Covid Vaccines Acceptability Insights Introduction

Johnson & Johnson Global Public Health

Coronavirus 2019-nCov novel coronavirus

Introductions

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- **Lauren Marks**, Global Strategic Partnerships Lead
- **Regeru Njoroge Regeru**, GPH Vaccines SSA Implementation & Program Management Lead
- **Janice April**, Insights & Intelligence Manager Vaccines, Africa
- **Jeffrey Doering**, Global Lead, Data Science & Strategy
- **Caroline Baratz**, Global Strategic Partnerships Manager, Digital Health
- **Diana Irungu**, Strategy Lead, Vaccines
- **Grace Humwa**, Vaccine Country Implementation and Access Manager
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- **Tristan Hunt,** Principal
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- **Zahra Asghar,** Associate

Agenda

①	**Welcome**	**Group** *15 min*
②	**Our Insights + Opportunity Use Cases**	**Jason Betik + Janice April** *45 min*
③	**Zooming into Nairobi**	**Jeff Doering** *20 min*
④	**Discussion + Next Steps**	**Group** *40 min*

Through a dedicated

Global Public Health (GPH)

organization, we are a team of innovators who put the world's most vulnerable at the heart of everything we do—measuring our success in lives improved.

170+
person team across
26
countries

End-to-end
organization
- Research & Development
- Strategy & External Affairs
- Field-based teams

100+
partners to
deliver impact

250 million+
lives impacted
in 2021

Executive-level leadership

Leverage full capabilities and resources
of Johnson & Johnson

Our Mission

Make relevant innovations that

save lives, cure patients and prevent disease

available – affordable – accessible

for the world's most vulnerable & underserved populations.

Vaccine Uptake: Strengthening Vaccine Confidence

Vaccines do not guarantee vaccinations: As COVID-19 vaccines become more widely available, we must strengthen vaccine confidence to improve vaccine uptake.

J&J GPH is conducting **unbranded research** to improve understanding of vaccine confidence across Sub Saharan Africa and how it is changing over time. This research does not include any information about the J&J vaccine, nor any other vaccines from other manufacturers.

Vaccine Confidence Research is in service of **Vaccine Confidence Campaigns and Risk Communication Plans.** Donors and NGOs can use this research to increase the effectiveness of their Campaigns.

ILLUSTRATIVE EXAMPLES OF RESEARCH:
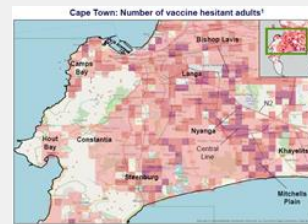
WHY
people aren't getting vaccinated

Insights Report, based on WHO/SAGE 3Cs model

WHICH
Population segments are most resistant

Attitudinal/Behavioral Segmentation

WHERE
to focus geographically within country

Geospatial Mapping of the 3Cs

WHAT
to say to change attitudes and behavior

"Getting the vaccine is like getting a sturdy umbrella and overcoat during a rainstorm. It makes sure that you avoid the worst of it. The idea is to keep you safe and dry from the rain"

Message Testing

WHO
should the communication come from

Influencer Plan

In our commercial business, campaigns are now highly targeted and relevant for specific audiences through precision marketing.

Our intention is to share J&J's commercial tactics to benefit the global public health community and to invest in disseminating actionable, data-based insights.

Precision marketing…

STOP SMOKING. START LIVING.

Nicorette Gum | NicoDerm CQ

nicorette
let's do something incredible

let's do something incredible

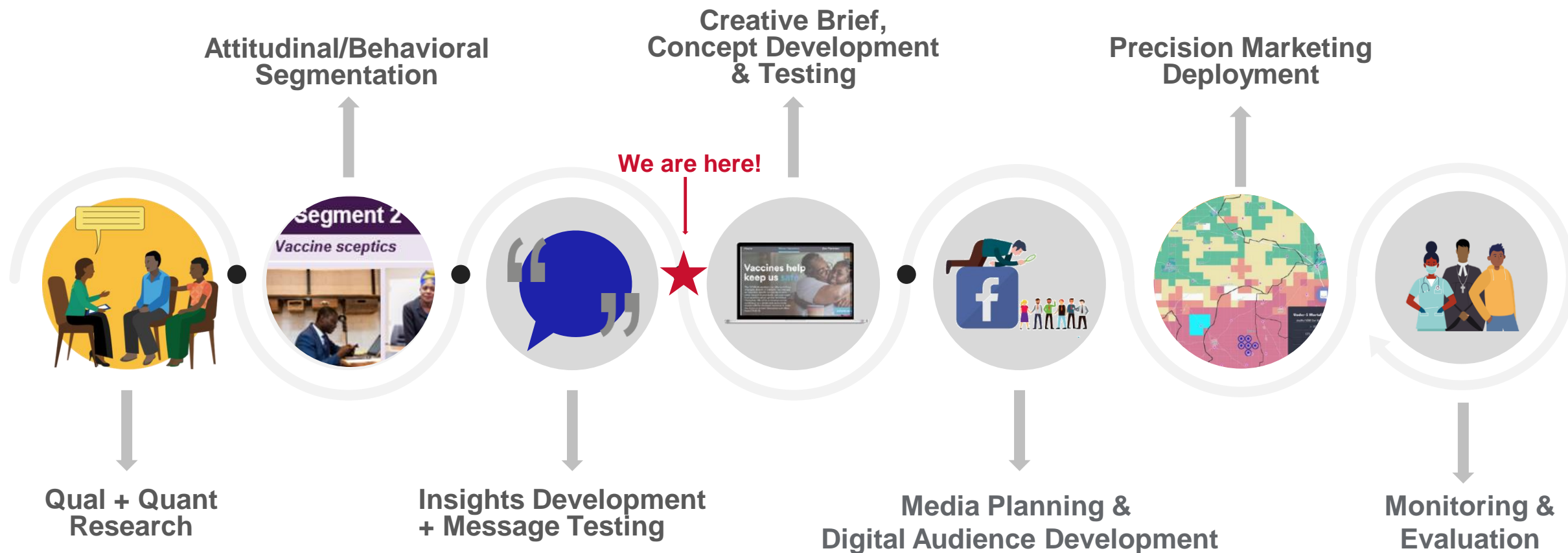**…can drive impact in global public health**

Many global health SBC campaigns start by targeting demographics. Complementing this with **advanced consumer analytics** that overlay attitudes & behaviors across geographies can help **target and tailor relevant communications**.

Segment 1
30%
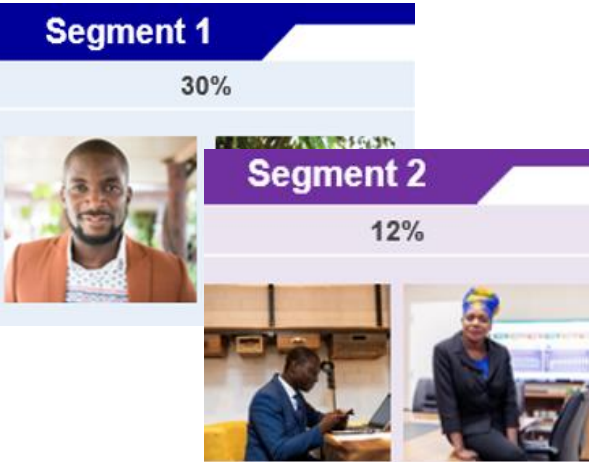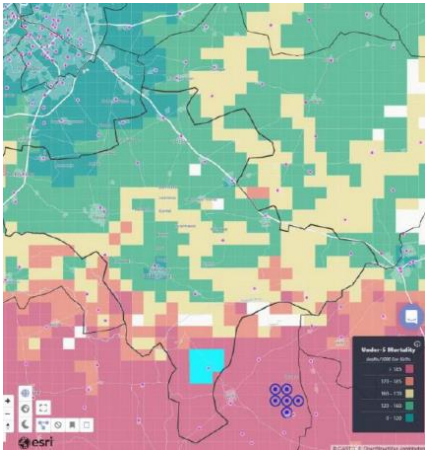
Segment 2
12%

Attitudinal/Behavioral Segmentation can serve as a springboard for targeted creative development, testing and communication execution with advanced analytics

Attitudinal/Behavioral Segmentation

Creative Brief, Concept Development & Testing

Precision Marketing Deployment

We are here!

Qual + Quant Research

Insights Development + Message Testing

Media Planning & Digital Audience Development

Monitoring & Evaluation

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We used statistically robust segmentation to identify groups of vaccination attitudes and mapped what messaging works, from whom, and where.

We aim to understand the enablers and barriers **along the spectrum** of those who will take the COVID vaccine, those who will never take the vaccine, and those who are undecided, as well as the proportion of these groups per country.

Especially for the undecided, we want to understand **what their reasons against vaccinating are**, and **engage them** in a conversation on issues that matter to them – speak to them based on their real values and concerns.

Likelihood to get the vaccine

Barriers

Enablers
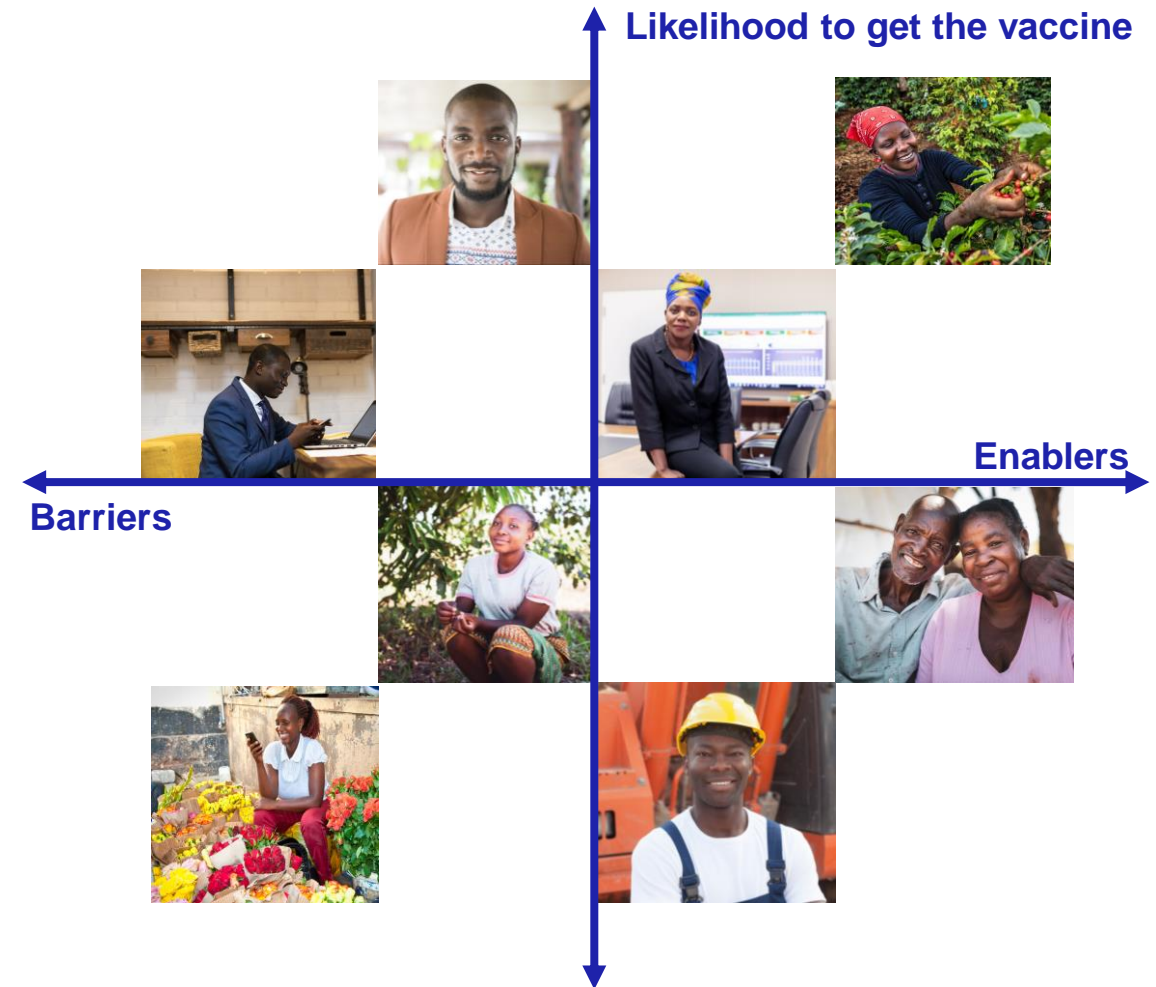
The data behind it (in partnership with IPSOS MORI + fraym)

Segmentation

Vaccine awareness, uptake, attitudes, beliefs, drivers, barriers, optimal communication channels Kenya, Zambia, and Nigeria

- Over **n=800** per market
- Sampling quotas:
  - 50/50 male and female spit
  - 33/33/33 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

Fieldwork conducted between August to September 2021

Respondents recruited using Ipsos' database of individuals 18+

Interviewers conducted 30-minute computer-aided telephone interviews

Message Testing

Force-choice experiment of messages, ideal messenger, and likelihood to impact behavior in Kenya, Zambia, and Nigeria

- Over **n=800** per market
- Similar sampling quotas to segmentation
- Must not have received the COVID-19 vaccine before
- Must not always avoid personal vaccinations

Fieldwork conducted between November to December 2021

Interviewers conducted 30-minute computer-aided telephone interviews with conjoint analysis

Geospatial Mapping

Geospatial mapping of vaccine attitudes, media consumption, demographics, language, socioeconomics, communications, media, and health centers in Kenya, Zambia, and Nigeria

- 2021 Fraym Kenya field survey (May 2021)
- WHO health facilities mapping[1]
- Malaria Atlas Project walking and driving times to health facilities[2]
- Uses artificial intelligence and machine learning with proprietary software FUSEfraym™

The segments reinforce the **WHO/SAGE** recommendations of the 3 C's Framework (**Confidence, Complacency, Convenience**) for vaccine engagement, with the backing of demographic data

A snapshot of the segments

Challenges aligned to WHO 3C Framework

Convenience
Practical barriers to access

Confidence + Complacency
perception of low risk and disease severity

Confidence
Trust in safety and efficacy

Confidence Complacency Convenience

Confident Enthusiasts	Enthusiastic Pragmatists	Vaccine Ambivalents	Vaccine Skeptics	COVID Cynics
Ready now	*Ready now*	*6-12 months*	*6-12 months*	*Never*
"If there's anything I can do to protect myself, I'll do it!"	"In theory I would get it, but I'm uncertain about logistics."	"I'm not against it, I just don't think I need it. I'll wait and see."	"I know it's important, but I want to wait and see if it's safe."	"I don't trust it and don't need it. Stop telling me to get it."

% of Kenya population [Global %]	30% [24%]	38% [19%]	15% [20%]	12% [25%]	6% [12%]
Segment #	1	4	5	2	3

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GLOBAL PUBLIC HEALTH
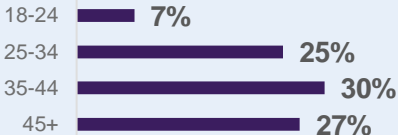PROPERTY OF JOHNSON & JOHNSON

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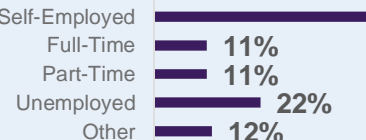
Meet the **Confident Enthusiasts** in Kenya (Segment 1 Teaser)

Segment 1 Overview

Summary	**Convinced of COVID threat and vaccine benefits. Would be quick adopters driven by social responsibility to protect their community.**
% of Kenya population [multi-country %]	30% [24%]
Likelihood to take a COVID-19 vaccine	Very High
Speed of uptake	As soon as possible
Perceived ease of getting the vaccine	Very easy
COVID disease perceptions	High perceived risk and severity

Demographics

Gender ♂ **53%**   ♀ **47%**

Age
- 18-24 — 7%
- 25-34 — 25%
- 35-44 — 30%
- 45+ — 27%

Urban/ Peri-urban/ Rural
- Urban **28%**
- Peri-urban **10%**
- Rural **62%**

Poverty Index
- High **30%**
- Medium **36%**
- Low **34%**

Employment Status
- Self-Employed — (no value shown)
- Full-Time — 11%
- Part-Time — 11%
- Unemployed — 22%
- Other — 12%

Optimal Messages + Messengers (Global)

Information Channels (Top 3)
- Radio **95%**
- TV **85%**
- Social media **69%**

WHAT to say to change attitudes and behavior

WHO should communicate

HOW the messages reach them

Getting the vaccine is like getting a sturdy umbrella and overcoat during a rainstorm.

Control messages: Messages that have already been circulated by the WHO/Health officials

Experts: Doctors, Nurses, Pharmacists, Community Health Workers, Govt Officials, WHO Officials

Expert/Non-expert messages: Messages developed by a creative agency, delivered either by a medical/health expert or layperson (non-expert)

Non- Experts: Family and Friends, Religious Leaders, Community Leaders, Celebrities

Meet the Enthusiastic Pragmatists in Kenya (Teaser)

Segment 4 Overview

Summary	**Convinced of COVID threat and merits of a vaccine, but inhibited by practical barriers. Cost-benefit analysis of the process could cause uptake delay.**
% of Kenya population [multi-country %]	38% [19%]
Likelihood to take a COVID-19 vaccine	High
Speed of uptake	As soon as possible
Perceived ease of getting the vaccine	Not easy/not at all easy
COVID disease perceptions	High perceived risk and severity

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Demographics

Gender ♂ 55% ♀ 45%

Age
- 18-24: 9%
- 25-34: 31%
- 35-44: 35%
- 45+: 25%

Urban/ Peri-urban/ Rural
- Urban: 22%
- Peri-urban: 11%
- Rural: 68%

Poverty Index
- High: 35%
- Medium: 31%
- Low: 34%

Employment Status
- Self-Employed: 44%
- Full-Time: 6%
- Part-Time: 11%
- Unemployed: 27%
- Other: 12%

Optimal Messages + Messengers (Global)

Information Channels (Top 3)
- Radio: 93%
- TV: 80%
- Social media: 62%

WHAT to say to change attitudes and behavior

WHO should communicate

HOW the messages reach them

> Getting the vaccine is like getting a sturdy umbrella and overcoat during a rainstorm.

Control messages: Messages that have already been circulated by the WHO/Health officials

Experts: Doctors, Nurses, Pharmacists, Community Health Workers, Govt Officials, WHO Officials

Expert/Non-expert messages: Messages developed by a creative agency, delivered either by a medical/health expert or layperson (non-expert)

Non-Experts: Family and Friends, Religious Leaders, Community Leaders, Celebrities

Meet the Vaccine Ambivalents in Kenya (Teaser)

Segment 5 Overview

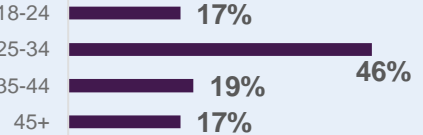|	
Summary	**Not convinced of the threat of COVID as a disease and lack motivation to seek a vaccine, but few barriers to uptake. Could be moved by social norms and strong messaging.**
% of Kenya population [multi-country %]	15% [20%]
Likelihood to take a COVID-19 vaccine	Moderate
Speed of uptake	Wait at least 6-12 months
Perceived ease of getting the vaccine	Fairly easy
COVID disease perceptions	Low perceived risk and severity

Demographics
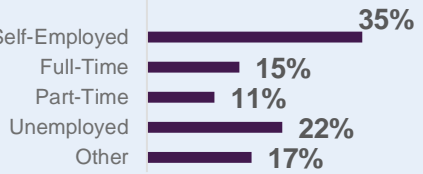
Gender ♂ 32% ♀ 68%

Age
- 18-24: 19%
- 25-34: 37%
- 35-44: 24%
- 45+: 20%

Urban/ Peri-urban/ Rural
- Urban: 41%
- Peri-urban: 8%
- Rural: 51%

Poverty Index
- High: 46%
- Medium: 32%
- Low: 22%

Employment Status
- Self-Employed: 36%
- Full-Time: 6%
- Part-Time: 10%
- Unemployed: 37%
- Other: 11%

Optimal Messages + Messengers (Global)

Information Channels (Top 3)
- Radio: 89%
- TV: 81%
- Social media: 58%

WHAT to say to change attitudes and behavior

WHO should communicate

HOW the messages reach them

Getting the vaccine is like getting a sturdy umbrella and overcoat during a rainstorm.

Control messages: Messages that have already been circulated by the WHO/Health officials

Experts: Doctors, Nurses, Pharmacists, Community Health Workers, Govt Officials, WHO Officials

Expert/Non-expert messages: Messages developed by a creative agency, delivered either by a medical/health expert or layperson (non-expert)

Non- Experts: Family and Friends, Religious Leaders, Community Leaders, Celebrities

Meet the Vaccine Skeptics in Kenya (Teaser)

Segment 2 Overview

Summary	**Convinced of COVID threat, but scepticism around vaccine safety and efficacy inhibits perceived benefit and quick uptake.**
% of Kenya population [multi-country %]	12% [25%]
Likelihood to take a COVID-19 vaccine	Moderate
Speed of uptake	Wait at least 6-12 months
Perceived ease of getting the vaccine	Fairly easy
COVID disease perceptions	High perceived risk and severity

Demographics

Gender ♂ 42% ♀ 58%

Age
- 18-24: 17%
- 25-34: 46%
- 35-44: 19%
- 45+: 17%

Urban/ Peri-urban/ Rural
- Urban: 38%
- Peri-urban: 10%
- Rural: 53%

Poverty Index
- High: 20%
- Medium: 35%
- Low: 44%

Employment Status
- Self-Employed: 35%
- Full-Time: 15%
- Part-Time: 11%
- Unemployed: 22%
- Other: 17%

Optimal Messages + Messengers (Global)

Information Channels (Top 3)
- Radio: 92%
- TV: 86%
- Social media: 71%

WHAT to say to change attitudes and behavior

WHO should communicate

HOW the messages reach them

Getting the vaccine is like getting a sturdy umbrella and overcoat during a rainstorm.

Control messages: Messages that have already been circulated by the WHO/Health officials

Experts: Doctors, Nurses, Pharmacists, Community Health Workers, Govt Officials, WHO Officials

Expert/Non-expert messages: Messages developed by a creative agency, delivered either by a medical/health expert or layperson (non-expert)

Non- Experts: Family and Friends, Religious Leaders, Community Leaders, Celebrities

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Meet the COVID Cynics in Kenya (Teaser)

Segment 3 Overview

Summary	**Strongly hesitant of COVID threat and a COVID vaccine. Mistrust in the vaccine's purpose and advocates means they will be slow to vaccine adoption, if at all.**
% of Kenya population [multi-country %]	6% [12%]
Likelihood to take a COVID-19 vaccine	Very Low
Speed of uptake	Never
Perceived ease of getting the vaccine	Fairly easy
COVID disease perceptions	Low perceived risk and severity

Demographics

Gender ♂ **62%** ♀ **38%**

Age
- 18-24: 20%
- 25-34: 38%
- 35-44: 27%
- 45+: 16%

Urban/ Peri-urban/ Rural
- Urban **31%**
- Peri-urban **20%**
- Rural **49%**

Poverty Index
- High **27%**
- Medium **27%**
- Low **47%**

Employment Status
- Self-Employed: 42%
- Full-Time: 9%
- Part-Time: 18%
- Unemployed: 18%
- Other: 13%

Optimal Messages + Messengers (Global)

Information Channels (Top 3)
- Radio **96%**
- TV **78%**
- Social media **69%**

WHAT to say to change attitudes and behavior

WHO should communicate

HOW the messages reach them

Getting the vaccine is like getting a sturdy umbrella and overcoat during a rainstorm.

Control messages: Messages that have already been circulated by the WHO/Health officials

Experts: Doctors, Nurses, Pharmacists, Community Health Workers, Govt Officials, WHO Officials

Expert/Non-expert messages: Messages developed by a creative agency, delivered either by a medical/health expert or layperson (non-expert)

Non- Experts: Family and Friends, Religious Leaders, Community Leaders, Celebrities

Zooming into your target geographies

Similarly to epi mapping used to identify health disease hotspots, **we have mapped vaccine attitudes + media consumption patterns to the county level…**
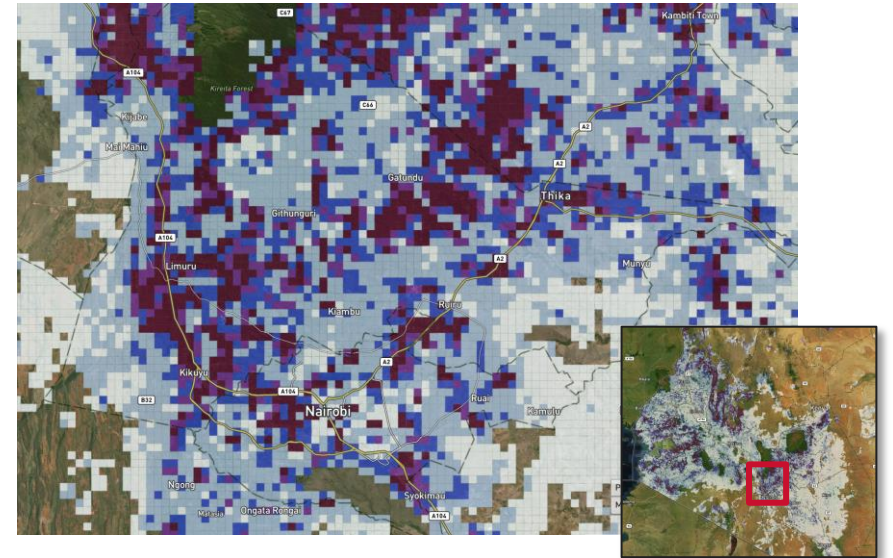
… to target creative campaign strategies that will resonate the most in prioritized geographies.

We used geospatial machine learning methods to create a local understand of vaccination uptake barriers

Factors we're mapping: "3C's", attitudinal/behavioral segments, media consumption patterns

Data

This report leverages the 2021 Fraym Kenya field survey (May 2021)

Health facilities in sub-Saharan Africa were sourced from the World Health Organization.[1]

Walking and driving time to health facilities were sourced from the Malaria Atlas Project.[2]

Methods

Machine Learning for Hyperlocal Mapping: The localized maps seen in this report were produced using the proprietary software FUSEfraym™. This software uses artificial intelligence and machine learning (AI/ML) to weave together survey data with satellite imagery and geostatistical datasets.

Potential ways to use this analysis:

- Concentrate communication campaigns and media spending in specific geographic areas

- Target specific messages to niche audiences in prioritized geographies

- Optimize vaccine distribution

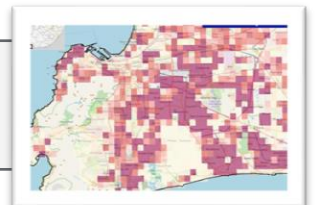- Service & Product Delivery Planning

3 Levels of Views

National
Patterns at the country level

Regional
Patterns at across counties

Local
Patterns at the Sq. Km

Ex. 1: Reaching 'Vaccine Skeptics' Near Nairobi

How do we reach those near Nairobi who are worried by Covid but have vaccine concerns?

WHO are we looking for?

Segment 2
Vaccine sceptics

Summary	**Convinced of COVID threat, but scepticism around vaccine safety and efficacy inhibits perceived benefit and quick uptake.**
% of population	25%
Likelihood to take a COVID-19 vaccine	Moderately low
Speed of uptake	Wait at least 6-12 months
Perceived ease of getting the vaccine	Fairly easy
COVID disease perceptions	High perceived risk and severity

WHERE do we find them?

People in the **vaccine skeptics** segment can be seen in greater numbers in the dark red squares on the map below, around the Nairobi area. They aren't focused in one place.
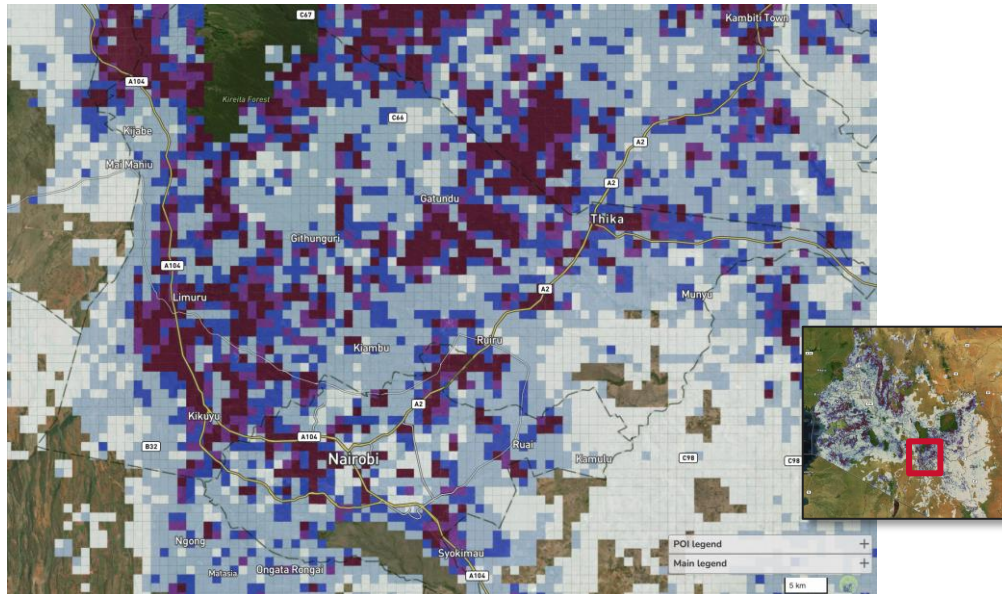
HOW do we reach them?

Media consumption patterns for Vaccine Skeptics around Nairobi can be seen in the chart below.

Given their heavy social media use, as well as their broad geographical distribution, a digital programmatic RCCE campaign via WhatsApp and Facebook might be most effective to reach this group, using geolocations as target points.

Social Media

Facebook Users	%	53
Twitter Users	%	20
Operanews Users	%	20
WhatsApp Users	%	61

TV News

Al Jazeera	%	10
BBC	%	9
CGTN	%	4
Citizen TV	%	73
CNN	%	10

Newspapers

Business Daily Africa	%	2
Daily Nation	%	26
People Daily	%	6

Putting it all together: *In order to reach Vaccine Skeptics near Nairobi, leverage Facebook and WhatsApp platforms, targeting near the north and north-west part of the city.*

Ex. 2: Finding 'Enthusiastic Pragmatists' Nationally

How do we reach those who *want* vaccines but don't think they can get them?

WHO are we looking for?

|	Segment 3 *Enthusiastic pragmatists*
Summary	Convinced of COVID threat and merits of a vaccine, but inhibited by practical barriers. Cost-benefit analysis of the process could cause uptake delay.
% of population	19%
Likelihood to take a COVID-19 vaccine	High
Speed of uptake	As soon as possible
Perceived ease of getting the vaccine	Not easy/not at all easy
COVID disease perceptions	High perceived risk and severity

WHERE do we find them?

People in the **enthusiastic pragmatists** segment are disproportionately located around Nyandaru, Samburu, and Lamu.

Enthusiastic Pragmatists (%)

>= 45	■
40 – 45	■
35 – 40	■
20 – 35	■
< 20	□
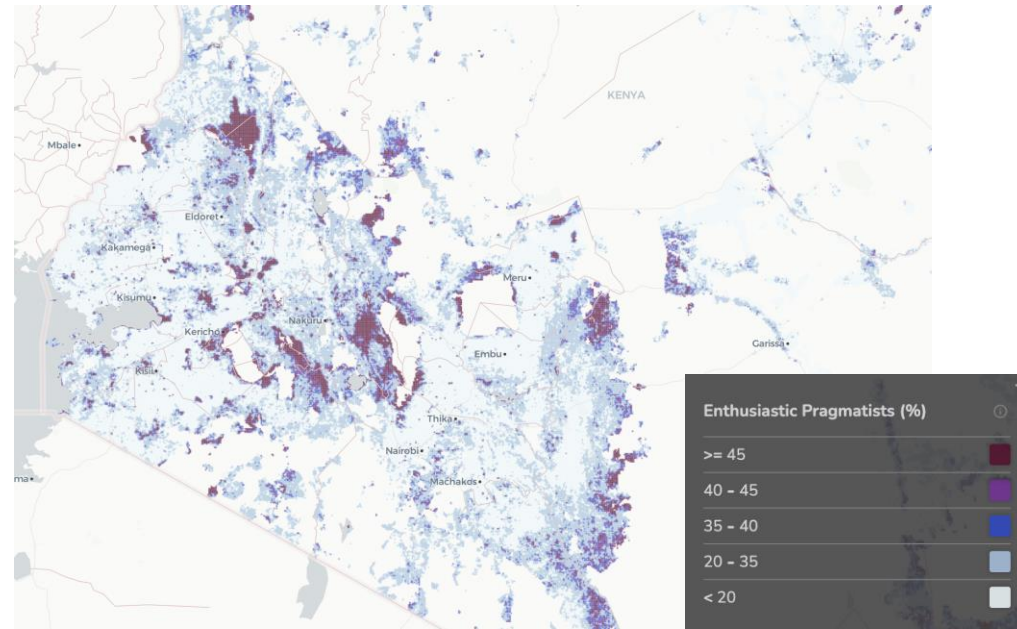
HOW do we reach them?

There are more TV viewers – specifically of Citizen TV- in Nyandaru than any other single media channel. These viewers primarily speak Swahili.

Social Media

Facebook Users %	50
Twitter Users %	16
Operanews Users %	19
WhatsApp Users %	55

TV News

Al Jazeera %	6
CGTN %	3
Citizen TV %	72

Language

English %	0
Somali %	0
Swahili %	31

Putting it all together: *In order to reach Enthusiastic Pragmatists in Kenya, try reaching people watching Citizen TV in Nyandaru country first.*

Ex. 3: Understanding Complacency near Mombasa

How do we reach those who *might* take a vaccine but don't see a risk in Covid, in Mombasa?

WHO are we looking for?

| Segment 5	
Vaccine ambivalents	
Summary	Not convinced of the threat of COVID as a disease and lack motivation to seek a vaccine, but few barriers to uptake. Could be moved by social norms and strong messaging.
% of population	20%
Likelihood to take a COVID-19 vaccine	Moderate
Speed of uptake	Wait at least 6-12 months
Perceived ease of getting the vaccine	Fairly easy
COVID disease perceptions	Low perceived risk and severity

WHERE do we find them?

People in central Mombasa tend to be less complacent, whereas those in the suburbs – particularly to the south-east and east, tend to be more complacent.
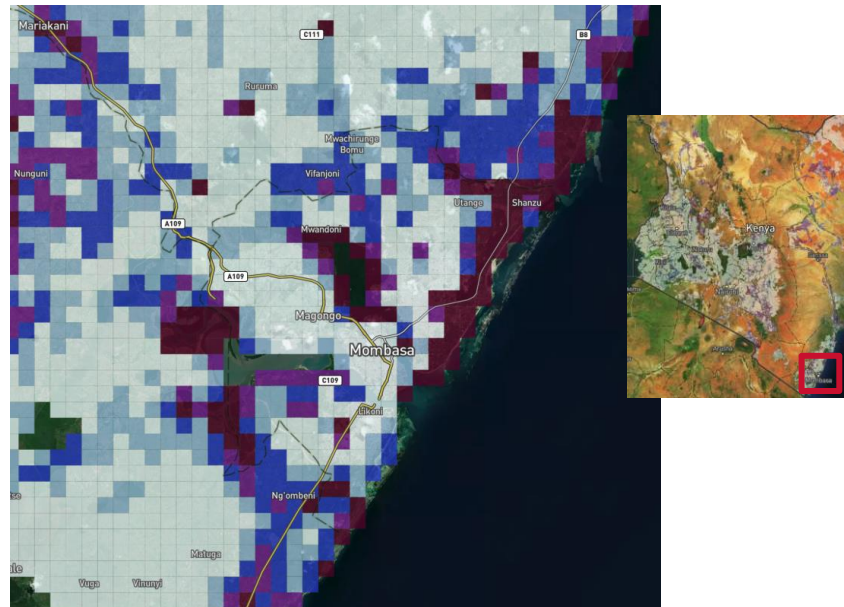
HOW do we reach them?

Pop-up vaccination sites in the north part of Mombasa could be used to reach those in complacency 'hot spots' where the residents tend to be less motivated to travel for a shot.
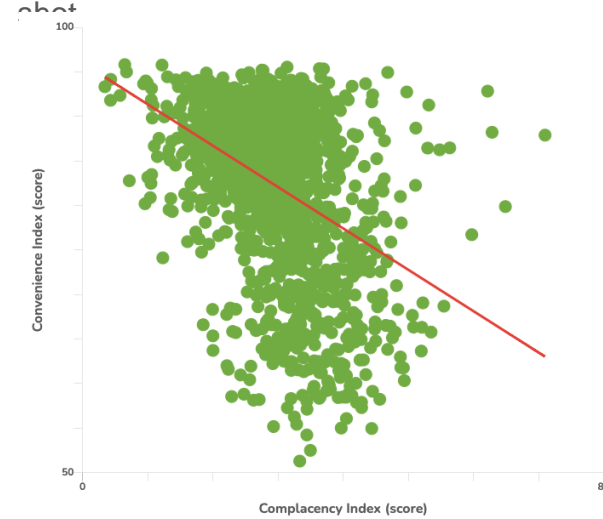
We also know that those who are more complacent *in this neighborhood* tend to have more convenience-related challenges, so pop-up clinics would serve them well.

R-square = 0.160397 and CC = -0.400496

Putting it all together: *In order to reach complacent people near Mombasa, try in-person outreach in the Shanzu ward.*

What's Next: Message Testing

Rigorous research to study which message (narrative language), messenger, gender of messenger, and media channel motivate each segment the most to vaccinate against COVID-19

- More than 2500 participants across three countries

- 60 messages were developed by Creative Agencies in Kenya, Nigeria, and Zambia that specifically addressed vaccine barriers

Messages shown to study participants

Expert messages:	Non-expert messages:
Delivered by a medical/health expert, including a mix of messages developed by a creative agency and existing WHO/ public health messages	Delivered by a lay-person, developed by a creative agency
• **Doctors** • **Pharmacists** • **Nurses** • **Community Health Workers** • **WHO Officials** • **Government Officials**	• **Family/Friend** • **Religious Leader** • **Community Leader** • **Music or Sports Celebrity**

<u>**Intent:**</u> **Increase motivation to vaccinate against COVID-19**

Our data show the most favorable combination of what to say (message), who should say it (messenger), and how it should be sent (media / channel)

How might this work complement your efforts?

Would you be interested in diving deeper into these insights?

Let's discuss!