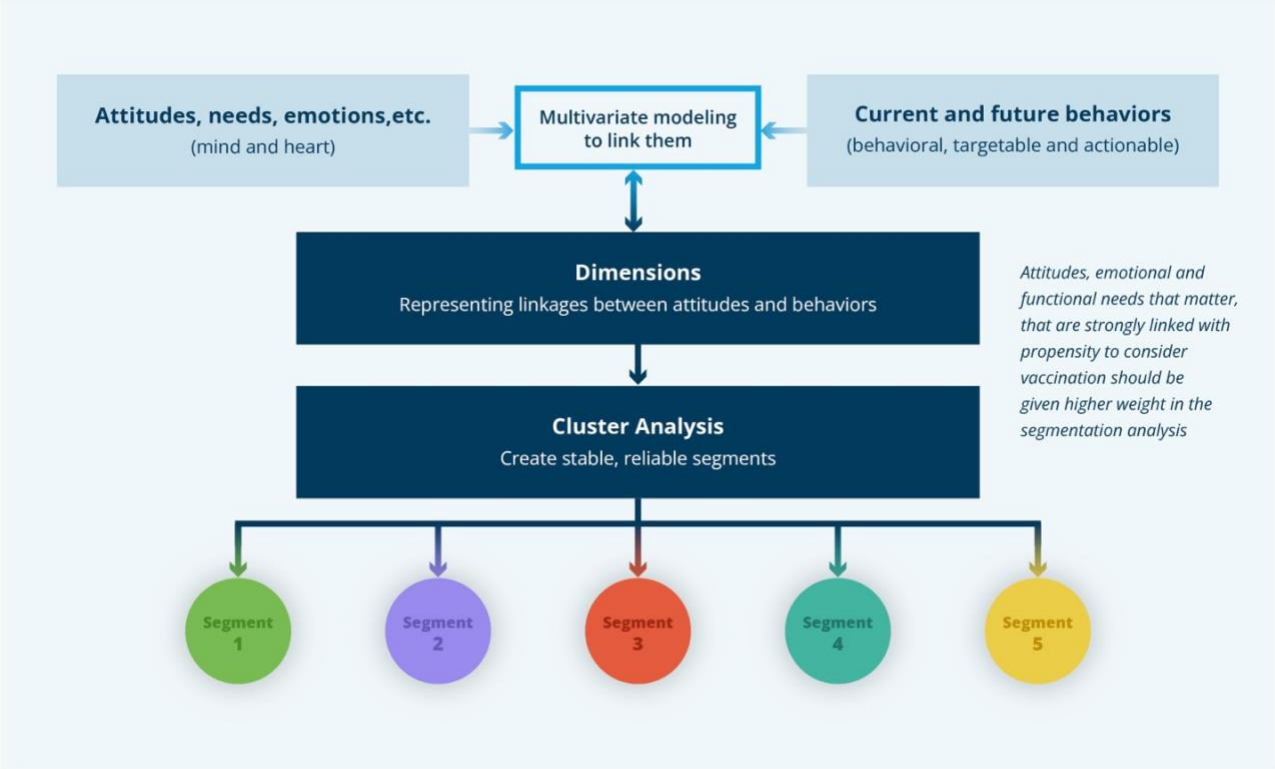
In your opinion, which variables were the most important for differentiating people on the question of vaccination? (choose 3)

- Demographics
- General perceptions
- COVID-19 perceptions
- COVID-19 vaccination
- Communication channels

The Analysis

Johnson & Johnson used their findings to develop targeted segments.

Targeted segmentation combines multiple dimensions into one segmentation strategy. To do this, we leverage various types of information, from demographic to behavioral and attitudinal. In conducting segmentation for COVID-19 vaccine uptake, we focus on current health behavior, attitudes and beliefs towards COVID-19, and sources of information, among others.



Meet the segments

In their analysis, Johnson & Johnson developed five segments applicable across the three countries. See Johnson & Johnson's report, [Increasing Willingness to Vaccinate in Sub-Saharan Africa], for a more detailed dive into the segments.

Segment 1

Confident Enthusiasts

24% of population

KEY CHARACTERISTICS

Convinced of the threat of COVID-19. Driven by social responsibility to protect their community.

VACCINE UPTAKE POTENTIAL
Very high

PERCEIVED EASE OF GETTING
Very easy

SPEED OF UPTAKE
As soon as possible

COVID RISK PERCEPTION
High perceived risk and severity

Segment 2

Vaccine Skeptics

25% of population

KEY CHARACTERISTICS

Convinced of the threat of COVID-19. Skeptical of vaccine safety and efficacy.

VACCINE UPTAKE POTENTIAL
Moderately low

PERCEIVED EASE OF GETTING
Fairly easy

SPEED OF UPTAKE
Likely to wait 6-12 months

COVID RISK PERCEPTION
High perceived risk and severity

Segment 3

COVID-19 Cynics

12% of population

KEY CHARACTERISTICS

Strongly hesitant of COVID threat and a COVID vaccine. Mistrust in the vaccine's purpose and advocates means they will be slow to uptake, if at all.

VACCINE UPTAKE POTENTIAL
Very low

PERCEIVED EASE OF GETTING
Fairly easy

SPEED OF UPTAKE
Never

COVID RISK PERCEPTION
Low perceived risk and severity

Segment 4

Enthusiastic Pragmatists

19% of population

KEY CHARACTERISTICS

Convinced of the threat of COVID-19 and merits of a vaccine, but inhibited by practical barriers. Cost-benefit analysis of the process causes delay.

VACCINE UPTAKE POTENTIAL
High

PERCEIVED EASE OF GETTING
Not at all easy

SPEED OF UPTAKE
As soon as possible

COVID RISK PERCEPTION
High perceived risk and severity

Segment 5

Vaccine Ambivalents

20% of population

KEY CHARACTERISTICS

Not convinced of the threat of COVID-19 and lack motivation to get a vaccine. Few barriers to uptake. Could be moved by social norms or strong messaging.

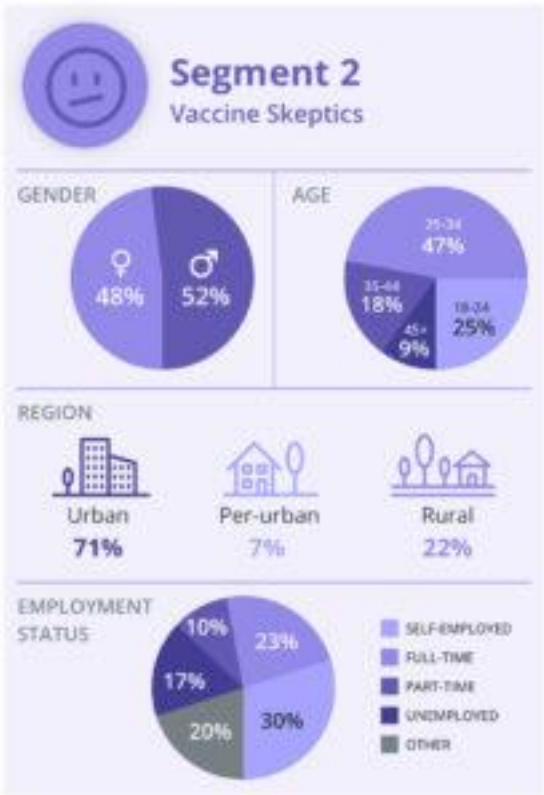
VACCINE UPTAKE POTENTIAL
Moderate

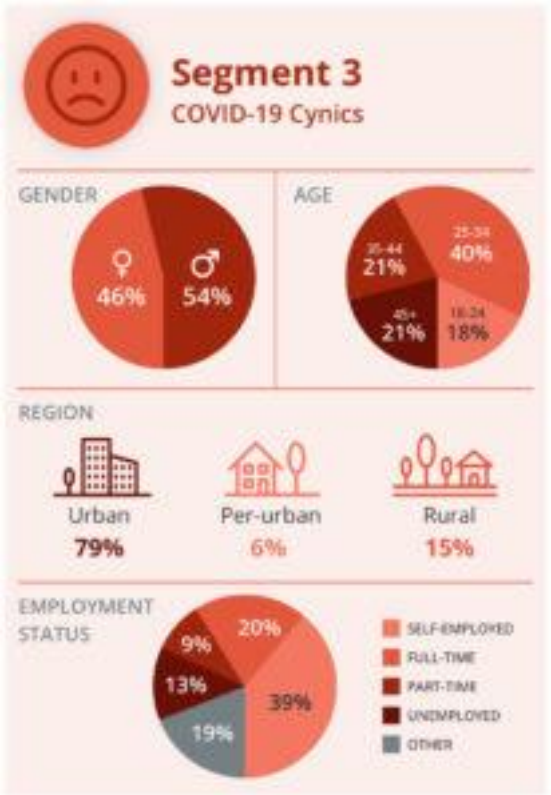
PERCEIVED EASE OF GETTING
Fairly easy

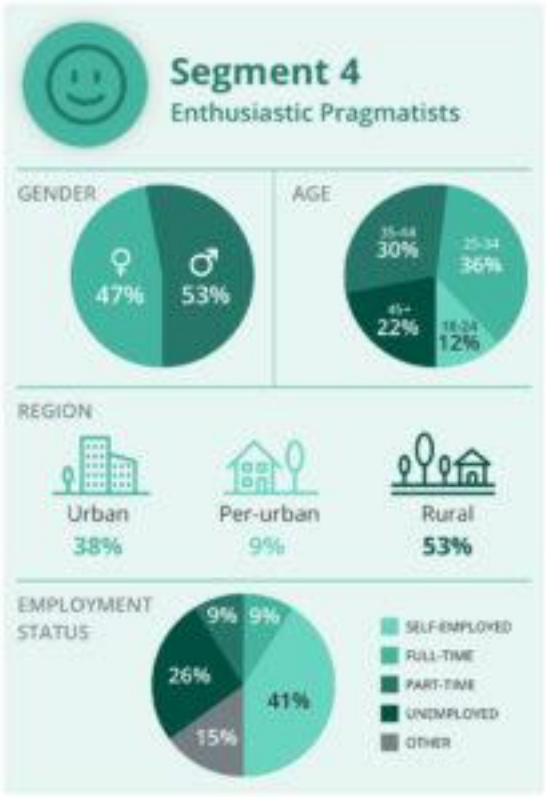
SPEED OF UPTAKE
Likely to wait 6-12 months

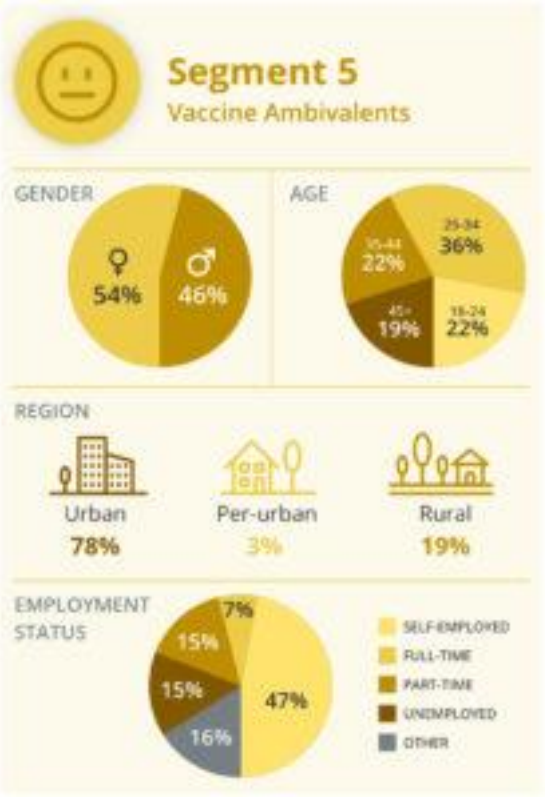
COVID RISK PERCEPTION
Low perceived risk and severity

Segment demographics









Barriers, motivators, and information channels

Segment 2
Vaccine Skeptics

LEVEL OF MOTIVATION TO GET THE VACCINE
Neutral

PERCEPTUAL BARRIERS
Neutral

PHYSICAL BARRIERS
Neutral

INFORMATION CHANNELS
Radio 88%
Television 85%
Social Media 83%

INFORMATION SOURCES & TRUST

This group has the highest trust in doctors, nurses and pharmacists.

They have low trust in celebrities, social media influencers and political leaders.

Segment 3
COVID-19 Cynics

LEVEL OF MOTIVATION TO GET THE VACCINE
Low

PERCEPTUAL BARRIERS
High

PHYSICAL BARRIERS
High

INFORMATION CHANNELS
Radio 85%
Television 84%
Social Media 72%

INFORMATION SOURCES & TRUST

This group has moderate to low trust in information sources overall, but prefer doctors, nurses and religious leaders.

Segment 4
Enthusiastic Pragmatists

LEVEL OF MOTIVATION TO GET THE VACCINE
High

PERCEPTUAL BARRIERS
Low

PHYSICAL BARRIERS
High

INFORMATION CHANNELS
Radio 90%
Television 83%
Social Media 66%

INFORMATION SOURCES & TRUST

This group has moderate levels of trust in doctors, nurses and religious leaders.

They have low trust in international organizations such as WHO and UNICEF.

Segment 5
Vaccine Ambivalents

LEVEL OF MOTIVATION TO GET THE VACCINE
Low

PERCEPTUAL BARRIERS
Neutral

PHYSICAL BARRIERS
Neutral

INFORMATION CHANNELS
Radio 85%
Television 84%
Social Media 72%

INFORMATION SOURCES & TRUST

This group has high trust in doctors, nurses and pharmacists. They are also most likely to trust celebrities and social media influencers.

Consistencies across segments

Some characteristics (listed below) were relatively uniform across segments. Note: there are some nuances in sentiment strength and where relevant this is included in our persona summaries.

- Equal gender split
- Strong religious beliefs
- Significant COVID-19 impact
- Community focus motivating action
- Even age distribution
- Trust in doctors for seeking medical advice
- High awareness of vaccine
- COVID-19 vaccine communication via TV and radio

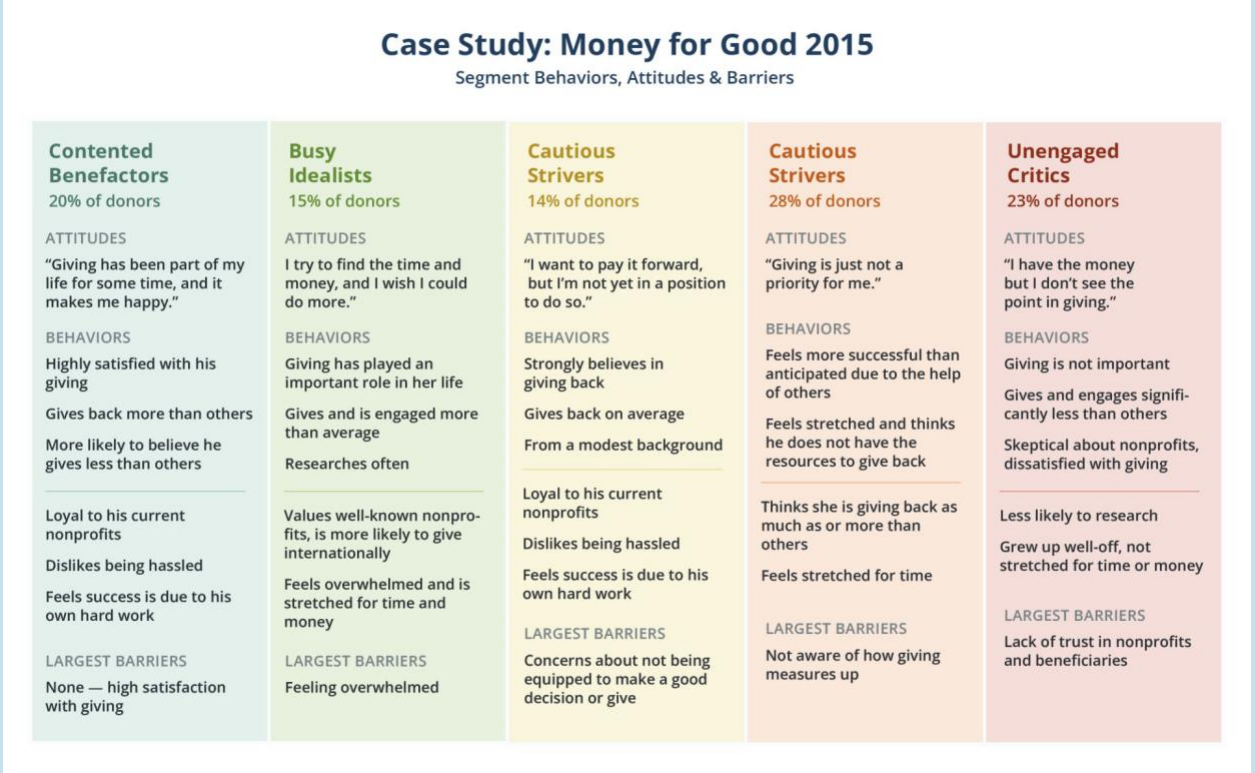
Focus on gender

Gender is an essential variable to factor into any good segmentation. While there will not always be noticeable differences between the attitudes and behaviors of different genders (e.g., in this case the Johnson & Johnson team did not find differences between genders in terms of attitudes and beliefs based on their sample), considering gender intentionally – and how it intersects with other identities such as age, ethnicity, education, religion etc. – helps reduce the likelihood that gendered differences will be overlooked. If it is relevant in your context, looking at a variety of gender identities outside of traditional gender binaries can be useful. This can be done by including gender (binary or other) as a variable in your analysis. Is there a correlation between gender and other variables? Keep in mind that there may be differences in needs, attitudes, beliefs and perceptions around vaccines between different genders. Additionally, even when gender may not determine beliefs or attitudes, it will be important to still consider gender in the use of any completed segmentation and the implementation of relevant campaigns based on findings. For additional information on gender's role in vaccine response, please see the Breakthrough ACTION **Gender Analysis for Emergency Vaccine Response Toolkit** (coming soon).

Case Study: Money for Good 2015

Segmentation among donors

Money for Good ($FG) was a research series conducted in 2014 to seek out the "voice of the donor" in charitable giving. $FG sought to understand the motivations behind donors' giving by conducting interviews to develop segments, defined by their behaviors and attitudes towards giving. The five segments developed were: Contented benefactors, Busy idealists, Cautious strivers, Unaware potentials and Unengaged critics. More details on these segments below.



Focus on women

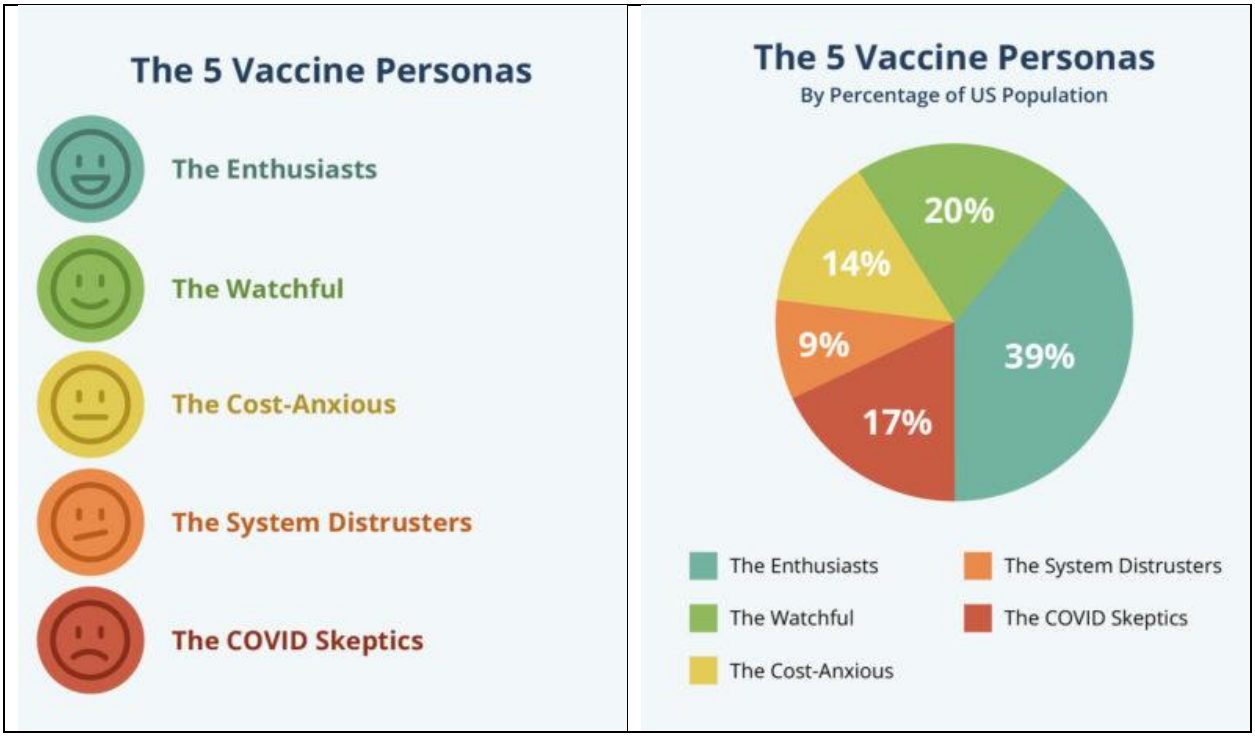
Two of the five segments were more likely to be women. The key behavioral and attitudinal characteristics of the women surveyed were: strong intention to give more, idealistic in their giving, and feeling stretched for time.

Spotlight: Surgo Ventures

Using the CUBES framework to identify US Barriers and Beliefs around COVID-19 Vaccines

Why looking solely at demographics isn't enough — we must target people's barriers and beliefs.

In January 2021, Surgo Ventures **leveraged its CUBES behavioral framework** to conduct a survey of 2,747 US adults in order to better understand their attitudes and behaviors around the COVID-19 vaccine. They began with a traditional demographic segmentation. Surgo identified five psych behavioral personas for the COVID-19 vaccine. As you can see, each segment included at least some of every demographic represented in the survey.

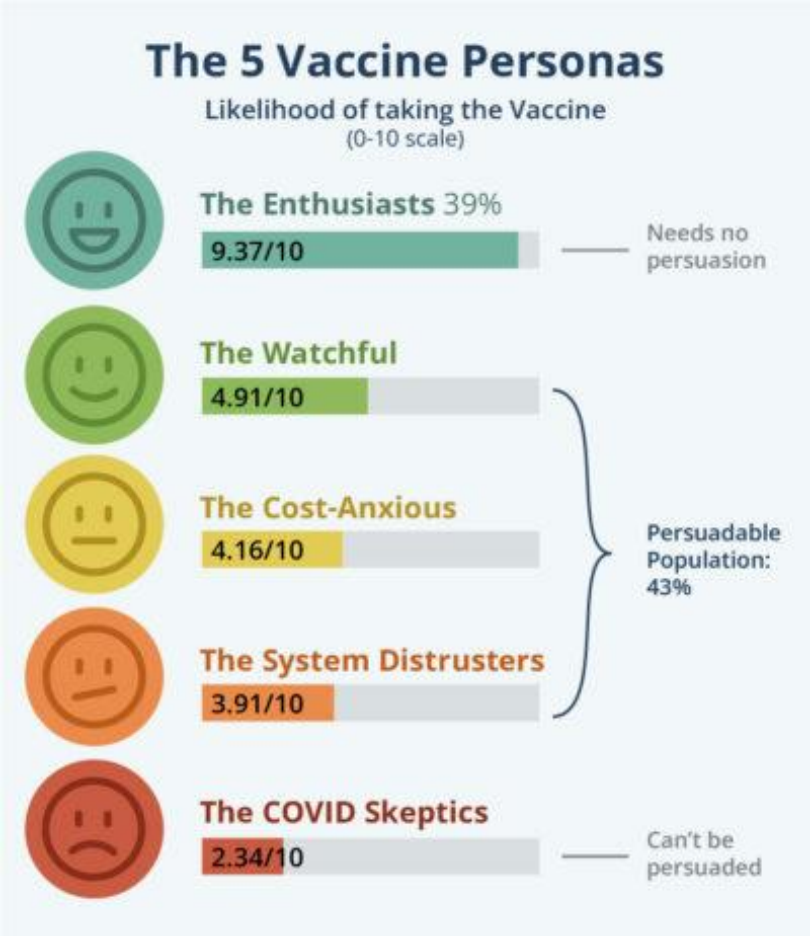


Five Personas

The January 2021 survey found that 39% of Americans were highly likely to get the vaccine, with the remaining 60% falling into four less likely segments, with a variety of concerns and barriers shaping their likelihood. On one end of the vaccine likelihood spectrum there were The Enthusiasts, who were ready and willing to get the vaccine, and on the other end there were The COVID-19 Skeptics who were guided by misinformation and unlikely to get vaccinated.

Personas differed widely in their likelihood to get vaccinated.

Each of these personas expressed different likelihoods of getting vaccinated on a 10-point scale. Three of these segments (labeled “The Persuadable”) could likely be convinced to take the vaccine, due to barriers they had that could be overcome with the right interventions.


The 5 Vaccine Personas
Likelihood of taking the Vaccine
(0-10 scale)
The Enthusiasts 39%
9.37/10
Needs no persuasion
The Watchful
4.91/10
The Cost-Anxious
4.16/10
Persuadable Population: 43%
The System Distrusters
3.91/10
The COVID Skeptics
2.34/10
Can't be persuaded


The 5 Vaccine Personas
Key Barriers & Solutions
The Enthusiasts
KEY BARRIERS
Appointment Availability
Vaccine safety
TARGETED SOLUTION EXAMPLES
Make it easy for them to get vaccines
The Watchful
KEY BARRIERS
Community norms
Vaccine safety
TARGETED SOLUTION EXAMPLES
Make it visible that others are vaccinated or have positive intent to be
The Cost-Anxious
KEY BARRIERS
Financial cost
Vaccine Safety
TARGETED SOLUTION EXAMPLES
Bring vaccines to people. Offer paid time off.
The System Distrusters
KEY BARRIERS
Trust
Vaccine Safety
TARGETED SOLUTION EXAMPLES
Listen and learn. Partner with trusted community organizations.
The COVID Skeptics
KEY BARRIERS
Deeply-held beliefs about COVID-19
Vaccine Safety
TARGETED SOLUTION EXAMPLES
Don't try to debunk. Enlist trusted figures to persuade.

Tackling barriers effectively is a customized activity, not a uniform one.

Most of the segments faced a unique combination of perceptual and structural barriers that affect their intention to get vaccinated. Changing their behavior depended on effectively addressing these factors.

What next?

Uses for segments in COVID-19 response.

Public health officials, policy makers and implementers can use segmentation to better understand the vaccine-hesitant populations. These decision-makers can use the information on each segment to develop targeted interventions or media campaigns to reach the unvaccinated.

Module B: Segmentation in Action

Messaging

Successful segmentation in public health means harnessing your knowledge of segments' lifestyle, habits, attitudes, perceptions and motivators and personalizing messaging for targeted outreach.

Key Considerations:

Getting those who are hesitant to reconsider vaccination requires:

- Acknowledging their unique barriers and concerns
- Addressing those concerns in a way that speaks to their values and makes the message personal to them
- Having trusted figures deliver messages – this can include local and community leaders, religious figures, trusted professionals, etc.

Implementation tools to identify members of a segment:

For segmentations based primarily on demographic factors (e.g., adolescent girls) it is relatively easy to identify specific segments. However, for segmentation based on needs, attitudes, and behaviors, it can be impossible to identify which segment an individual belongs to simply by looking at them. In these cases, a "typing tool" might be needed. The tool is often a short survey covering the most relevant differentiating questions between segments. Based on responses, individuals can be assigned a probability of being in a given identified segment. For users of this toolkit deploying the Johnson & Johnson segmentation, you may access and deploy the typing tool developed by Johnson & Johnson.

Johnson & Johnson's Message Development

Based on what drives decision-making for each segment, messaging can be developed that addresses segments in targeted ways, including tailoring messages to specific segments. Based on their multi-

country research, Johnson & Johnson developed segments and messaging applicable across East, Southern and West Africa.

Johnson & Johnson developed the following messaging for each of their identified segments. These messages are the result of Johnson & Johnson's research and testing across three African countries, and while relevant across contexts, can also be edited or revised to suit local realities.

Messages that encourage Confident Enthusiasts

Altruism

- There are two reasons to get vaccinated: to protect ourselves and to protect those around us. Because not everyone can be vaccinated, including babies or those who have illnesses…they depend on others to be vaccinated to ensure that they are also protected.
- The simple act of taking the vaccine protects your family, friends and community at large. Especially those who are weak with vulnerable immune systems. Play your part and protect the people you love.

Best messengers: WHO official, doctor or nurse.

Connecting with values

All COVID-19 vaccines work with the body's natural defenses to safely develop immunity to disease. That means that if you get exposed to the virus after being vaccinated, your body is ready to fight the virus and prevent you from getting sick.

Best messengers: Doctor

Messages that help instill confidence in Vaccine Skeptics

Altruism

- There are two reasons to get vaccinated: to protect ourselves and protect those around us. Because not everyone can be vaccinated including babies or those who have illnesses…they depend on others to be vaccinated to ensure they are also protected.
- The simple act of taking the vaccine protects your family, friends and community at large. Especially those who are weak with vulnerable immune systems. Play your part and protect the people you love.

Best messengers: WHO official, Doctor or Nurse.

Messages that help shake COVID-19 Cynics out of complacency

Altruism

- There are two reasons to get vaccinated: to protect ourselves and protect those around us. Because not everyone can be vaccinated including babies or those who have illnesses…they depend on others to be vaccinated to ensure they are also protected.

Best messengers: WHO official, Doctor.

Framing/Reframing

- The vaccination is just one of many tools that you can use to keep you or your loved ones protected from COVID-19. It gives you an advantage when fighting the virus after you've been exposed by limiting your symptoms and reducing the chances of death. It is highly effective and puts you in the driver's seat when navigating exposure to COVID.

Best messengers: Pharmacist, WHO Official, Doctor.

Messages that embolden Enthusiastic Pragmatists

Altruism

- There are two reasons to get vaccinated: to protect ourselves and protect those around us. Because not everyone can be vaccinated including babies or those who have illnesses…they depend on others to be vaccinated to ensure they are also protected.
- The simple act of taking the vaccine protects your family, friends and community at large. Especially those who are weak with vulnerable immune systems. Play your part and protect the people you love.

Best messengers: WHO official.

Connecting with values

All COVID-19 vaccines work with the body's natural defenses to safely develop immunity to disease. That means that if you get exposed to the virus after being vaccinated, your body is ready to fight the virus and prevent you from getting sick.

Best messengers: WHO Official, Doctor

Messages that address complacency among Vaccine Ambivalents

Altruism

- There are two reasons to get vaccinated: to protect ourselves and protect those around us. Because not everyone can be vaccinated including babies or those who have illnesses…they depend on others to be vaccinated to ensure they are also protected.
- The simple act of taking the vaccine protects your family, friends and community at large. Especially those who are weak with vulnerable immune systems. Play your part and protect the people you love.

Best messengers: WHO official, Doctor, Nurse.

Connecting with values

All COVID-19 vaccines work with the body's natural defenses to safely develop immunity to disease. That means that if you get exposed to the virus after being vaccinated, your body is ready to fight the virus and prevent you from getting sick.

Best messengers: WHO Official, Doctor

Media Campaign

Message testing

Johnson & Johnson conducted research to test their messaging for segments. They surveyed over 2400 people in Kenya, Nigeria and Zambia from August through September of 2021 for the segmentation, and over 2400 people from Nov-Dec 2021, testing over 60 messages via phone.

- **View the Process**

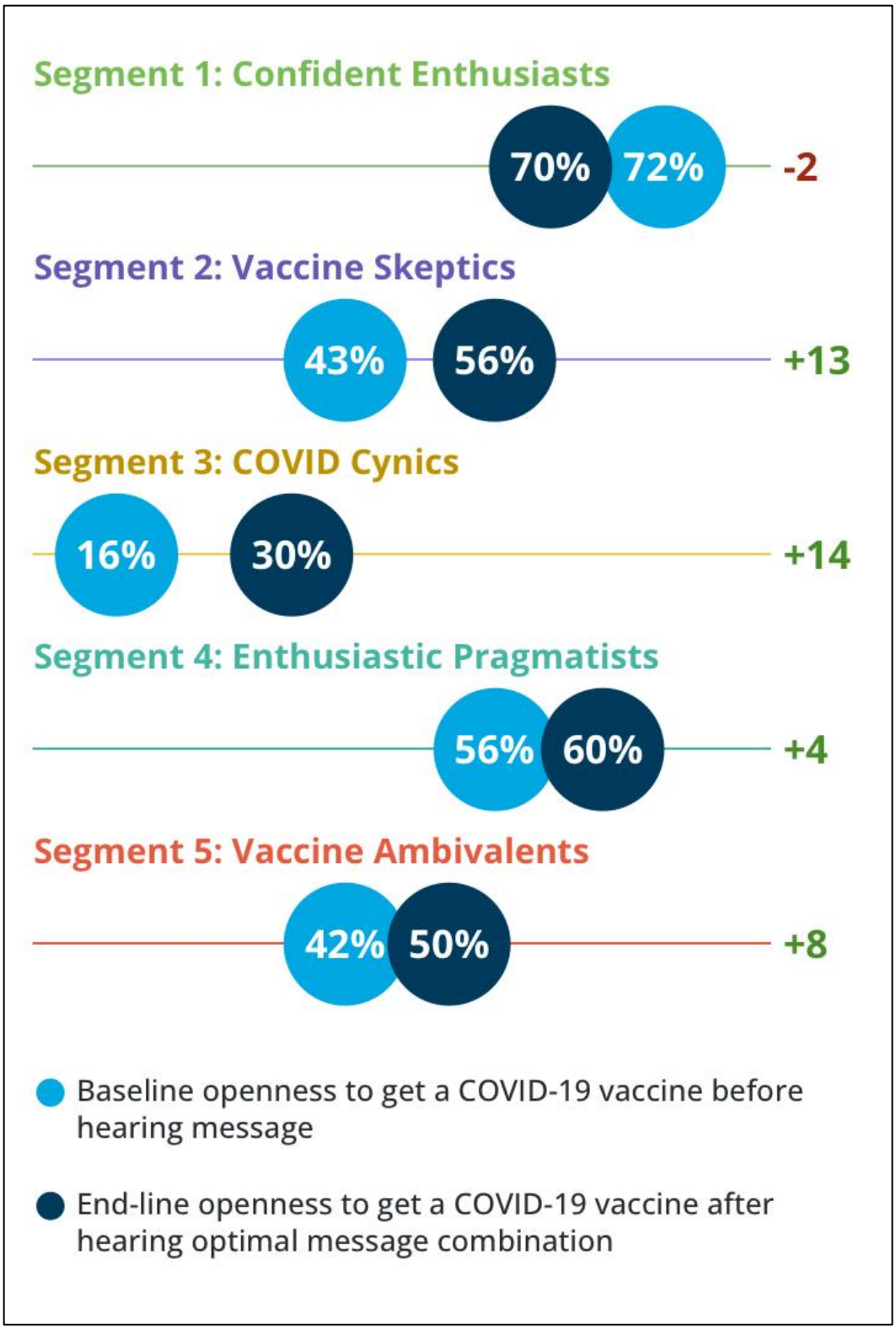
Message materials

Johnson and Johnson developed a set of communications and messaging materials available to the public to conduct vaccination campaigns. See below for examples to use or learn from.

- **All Hands on Deck Sample Posters**
- **Sample Discussion Guide**
- **Sample Radio Script**

Results

Johnson and Johnson tested their messaging materials to better understand their impact among the target populations. Below is a summary of their results among their identified segments of not-yet-vaccinated adults.



The slight decline in open-ness for Segment 1 is likely due to how the end-line measure is calculated, adjusting for influence of message and messengers but not a meaningful difference, especially due to the already willing persona to uptake the vaccine as soon as possible

Activating the Surgo Ventures COVID-19 Segmentation

Surgo Ventures also provides an interesting example of operationalizing segmentation messaging. Surgo created this program to apply their COVID-19 personas and encourage greater vaccination. The program was two-pronged:

1. Vaccinated patients were given a $20 gift card to either a) text an unvaccinated friend or family member to urge them to get vaccinated or b) bring an unvaccinated person they know to the clinic.
2. Staff members were provided with a set of personalized, behavioral science-based scripts to use in interactions with unvaccinated patients (similar to the Johnson & Johnson **typing tool**, like a survey to identify which segment patients may belong to and then providing targeted messaging to the healthcare provider).

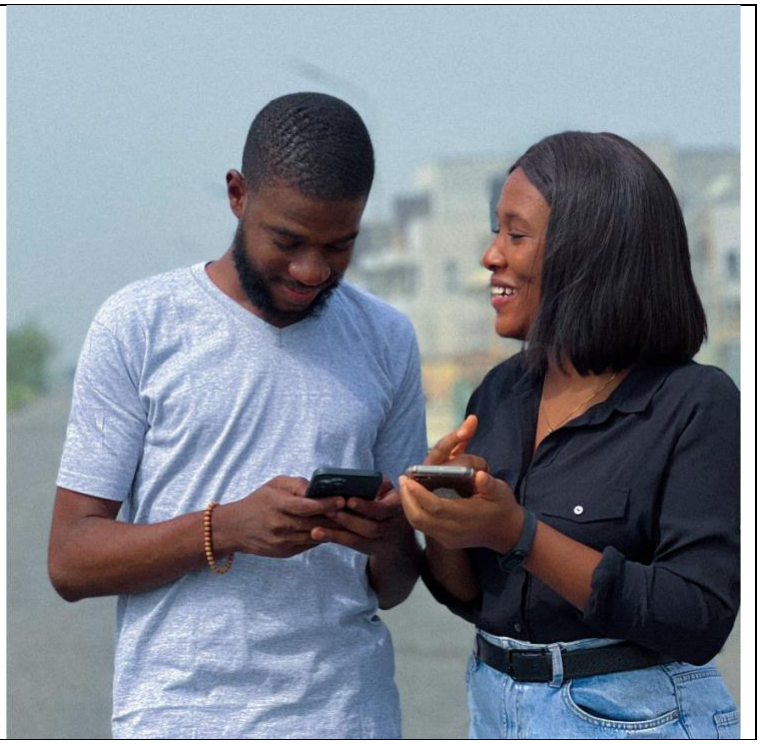
This program by Surgo led to 200+ people getting vaccinated at a qualified health center.

*This method may not be appropriate for every context.

Key Considerations

There are often additional factors to consider as well to ensure successful segmentation-based campaigns, and they may vary by segment.

- **Example of factors by segment**

The messenger Messengers can be just as important as the message itself. While the efficacy of messengers can vary significantly by context, there were clear differences in the Johnson & Johnson work related to messenger trust.	

Will listen to:	
 WHO officials	Medical experts like doctors, international health authorities or nurses are most credible and trustworthy.
 Doctors and nurses	
 Community leaders	Community leaders and also family/friends are credible messengers.
 Family and friends	

May listen to:	
 Celebrities	These influencers are not always the most credible messengers on issues of health, however they should not be ruled out altogether. Selecting locally respected celebrities who have a connection to the population can be a useful way to amplify vaccine messaging, and use of these influencers should be considered on a case-by-case basis.

Will not listen to:	
 Government officials	Political figures are not credible or persuasive source of information when it comes to vaccines. Also, a sizeable portion of the population do not trust the government when it comes to vaccines.

What messages don't work?

The messages below were some of the worst performing across all three countries.

Fear-based messaging

Why?

Trying to threaten people into vaccinating with threats of serious illness or death can alienate people who already have concerns about the vaccine; it can also erode trust among people who have had an experience with mild COVID-19 and find the messaging to be overly alarmist.

Examples:

1 in 10 people experience long COVID. My sister still struggles with how viciously the virus has physically devastated her body, and it's been months since she had COVID. Avoid that by getting vaccinated.

Messages that don't include any personal connections

Why?

Individuals are not at the core of these messages - companies and processes are. These are unlikely to be salient and inspire personal connection or reflection.

Examples:

Scientists in private companies have been developing vaccines while unbiased, independent scientists review and approve the science. Approval from the World Health Organization means this process was followed without the local government. Many pharmaceutical companies invested significant resources into quickly developing a vaccine for COVID-19 because of the worldwide devastation. The emergency made it necessary but that doesn't mean that the companies took shortcuts when it came to safety.

Public information messages without a call to action or emotional appeal

Why?

These types of messages have value but are not enough to motivate someone who has not already made the decision to get vaccinated.

Examples:

Quickly find out where the jab is available on the Ministry of Health's website.

Messages framing vaccination as a pathway to getting back to having fun are not universally popular

Why?

These messages may be seen as trivializing by those with deeply-held concerns and fears around getting vaccinated (e.g., Segment 3) or who did not engage in these activities before the pandemic.

Examples:

Remember late night drives, live concerts, or public displays of affection? Life can go back to normal without the fear of long-term effects since they are extremely rare.

Broader Applicability

Applying this segmentation outside of the 3 test countries

Segmentation is an incredibly useful tool to understand and target populations. A full explanation of how to conduct this process is in Module C. However, if conducting a segmentation is beyond current capacities, it is likely that these segments developed here will have at least some applicability across other settings.

Why do we have confidence in segmentation applicability more broadly?

Diverse mix of the countries within the analysis

- Looking at population level trends in the data, Kenya (high likelihood, quick adoption), Zambia (high likelihood, slower adoption), and Nigeria (low likelihood, slow adoption), cover a broad continuum of anticipated behavior towards a COVID-19 vaccine.
- Whilst local nuances are imperative to consider for targeting, our sampling basis ensures a mix of attitudes are covered within the global segmentation.

Key segment metrics

- Our segments are predominantly defined by willingness to have a COVID-19 vaccine, speed of adoption, motivational drivers and barriers to uptake – these are all easily identifiable in other populations and used within our typing tool. A typing tool is a short series of questions used to predict what segment a person would belong to.

Knowledge from other vaccination projects

- The difference in trends between Kenya, Zambia and Nigeria were not surprising and mirror general sentiment towards vaccines as a whole in those countries.
- Countries can establish how closely they resemble regional neighbors to have a fair idea of which story is most likely to match their situation. For example, in Uganda we know there is an existing social norm around vaccinating infants and we would expect the segmentation distribution to be closer to Kenya than Nigeria.

Module C: Conducting Your Own Segmentation

Is the Johnson & Johnson segmentation right for you?

- Gather together your programming and implementation team(s).
- Review the Johnson & Johnson segmentation, focusing on the different segments, their unique barriers and beliefs.
- Do these segments resonate with our context? Brainstorm with your team to decide if this segmentation is right for you.

Yes, completely.

Review Modules A and B. Use the Johnson & Johnson segments and messaging tools as they are; no adaptation necessary.

Yes, but we have some questions, and / or there are some nuances we'd like to better understand.

Identify what questions you have and consider some exercises to better understand any adaptation that might be needed. Discuss what information you are missing with your team, and write them down. Next, you have two options:

OPTION 1: Host a workshop for key stakeholders including Ministry of Health (MoH), implementing partners, facility managers, and provider supervisors. Gather together a group (like the above) to discuss segment profiles and messaging, then make adaptations as needed.

OPTION 2: Use the **typing tool** as a screener to recruit for qualitative research to identify members of each segment, then conduct small focus groups to better understand the nuances of each segment, and adapt tools and messaging as needed

Unsure, we think additional research would be helpful.

You're in luck! The next section is for you. Follow the steps outlined in Module C to conduct your own segmentation.

Step 1: Identify Your Objective

What is the objective of this segmentation exercise?
Possible objectives could include:

- increasing vaccine uptake
- increasing vaccine acceptance
- increasing intent to get the vaccine or other

Step 2: Identify Your Target Population

Among which population are you trying to influence behavior?
Possible target populations could include:

- Entire population
- Pregnant women
- Women and men over 60
- Youth 13+ etc.

Step 3: Convene Stakeholders

Identify and bring together the people you want to involve in conducting the segmentation exercise. The table below lists functional groups and their potential segmentation roles. Consider the functions of your own team and decide whether they should be a part of the exercise.

Types of people you may want to include in your process:

	**People with Knowledge** …of primary data collection …of data analysis …of national COVID-19 trends Researchers, infectious disease experts, COVID-19 response staff
	**People with Access** …to communities ...to funds Implementers and program staff from NGOs, Donors
	**People with Influence** …over policy …over community access Policy makers, government officials
It will be important to include a mix of people in the process, specifically women and representatives of marginalized populations, and ensuring that they have an equal say in decision-making. Ensuring a diversity of voices in the decision-making process is critical to all programming, and specifically health-related efforts that have such an intimate impact on people's lives.	

Step 4: Identify Key Variables

With your team, brainstorm the different factors which may influence your target population's intention to get vaccinated.

You can group these factors into demographic, behavioral, and attitudinal.

Use this table as a starting point to identify the characteristics that might influence your chosen population's intention to be vaccinated. Which factors are most important in your context? Which do you think have the greatest impact on your population's beliefs about vaccination?

Select those that are relevant to your context and add others as necessary.

Demographic (general)

Sample characteristics

- Age
- Location
- Gender
- Number of children
- Rural/urban
- Literacy/numeracy
- Socio-economic status
- Household income
- Level of education
- Employment status / type of employment
- Health history / risk factors: obesity, diabetes, smoker, respiratory disease
- Member of minority population
- Living with elderly people
- COVID illness or death in the family from COVID

Sample segment

- Upper class females with post-graduate degree from Abuja.

When to use

- Best for simple targeting or combining with other variables.

Behavioral (specific to your context)

Sample characteristics

- Seeks information regarding the disease (+ which channels)
- Social media user
- Goes to health center for preventative treatments (e.g. vaccination for children, other)
- Goes to health center when experiencing illness
- Goes to traditional practitioners when experiencing illness
- Involved in community activities
- Vaccination status

Sample segment

- Frequent social media user with multiple strong community ties

When to use

- Use when trying to understand group preferences. Best when combined with attitudinal variables.

Attitudinal (specific to your context)

Sample characteristics

- Perceived access
- Perceived effectiveness of vaccine
- Perceived threat of the disease
- Trust in authority (government, health institutions, health care professionals)
- Perceived social norms (e.g. others are getting vaccinated or not)
- Perceived safety of vaccine
- Perceived consequences if remaining unvaccinated
- Perceived role of fate/divine will

Sample segment

- Believes that the vaccine is a conspiracy

When to use

- Use when trying to understand rationale for behaviors. Powerful for communication. Best when combined with behavioral variables.

Step 5: Develop Hypothetical Segments

Combining your own contextual knowledge and support from academic and grey literature, begin drafting hypothetical segments.

Using Google (or **scholar.google.com**) or your own research networks, conduct a search for articles and papers written on behaviors, beliefs and attitudes around vaccines in your country/region/district (or similar contexts if this is unavailable).

- What do these articles say about the types of beliefs people have, and how those beliefs, attitudes and behaviors are usually combined among groups?
- What conclusions can you draw about the types of segments that may exist in your context, among your target population?

Use this information to begin drafting your segments. Identify the unique behaviors, attitudes, and beliefs that these groups have around the COVID-19 vaccine that separate them from others.

Step 6: Test Your Hypotheses

At this point it is time to test your hypotheses and find out how the segments actually take shape in your context.

Each type of research offers its own advantages and disadvantages associated with its own methods. Many approaches can be done independently, but for some of the more advanced techniques it can be best to partner with a market research firm.

Qualitative Research

Interviews with key informants and focus group discussions each provide more context on a person's experience without the heavy investment of quantitative primary research. Key informant interviews and focus group discussions are an excellent way to gather in-depth information from individuals on a specific topic.

Interviews

One-on-one interviews with members of your target population.

☑ Simple

☒ Difficult to ensure truthful responses

Focus Groups

Carefully moderated, prompted discussions with groups from your target population.

☑ Can help spur participant ideas and creativity

☒ "Groupthink" can elicit biased responses

Now that you've done some initial brainstorming on the factors that might influence vaccination, it's a good idea to test your concepts with real people. Interviews with key informants and focus group discussions each provide more context on a person's experience without the heavy investment of quantitative primary research.

Potential questions for a discussion guide

When developing your discussion guide, refer to the factors that you brainstormed with your team. In your research with real subjects, you want to focus on their beliefs, behaviors and attitudes around COVID-19 and the vaccine. Some things to consider:

- Emotional drivers and barriers (e.g. wants to protect their family versus fear of side effect versus apathy)
- Key influencers (e.g. informed by mis-information on social media vs. follows community / religious leader vs. decides based on husband / family choices)
- Previous experience with health system (e.g. has received other vaccinations and is proactive in seeking care vs. prefers traditional healers vs. tends not to seek care)

1. Are you aware that there is a vaccine to help protect you against Covid? How did you learn about it? What information did you receive? What do you think about the vaccine?
2. Do you know where / how to get vaccinated? Do you have access?
3. In your community, do you think that most people have been vaccinated? Why or why not?
4. Have you been vaccinated against Covid? [if yes] How many times? Why did you choose to get vaccinated? [if not] Why haven't you been vaccinated? Do you think you will do it in the future? Why or why not? Is there anything that would convince you to get vaccinated?
5. Which sources of information about Covid vaccination do you find the most reliable and useful? Which do you trust the most?

Case Study: Guatemala

Example of Qualitative Research for Segmentation

Research overview

In 2021, Breakthrough Action and Johns Hopkins University conducted a survey in three municipalities with low or stagnant Covid-19 vaccination in Guatemala: Playa Grande, Ixcán in the department of Quiché, San Cristóbal Verapaz in the department of Alta Verapaz and Chiantla in the department of Huehuetenango, Guatemala.

The survey was conducted through key informant interviews and group discussions with small numbers of participants from each group of interest.

Objectives

The objective of this rapid qualitative survey was to identify the intentions or motivations to get vaccinated, reasons for hesitancy, perceived barriers and benefits, and recommendations to increase vaccination coverage among four interest groups:

1. Those who, without completely rejecting the COVID-19 vaccine, have not yet been vaccinated,
2. Those who, having received the first dose of the vaccine, still do not have the second;
3. Mothers and fathers of children and adolescents from 12 to 17 years of age and
4. Pregnant women

Findings

Rather than a traditional segmentation, the team pre-identified these groups in order to learn more about them, and the factors that influenced their health behaviors. The factors they found most influential in decision-making among these groups were:

- **Self-efficacy**: people's knowledge and abilities to act. In this case, the participants said they had little knowledge and/or had received little information about the vaccine, especially about the second dose, the childhood vaccine, adolescents, and pregnant women.
- **Fear of the negative consequences**: ranging from short-term, observable reactions to long-term ones that were expressed in rumors such as the vaccine causing death, abortion, and infertility etc. Fear of negative consequences of the vaccine was one of the most mentioned factors by the participants.
- **Access** (or the lack thereof): This had many different aspects such as the degree of availability of the vaccine, brand of vaccine, access to vaccination services and other barriers related to the cost of transportation.
- **Health policies**: including confusion around the need to sign a consent form, present identification documents or provide the telephone number. Further, health policies were not always implemented in a standardized way which creates confusion and mistrust.
- **Isolation**: Low perception of susceptibility or severity because in rural villages many people had not seen cases of COVID-19.
- **Traditional beliefs**: Many people expressed strong beliefs in divine protection and destiny, as well as traditional medicine to cure illness.

Gender Analysis

Consider including a gender analysis in the qualitative research you conduct. In qualitative research this means applying a gendered lens to the research and analysis. This could mean conducting gender-specific focus group discussions, or asking questions designed to highlight the different experiences of different genders (I.e. is their gender identity at the root of their specific behavior or belief). In analyzing the findings, try to ascertain what role gender is playing in motivating respondents.

Additionally, even when gender may not determine beliefs or attitudes, it will be important to still consider gender in the use of any completed segmentation and the implementation of relevant campaigns based on findings. For additional information on gender's role in vaccine response, please see the Breakthrough ACTION **Gender Analysis for Emergency Vaccine Response Toolkit** (coming soon).

Quantitative Research

Quantitative research can be an excellent way to gather coherent and precise insights into your target populations. Select a set of variables to test based on factors associated with willingness to practice the behavior of interest – in this case, vaccination. This could include factors such as those listed in Module A (Key Factors), such as willingness to be vaccinated, perceptions of the COVID-19 pandemic, perceived barriers to vaccination, preferred communication channels, trusted figures for communication et cetera.

Surveys

Carefully formed set of questions sent out to target population.

☑ Can fit a variety of analytics

☒ Questionnaires and wording need to be fine-tuned for best results

Secondary Data Analysis

Similar to data analysis. Can be more advanced or include a wider range of sources.

☑ Factual: shows actions that have actually transpired

☒ Retrospective: tough to pick out unmet needs

Thoughtful survey design and recruitment criteria are integral to producing useful quantitative outputs. The survey instrument should be informed by the results of qualitative research, background research, and insights gathered starting from the initial brainstorm and stakeholder interviews. The screening criteria should be based on the hypothesis segments and the sample should be representative by factors such as gender, geography, education, marital status, and income or socioeconomic group. The instrument should investigate needs, attitudes, behaviors, and other factors thought to influence the behavior(s) of interest.

Following an analysis plan that establishes which questions are to be answered, which sub-groups should be used, and which specific hypotheses are to be tested, the data should be analyzed using the appropriate analysis method. Analysis techniques typically used for segmentation included cluster analysis, latent class analysis, and perceptual mapping. The objective of this analysis is to identify commonalities and trends among groups based on behavioral and attitudinal factors. For example, does the data show that groups can be segmented based on their perceptions of the COVID-19 vaccine and their perceived barriers to getting vaccinated? These are the types of trends to look for.

Gender Analysis

Consider including a gender analysis in the quantitative research you conduct. In quantitative research this means including a gender variable (whether binary or including other gender identities relevant to your context). This will allow you to identify how gender interacts with other variables, and whether it is a key driver of differences in behavior or attitudes between segments. Additionally, even when gender may not determine beliefs or attitudes, it will be important to still consider gender in the use of any

completed segmentation and the implementation of relevant campaigns based on findings. For additional information on gender's role in vaccine response, please see the Breakthrough ACTION **Gender Analysis for Emergency Vaccine Response Toolkit** (coming soon).

Step 7: Analyze Findings

You are now ready to bring the various elements of segmentation together.

Revisit notes from your brainstorming sessions, your hypotheses, informal qualitative research, and/or data analysis. Work with your team to answer the following questions:

- Which factors stand out as most important among the target population?
- How do those factors differ between various groups?
- What stands out as a viable segmentation? I.e., how does the data we collected tell a story about different groups within the population and their attitudes, behaviors, and beliefs around COVID-19?

Step 8: Refine and Finalize Your Segmentation

It is now time to refine and finalize your segmentation.

Revisit your hypothetical segments, keeping in mind the analysis conducted in Step 7.

- Edit or revise the segments you drafted to reflect your research findings.
- You want to create as many segments as you find meaningful differences in behavior and attitudes related to the vaccine.
- However, keep in mind that too many segments can be difficult to manage. Generally, it's useful to try and aim for between 3 and 6 segments.

Once finalized, your segmentation should resemble the profile of an individual representing a group. This profile should respond to your objective by providing useful information to inform your programming goals. It should also include information on each of the factors important to your objective that came out of your research.

A: Review your research findings

If you've completed qualitative research, first go through your notes or transcripts as a whole and jot down key themes and interesting findings. Do the same with quantitative findings. Have your team look over preliminary data cuts, tables, cross-tabs, etc. Check for statistical significance to determine which findings are most reliable. A helpful exercise is to have team members write findings on sticky notes and place them on a whiteboard. Arrange the notes in groups or categories. Once you've laid out a framework, look through your notes to find supporting quotes and additional details that add nuance to your conclusions.

B: Compare your findings to your segmentation hypotheses and objectives

Your completed research should help you either confirm or reject the hypothesis laid our earlier. Check to see if this is the case. Were you able to test all hypotheses? Note which ones remain untested. Sense-check your discussion by going back to the beginning. Review (and confirm) the overall objective of the exercise and how your team thought they'd complete the segmentation. Does the proposed segmentation meet your objectives? Why or why not? Are any key hypotheses or questions still unanswered?

C: Check your intuition

Segmentation is a mix of art and science. There's generally not a specific "aha" moment when you realize you have the right segmentation. A good test it when segments help answer your objectives and seem intuitively right. Ask around – do other stakeholders recognize these segments? Have they met these types of populations before?

D: Identify further research (if necessary)

You may choose to do further research. If so, what specifically do you need? Make sure your research has a definitive end. You may decide that more sophisticated quantitative analyses are required. There are several options for statistical modeling that can help remove researcher bias in segmentation, identify statistically significant differences across your segments, and assess the size of your opportunity more accurately. For these more advanced techniques, it's best to work with a qualified market research firm.

Step 9: Apply Your Findings

Brainstorm with appropriate teams in your organization to answer the following questions and develop a plan of action.

- Which segments are most likely to accept vaccination? Do they still have barriers that need to be addressed? For the segments less likely to get vaccinated, what are their main barriers?
- Are the barriers to vaccination addressable? Would these be best addressed through a communication campaign, interpersonal communication another SBC intervention? Are there any materials that exist already that could be used or built upon?
- For each segment, which messages would resonate most to address their vaccination hesitancy? What is the best channel to deliver these messages? (Compass provides how-to-guides, such as **how to develop a communication strategy** and **how to plan an interpersonal communication intervention**.)
- When applying findings, consider gender in how to do it – e.g. while there may be an equal number of men and women who are in one segment based on attitudes towards vaccines, they may have different preferences for channels/trustworthy sources, or different barriers to access the vaccine once they decide that they do want to get it. Or their fear of getting the vaccine may be based on different myths/misinformation – e.g. women's fear may be more related to rumors around infertility – esp. in places where proving fertility is a strong social norm – whereas men may have different reasons – so messaging still needs to be tailored.

Conclusion

Key Takeaways

- Interventions will be more effective if tailored to the heterogenous needs, knowledge, attitudes, and beliefs of the focus sub-populations.
- Many factors contribute to vaccine hesitancy, such as risk perception, attitudes, social and cultural norms and structural barriers. Vaccine hesitancy is complex and context-specific, and varies across time, place and vaccines.
- The Johnson & Johnson segmentation is an excellent place to start workshopping segments with your team.
- For developing messaging based on segmentation, ideally the characteristics of a segment include insight into the unique needs, attitudes and beliefs of a group. This information can be gathered through focus group discussions, key informant interviews and brainstorming within your team, as well as through quantitative data collection.
- Messengers can be just as important as the message itself. Know your segments and which messengers will resonate the most with them.

Further Reading

Segmentation Tools and Examples

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COVID Segmentations

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Creative Campaign Assets

- **Johnson & Johnson "All Hands on Deck" Sample Posters**
- **Johnson & Johnson "All Hands on Deck" Sample Discussion Guide**
- **Johnson & Johnson Sample Radio Script**

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