

ASSESSING *Recovery*

Exploring the **Impact** of the **COVID-19 Vaccine** on the **Recovery of Travel**

January 21, 2020

U.S. TRAVEL
ASSOCIATION®



ANGIE BRIGGS

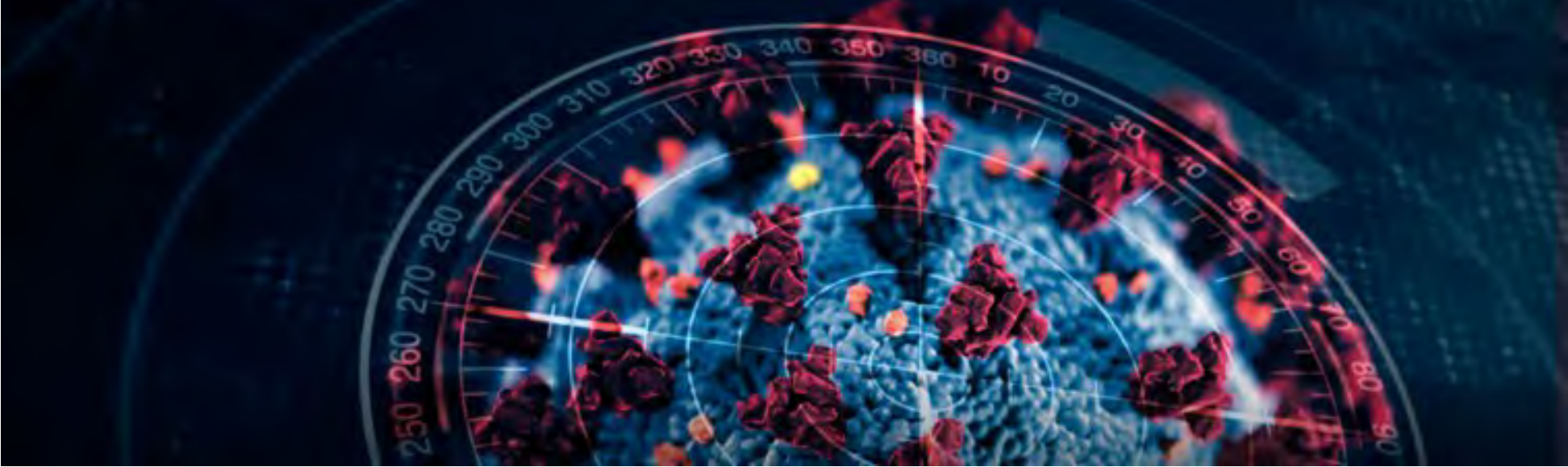
Vice President of Industry Relations
U.S. Travel Association



DR. TRISH PERL, MD, MSC, FIDSA, FSHEA, FACP

**Chief of Infectious Diseases and
Geographic Medicine**

UT Southwestern Medical Center



COVID-19 Prevention and Vaccines

Trish M. Perl, MD, MSc

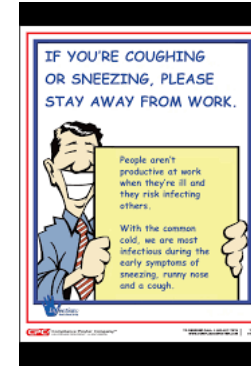
Professor of Medicine
Chief, Division of Infectious Diseases
and Geographic Medicine
Trish.Pperl@UTSouthwestern.edu

 @PerlTrish

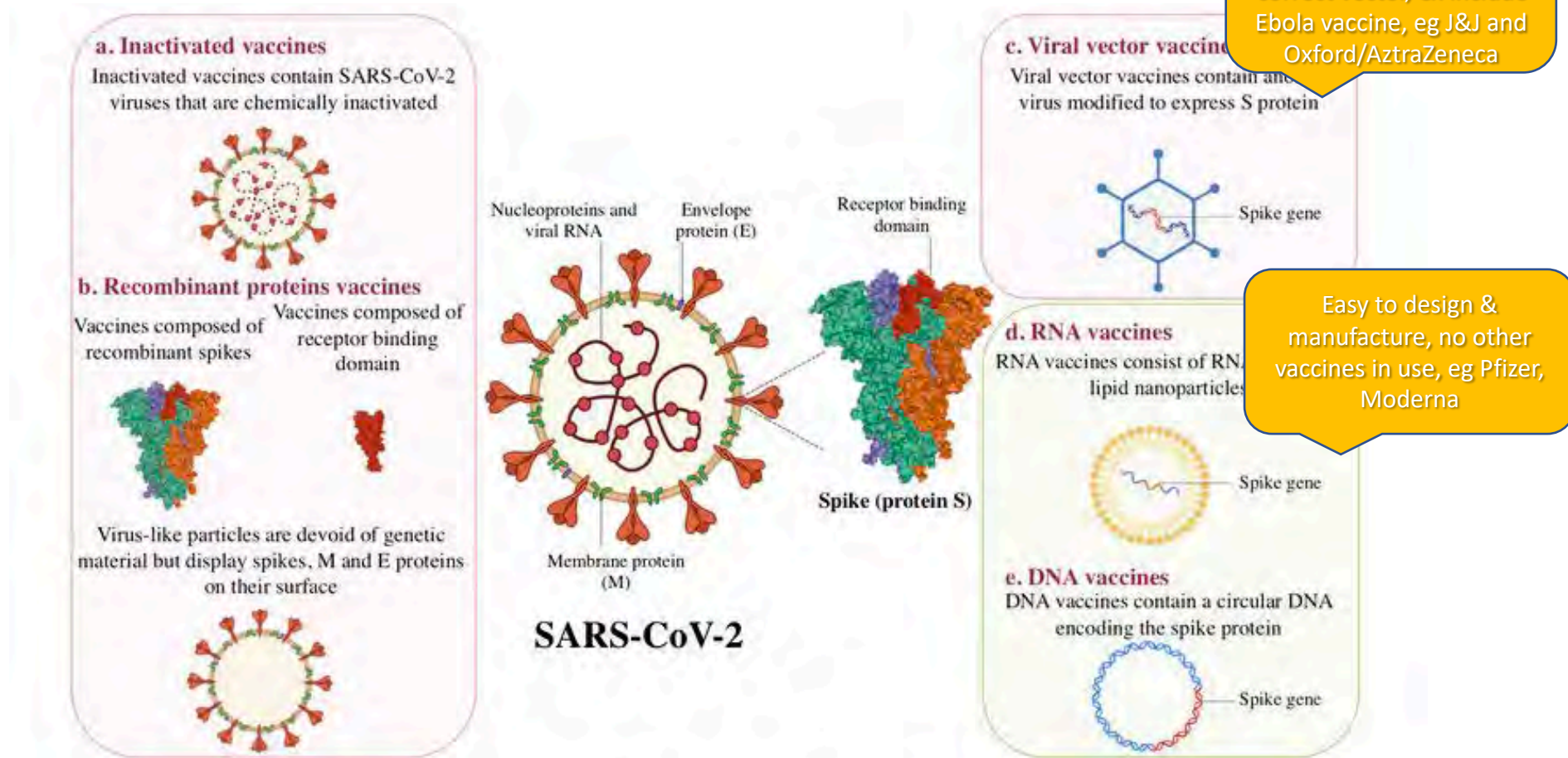
<https://www.statnews.com/2020/12/28/chance-illnesses-after-covid-19-vaccinations-could-test-public-confidence-even-if-the-problems-are-unrelated>



Prevention of COVID-19

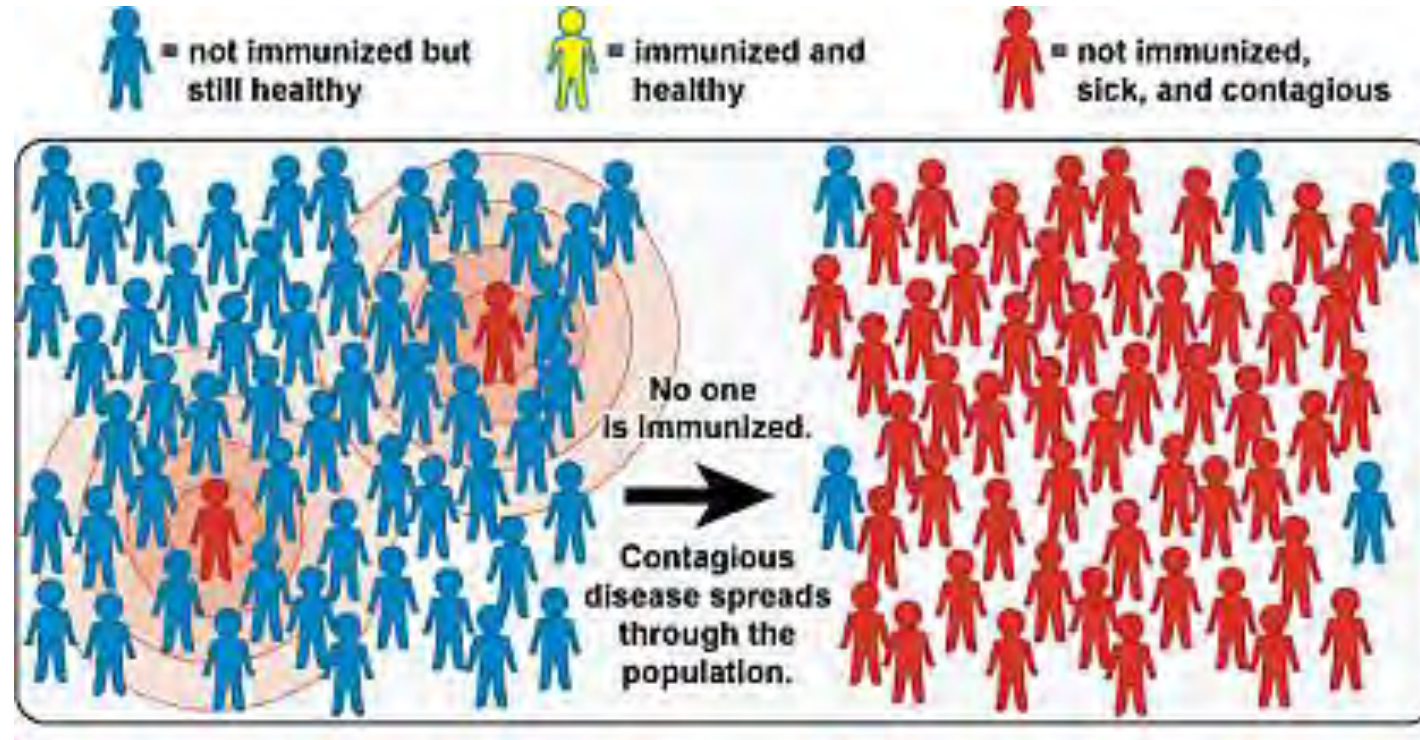


Types of COVID-19 Vaccines

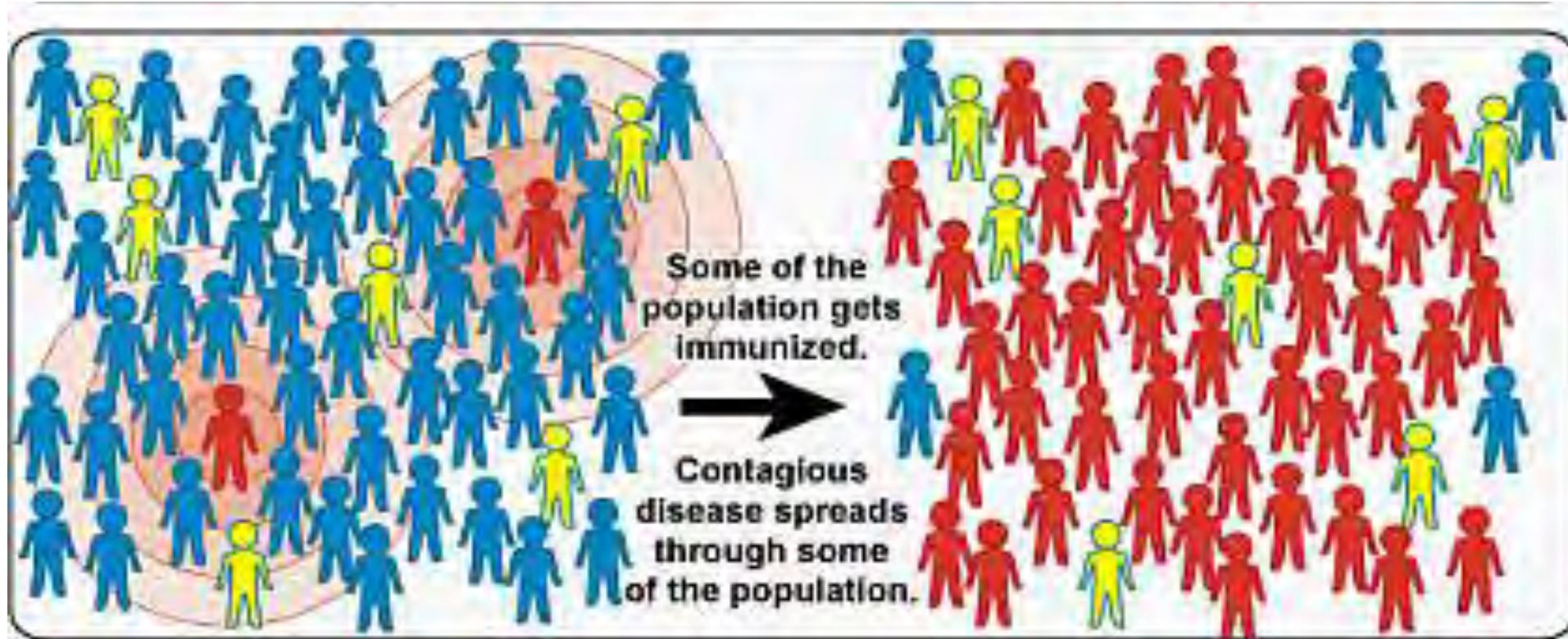


The platforms used for COVID-19 vaccine candidates in clinical trials. Strategies already in use are shown in the red box while novel approaches are shown in the green box. Images created using Mol* (Nino and al (2020) PDB ID 6XBP, Figure created with BioRender.com)

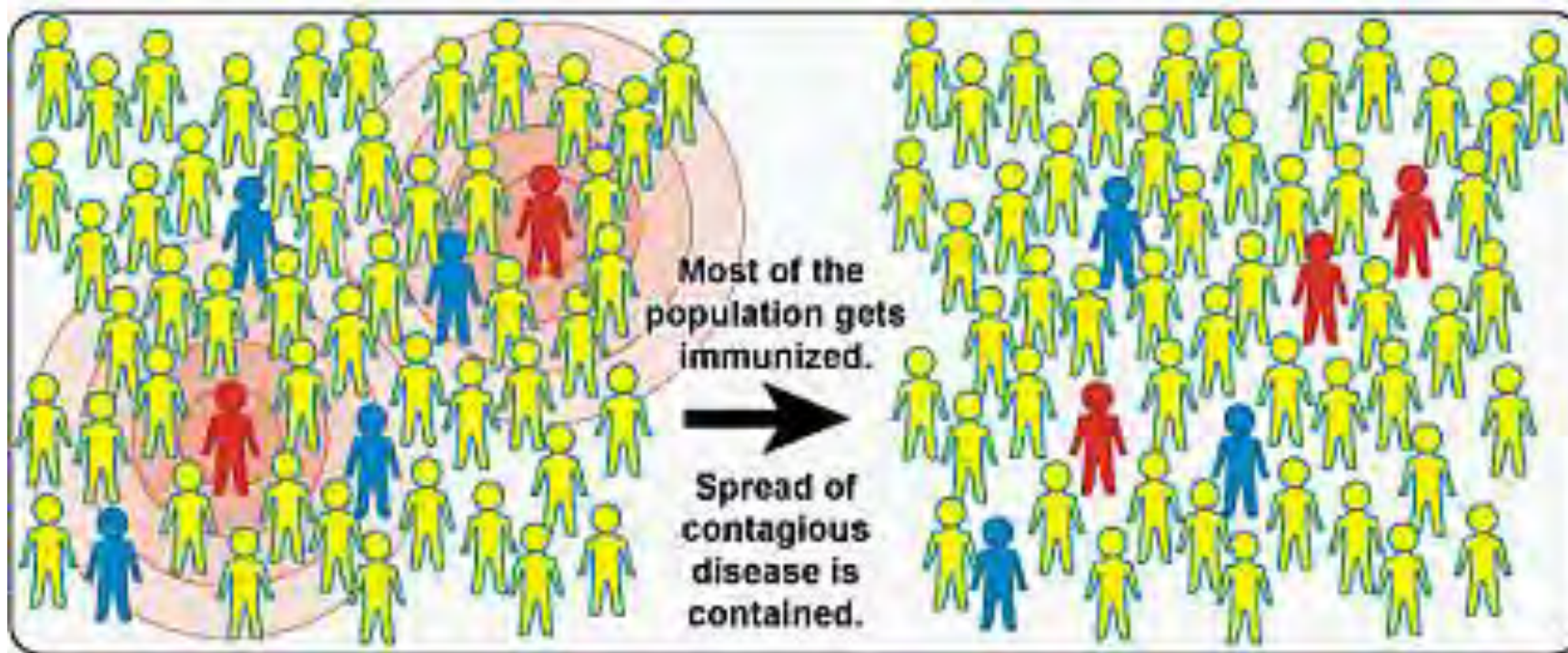
Indirect Effect of Vaccination: Herd Immunity



Indirect Effect of Vaccination: Herd Immunity

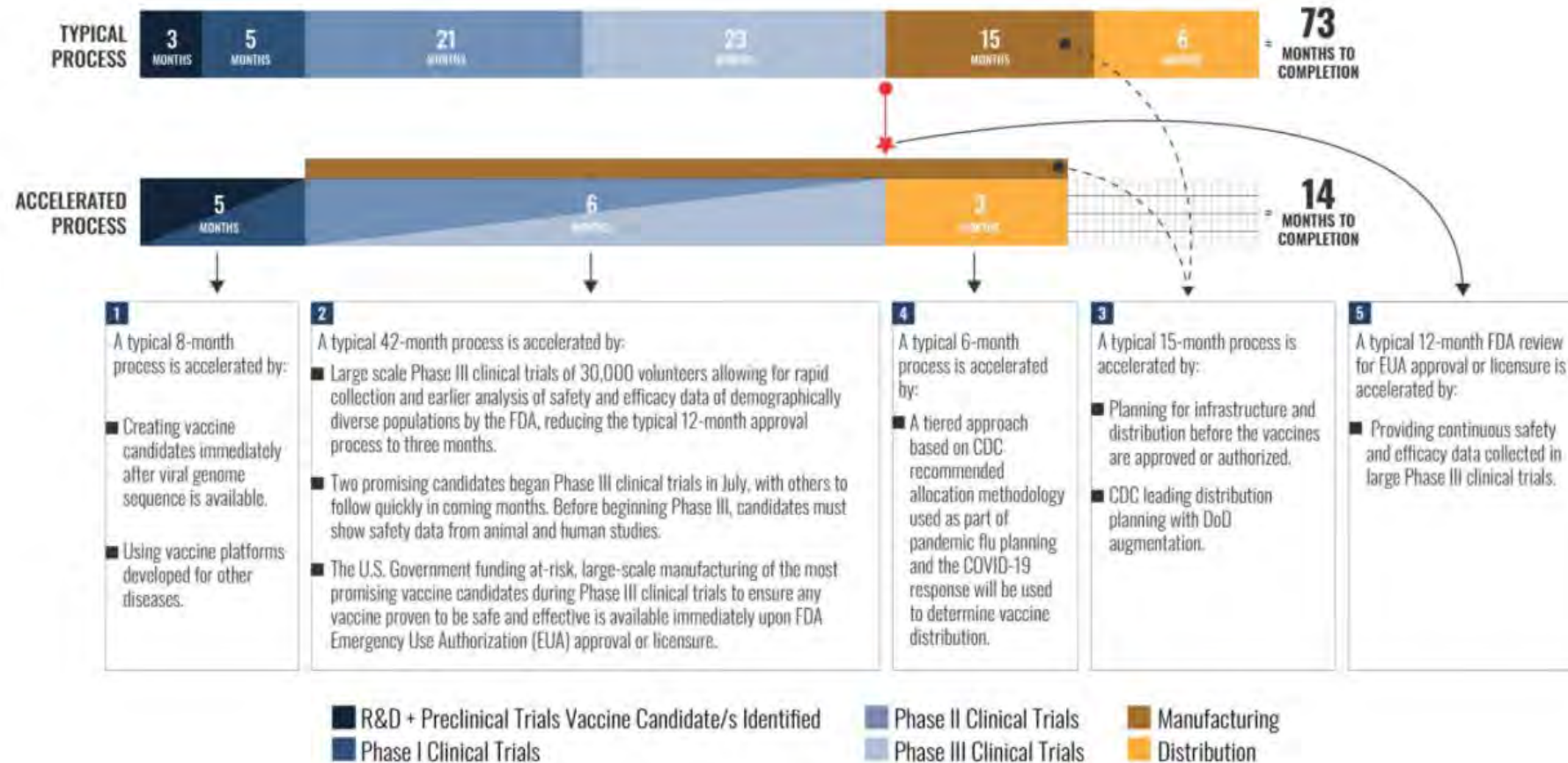


Indirect Effect of Vaccination: Herd Immunity










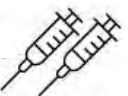

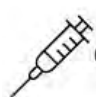
Estimates are a population will need ~ 70% of individuals to be immune through vaccination or natural infection to achieve herd immunity

Operation Warp Speed







COVID-19 Vaccine: Phase 3 Trials Underway in the U.S.



Pfizer			Phase 3 complete EUA granted	
Moderna			Phase 3 complete EUA granted	
Oxford/Astra Zeneca			Phase 3 preliminary analysis	
Johnson & Johnson			Phase 3 preliminary analysis	

What Do We Know About the Vaccine Frontrunners?

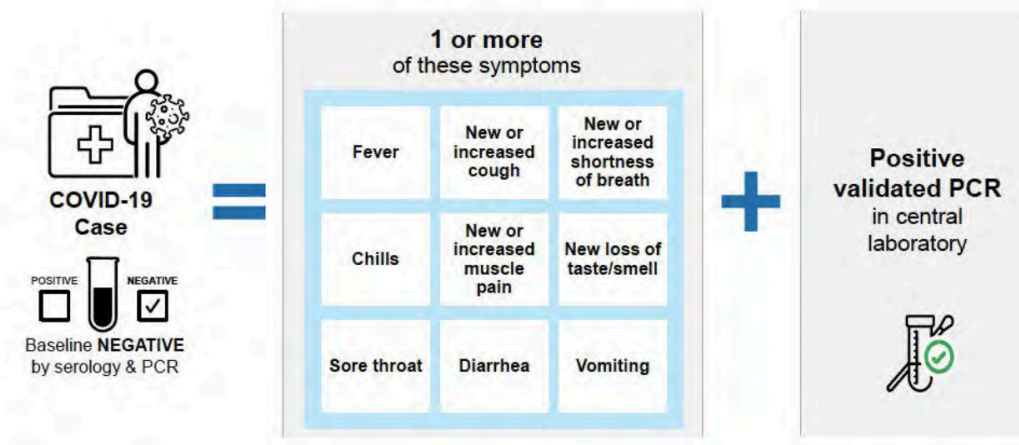
Vaccine	Mechanism of Action	Phase	Efficacy Results	Comments
Pfizer/BioNTech	mRNA 	Phase 3 complete, EUA granted	95% efficacy after 170 cases, severe cases 9 placebo vs. 1 vaccine	Requires freezer for storage, efficacy over 94% in pts > 65 years, no safety concerns
Moderna	mRNA 	Phase 3 complete, EUA granted	94.5% efficacy after 95 cases, severe cases 11 placebo vs. 0 vaccine	Stable at refrigerator temp x 30 days, no safety concerns
Oxford/Astra Zeneca	Chimp adenovirus vector 	Phase 3 interim analysis	70% efficacy after 131 cases; 90% after half dose/full dose, 62% after 2 full doses	Less stability issues, but safety data remains open question
J & J	Adenovirus vector 	Phase 3 analysis	Unknown	Less stability issue, safety data pending, single dose

mRNA Trial Endpoints

Primary endpoints: **Starting > 7 or 14 days after second dose of vaccine**

- Incident COVID-19 symptomatic infection in those w/o past SARS-CoV-2 infection
- Incident COVID-19 symptomatic infection in those w/ or w/o past SARS-CoV-2 infection

Secondary endpoints: Severe COVID-19 infection (>7d or >14d after 2nd dose), Vaccine efficacy in key subpopulations, CDC defined SARS-CoV-2 infection










Side effects, contraindications, special populations

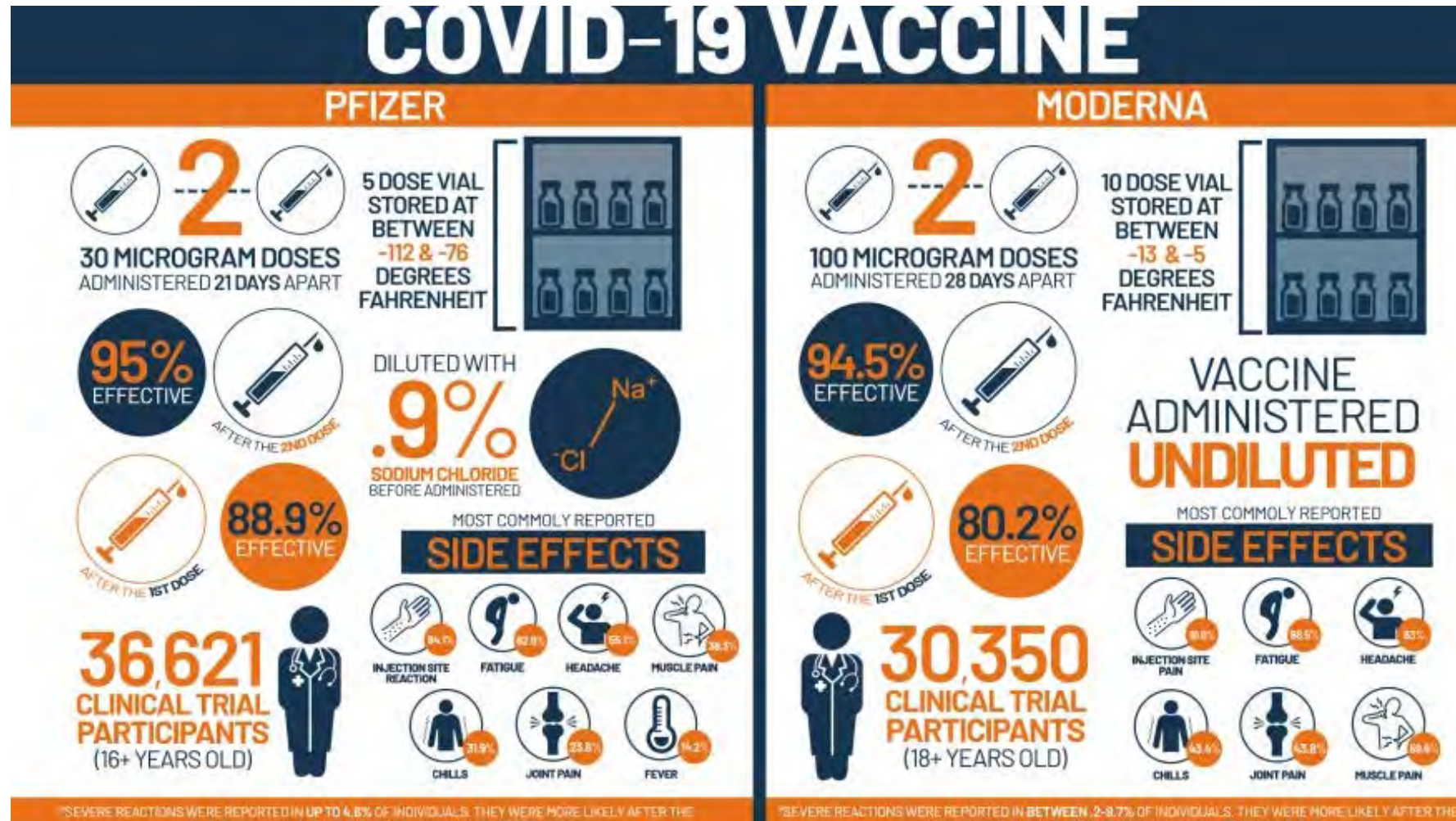
Vaccine	# Doses	Side effects	Pregnancy	Immunosuppressed	Autoimmune
Pfizer/BioNTech	50 million 12/2020, 1.3 billion in 2021	Pain, fatigue, HA, muscle, joint pain, chills, fever, vomiting; bell's palsy > after 2 nd dose	Minimal data; can be given	Minimal data; can be given	Minimal data; can be given
Moderna	20 million 12/2020, 80 million in 2021 (US)	Pain, fatigue, HA, muscle, joint pain, chills, fever, vomiting; bell's palsy, allergic rxn; SE > after 2 nd dose	Minimal data; can be given	Minimal data; can be given	Minimal data; can be given
Oxford/AstraZeneca	3 billion in 2021	Pain, fatigue, HA, muscle, joint pain, chills, fever, nausea; Rare transverse myelitis	unknown	unknown	unknown
J & J	1 billion in 2021	Unknown	Unknown	unknown	unknown

Reactogenicity: Comparison to Other Vaccines

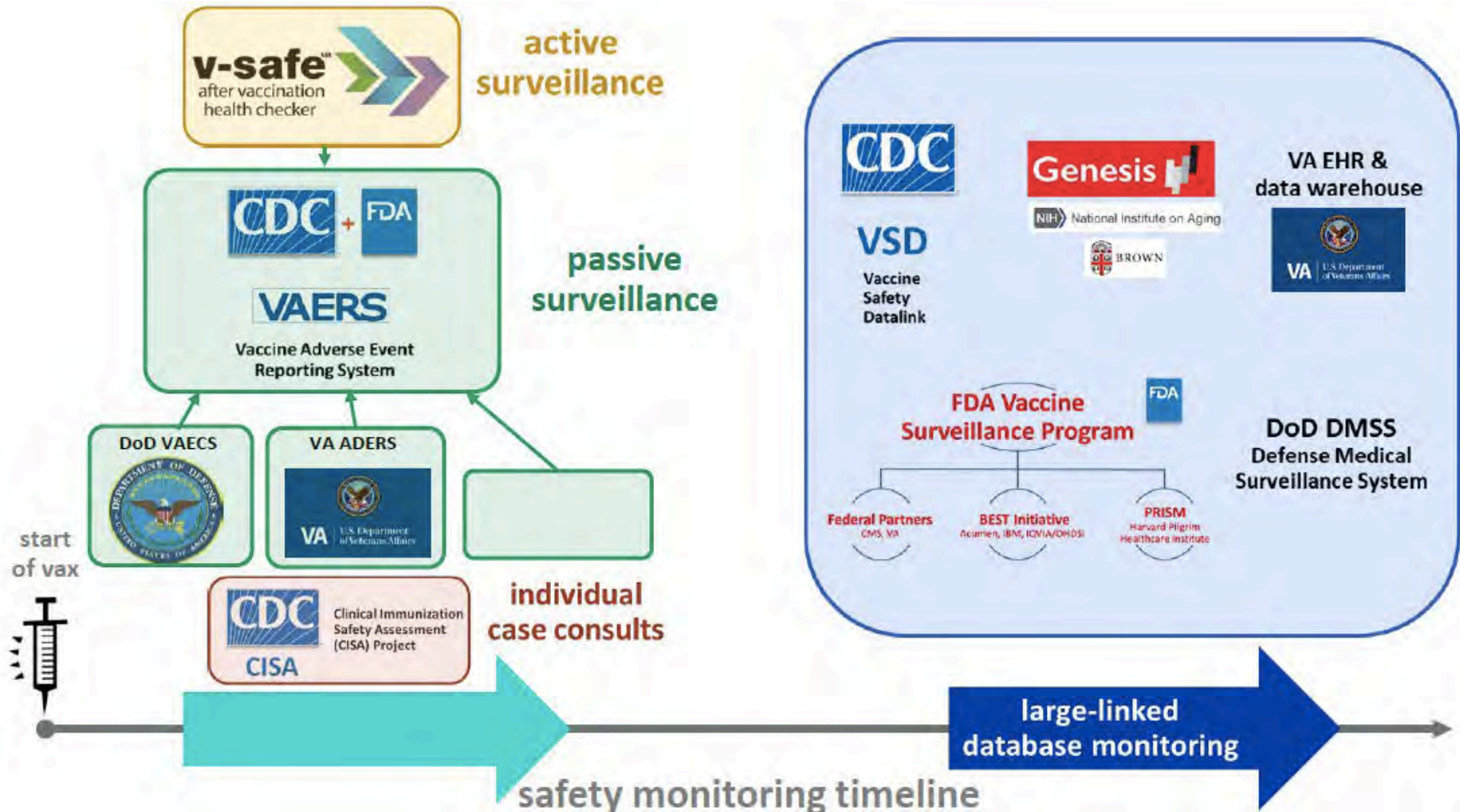
Vaccine Side Effects Compared

	 SHINGRIX (ZOSTER VACCINE RECOMBINANT, ADJUVANTED) Shingrix	 COVID-19 BNT162b2	 Flu	 Placebo (saline)
Local Pain	78%	83%	45%	14%
Redness	38%	5%	13%	1%
Swelling	26%	6%	4%	1%
Myalgia	45%	21%	15%	11%
Fatigue	45%	47%	18%	33%
Headache	38%	42%	19%	34%
Chills	27%	14%	6%	6%
Fever	21%	4%	1%	1%
GI Symptoms	17%	11%	7%	12%
Overall	38% 	26% 	14% 	13%

Comparing Pfizer and Moderna Vaccines



Post-Vaccine Safety Surveillance



V-safe | After Vaccination Health Tracker

- Give patients a **v-safe** information sheet at the time of vaccination
- Encourage them to enroll and fill out the surveys when prompted

<https://vsafe.cdc.gov/>



v-safe info poster

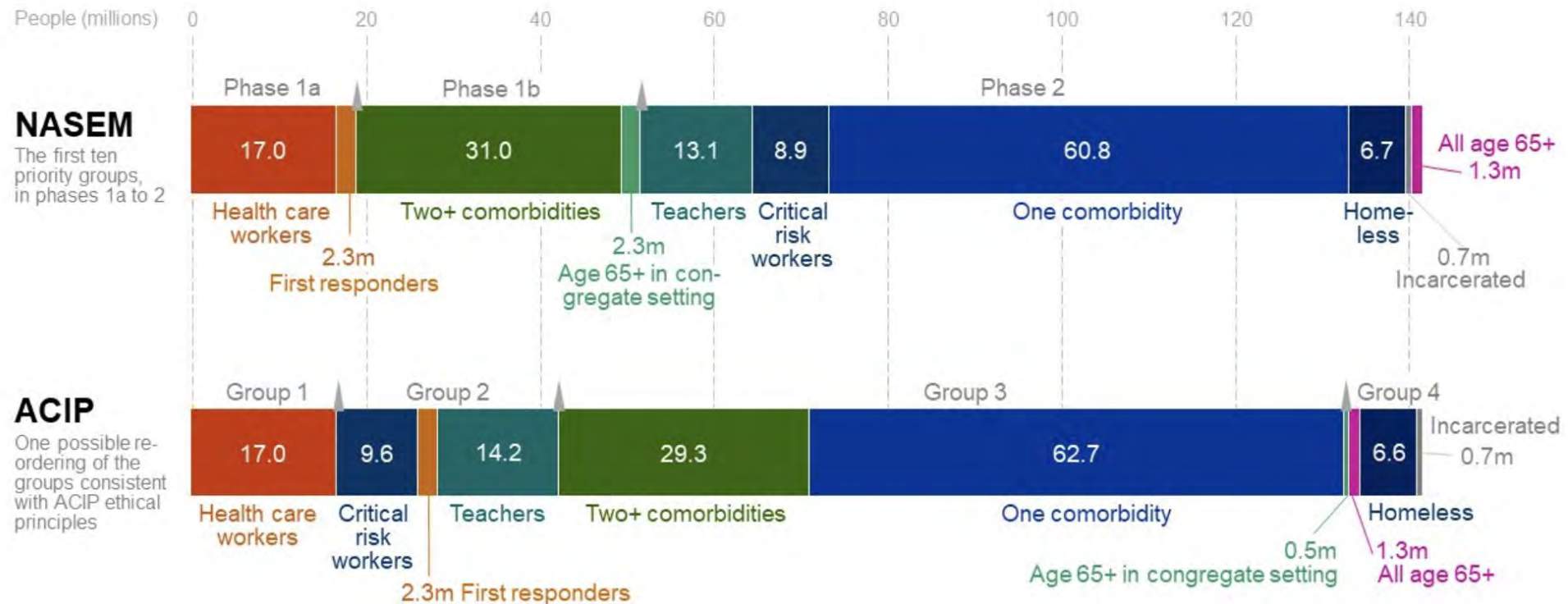


v-safe info sheets

How Many People in the US Are in the Higher Priority Groups?

Vaccine prioritization under NASEM and ACIP priorities

Ordering of vaccination among 144.1 million people in the first 10 NASEM priority groups, accounting for overlap



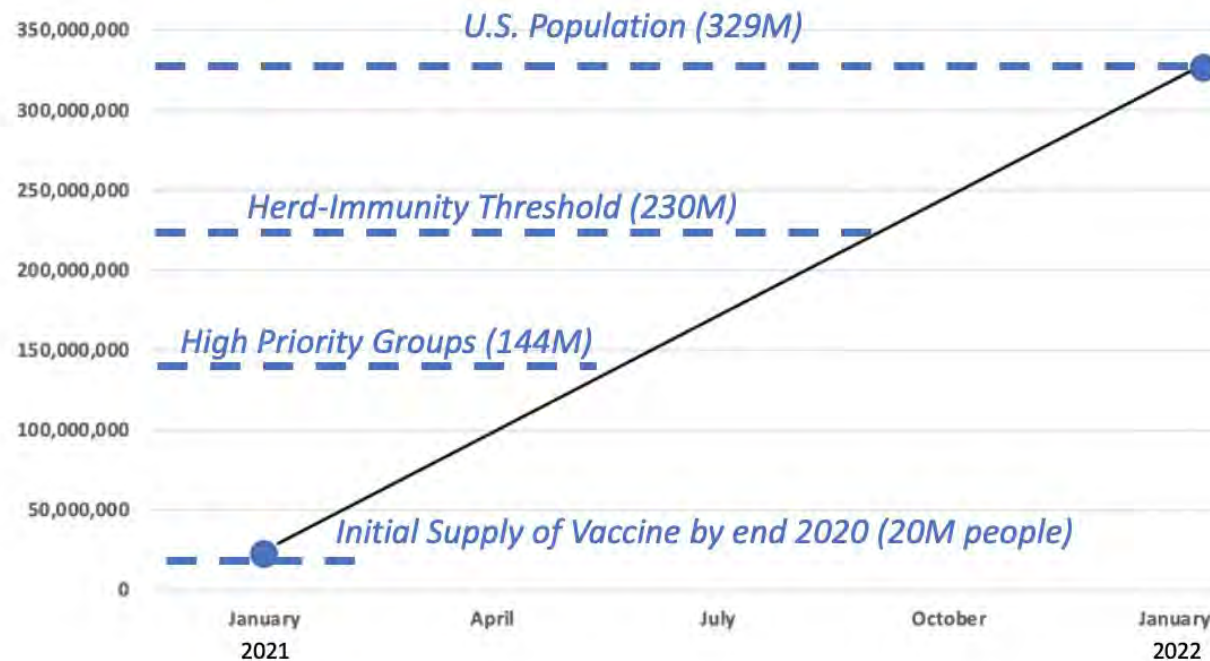
Group sizes vary across the two orderings because they exclude overlaps with preceding groups.

NASEM: Framework for Equitable Allocation of COVID-19 Vaccine. 2020. National Academies Press

ACIP: McClung et al. ACIP's Ethical Principles for Allocating Initial Supplies of COVID-19 Vaccine. MMWR 2020;69:1782-6

Theoretical Vaccine Distribution Timeline

U.S. Vaccine Availability and Eligible Groups



Some Useful Numbers to Gauge Vaccine Timing (Ariadne estimates)

- Healthcare workers & first responders: 19.3M
- Patients with one or more comorbidities: 92M
- Patients over 65 with no comorbidities: 1.3M
- Over 65 in congregate settings: 2.3M
- Essential workers not fitting other categories: 22M
- Homeless: 6.7M
- Incarcerated: 0.7M

Total: ~144M

Number of people in U.S.: 329M

Herd immunity threshold (~70% of total population): 230M



ERIN FRANCIS-CUMMINGS

President and CEO
Destination Analysts



CORONAVIRUS TRAVEL SENTIMENT INDEX REPORT

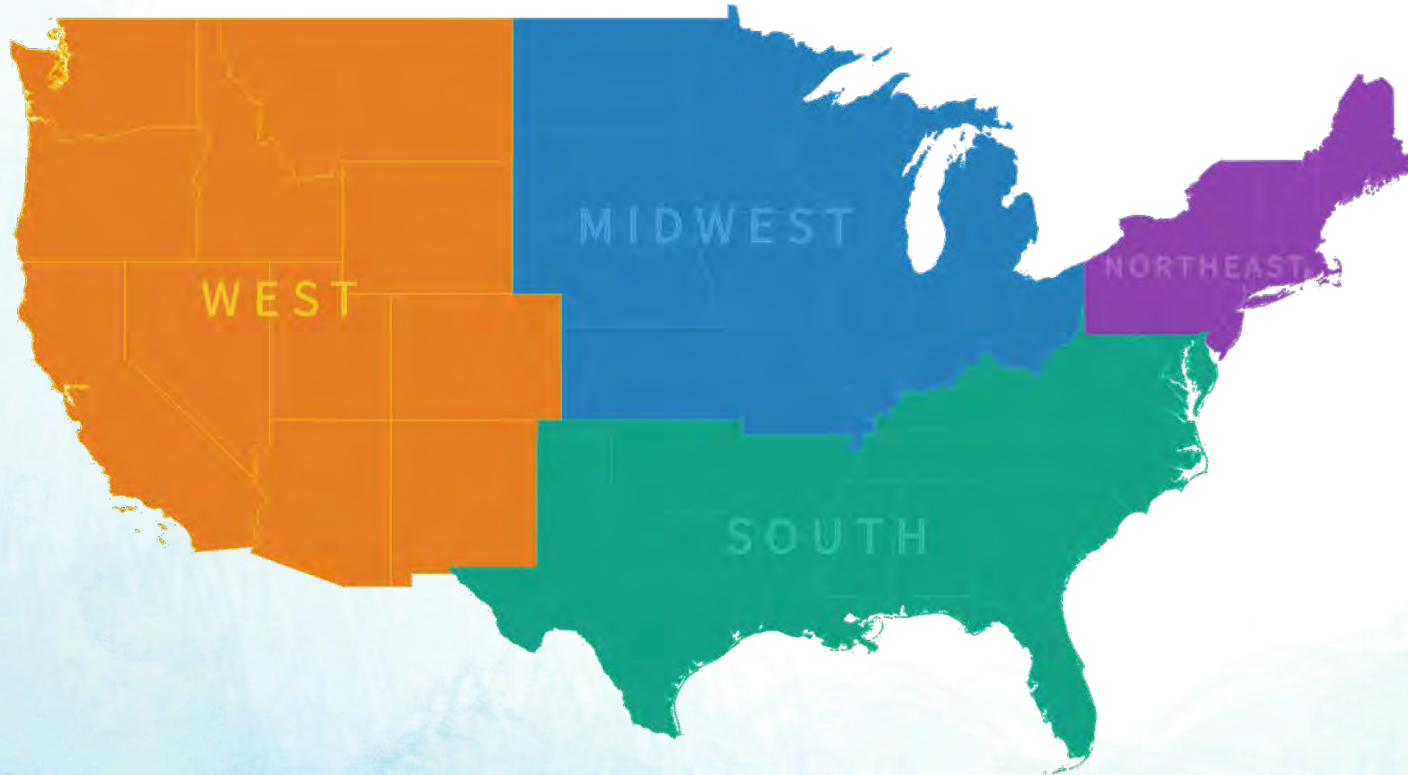
*Highlights on COVID-19 Vaccines
Impact on Travel Sentiment
January 21st, 2021*

Destination  Analysts



Destination  Analysts

METHODOLOGY



- **Weekly tracking survey of a representative sample of adult American travelers in each of four U.S. regions**
- **Designed to track traveler sentiment and generate insights into when tourism businesses can expect demand to return and from whom**
- **Week 45 data (fielded January 15-17) will be presented today**
- **1,200+ fully completed surveys collected each wave**
- **Confidence interval of +/- 2.8%**
- **Data is weighted to reflect the actual population of each region**



A LOOK BACK ON 2020:

***What One Word Best Describes
How You Feel about Travel?***



Feelings About Travel: Historical Perspective

Marc



April



October

May



Question: What ONE WORD best describes how you feel about travel right now?



***What ONE WORD
best describes how
you feel about
travel in 2021?***



Newsweek

59% of Americans Say Vaccine Rollout Happening Too Slowly in Their State: Poll

Nicole Fallert · 5 hrs ago



A majority of Americans feel their state is moving too slowly in distributing the COVID-19 vaccine, according to a poll released Sunday. Conducted from January 13 to 16, the survey from CBS News and YouGov also suggests that most Americans haven't received helpful explanations as to why their state's rollouts are taking so long.



© Joe Raedle/Getty Images Most Americans feel the COVID-19 vaccine rollout has been too slow in their state. A healthcare worker with American Medical Response, Inc working with the Florida Department of Health in Broward administers a Pfizer-BioNtech COVID-19 vaccine at the John Knox Village Continuing Care Retirement Community on January 6, 2021 in Pompano Beach, Florida. The community administered the 2nd vaccine to 90 skilled nursing residents and 80 healthcare staff completing the inoculation for them. An additional 50 healthcare staff received their first dose of the vaccine.

The COVID-19 vaccines from Pfizer and Moderna were both approved for emergency use authorization by the U.S. Food and Drug Administration last month. But as of Saturday, only about 10.6 million Americans have received a vaccine, according to the Centers for Disease Control and Prevention. As of Sunday, there are 23 million reported COVID-19 cases in the U.S., according to data from Johns Hopkins University, and the nation is nearing 400,000 deaths.

PERSONAL HEALTH CONCERNS

MARCH 13, 2020 – JANUARY 17, 2021



CONCERNED ABOUT PERSONAL HEALTH (AVERAGE SCORE ON AN 11-POINT SCALE)



QUESTION: THINKING ABOUT THE CURRENT CORONAVIRUS SITUATION, IN GENERAL, HOW CONCERNED ARE YOU PERSONALLY ABOUT CONTRACTING THE VIRUS?

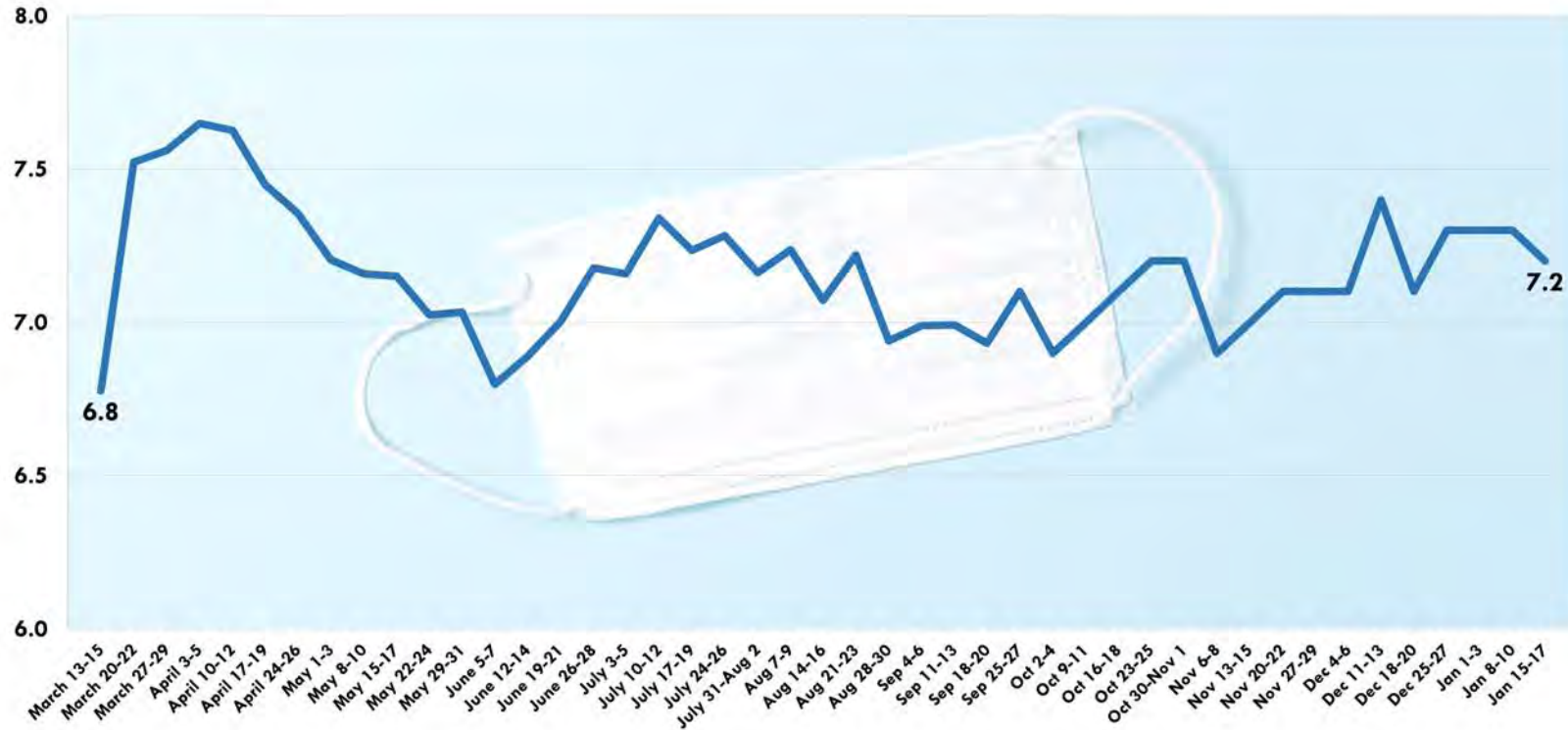
(Base: Waves 1-45. All respondents, 1,201, 1,200, 1,201, 1,216, 1,263, 1,238, 1,208, 1,204, 1,200, 1,212, 1,223, 1,257, 1,214, 1,214, 1,205, 1,231, 1,365, 1,213, 1,200, 1,206, 1,224, 1,201, 1,202, 1,207, 1,250, 1,225, 1,205, 1,200, 1,205, 1,203, 1,203, 1,204, 1,203, 1,203, 1,203, 1,205, 1,206, 1,205, 1,205, 1,204, 1,206, 1,201, 1,207, 1,206, 1,225 and 1,205 completed surveys.)

HEALTH CONCERNS (FAMILY & FRIENDS)

MARCH 13, 2020 – JANUARY 17, 2021



CONCERNED ABOUT THE HEALTH OF FAMILY OR FRIENDS
(AVERAGE SCORE ON AN 11-POINT SCALE)



QUESTION: THINKING ABOUT THE CURRENT CORONAVIRUS SITUATION, IN GENERAL, HOW CONCERNED ARE YOU ABOUT YOUR FRIENDS OR FAMILY CONTRACTING THE VIRUS?

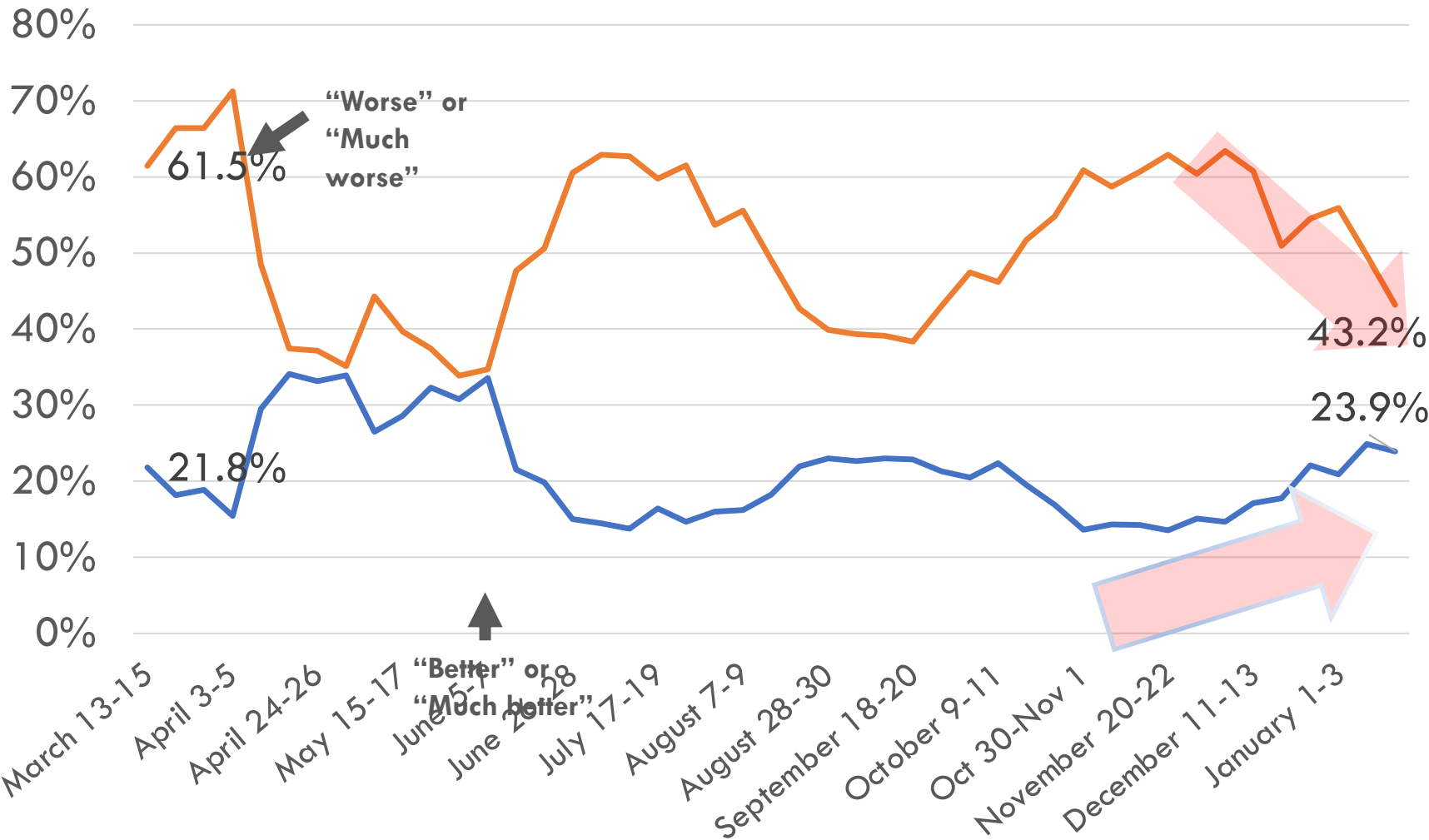
(Base: Waves 1-45. All respondents, 1,201, 1,200, 1,201, 1,216, 1,263, 1,238, 1,208, 1,204, 1,200, 1,212, 1,223, 1,257, 1,214, 1,214, 1,205, 1,231, 1,365, 1,213, 1,200, 1,206, 1,224, 1,201, 1,202, 1,207, 1,250, 1,225, 1,205, 1,200, 1,205, 1,203, 1,203, 1,204, 1,203, 1,203, 1,205, 1,206, 1,205, 1,205, 1,204, 1,206, 1,201, 1,207, 1,206, 1,225 and 1,205 completed surveys.)

EXPECTATIONS FOR THE CORONAVIRUS OUTBREAK (WAVES 1-45)

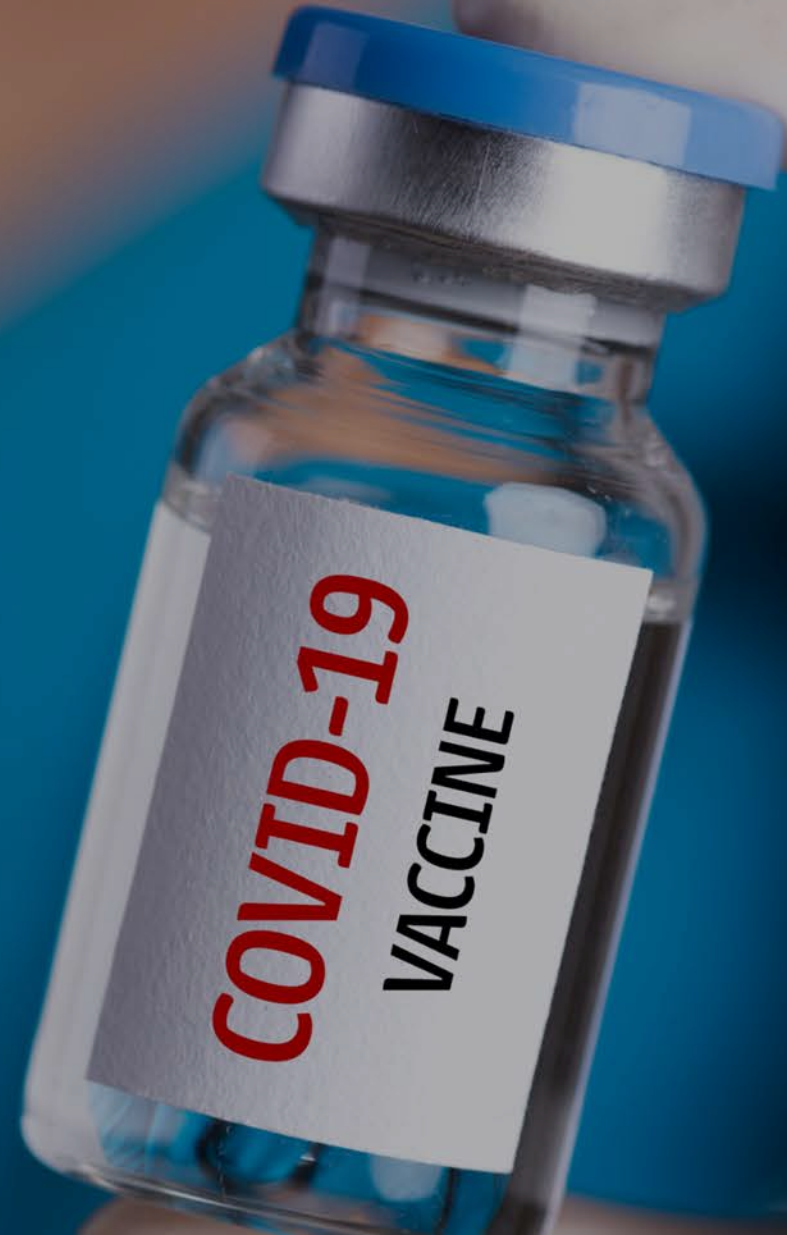
Question: In the NEXT MONTH, how (if at all) do you expect the severity of the coronavirus situation in the United States to change?

In the next month the coronavirus situation will _____

(Base: Waves 1-45. All respondents, 1,201, 1,200, 1,201, 1,216, 1,263, 1,238, 1,208, 1,204, 1,200, 1,212, 1,223, 1,257, 1,214, 1,214, 1,205, 1,231, 1,365, 1,213, 1,200, 1,206, 1,224, 1,201, 1,202, 1,207, 1,250, 1,225, 1,205, 1,200, 1,205, 1,203, 1,203, 1,204, 1,203, 1,203, 1,205, 1,206, 1,205, 1,205, 1,204, 1,206, 1,201, 1,207, 1,206, 1,225 and 1,205 completed surveys.)



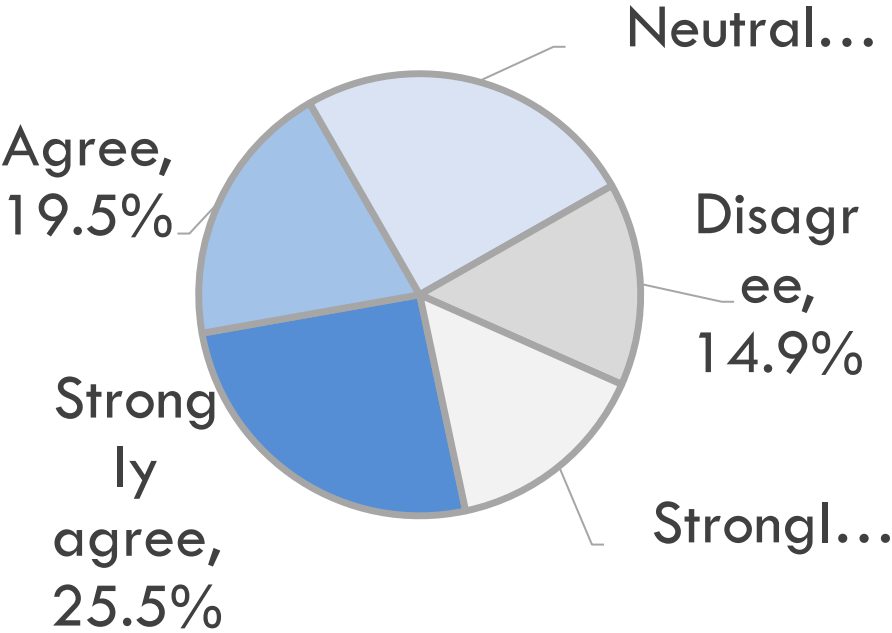
FEELINGS ABOUT A COVID-19 VACCINE



TRAVEL UNTIL GETTING THE VACCINE

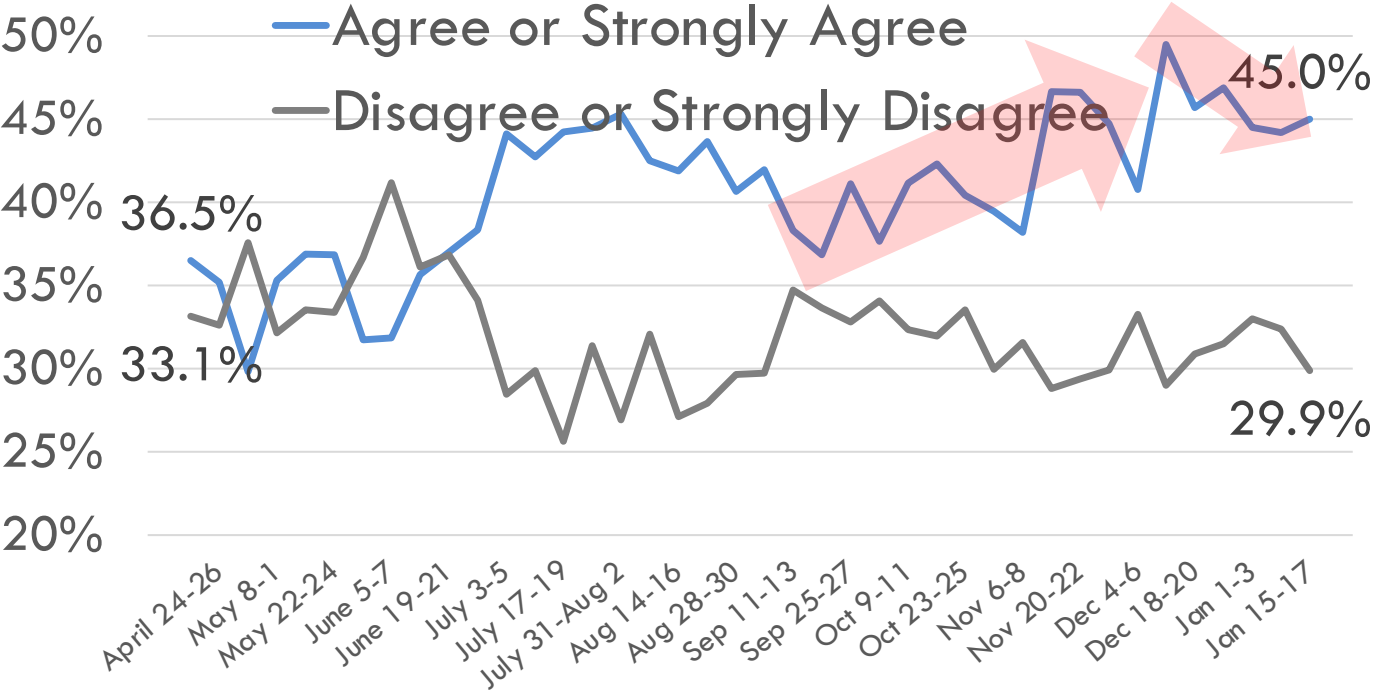
How much do you agree with the following statement?

Statement: I'm not traveling until I am able to get a vaccine.



(Base: Waves 6-45. All respondents, 1,238, 1,208, 1,204, 1,200, 1,212, 1,223, 1,257, 1,214, 1,214, 1,205, 1,231, 1,365, 1,213, 1,200, 1,206, 1,224, 1,201, 1,202, 1,207, 1,250, 1,225, 1,205, 1,200, 1,205, 1,203, 1,203, 1,204, 1,203, 1,203, 1,205, 1,206, 1,205, 1,205, 1,204, 1,206, 1,201, 1,207, 1,206, 1,225 and 1,205 completed surveys.)

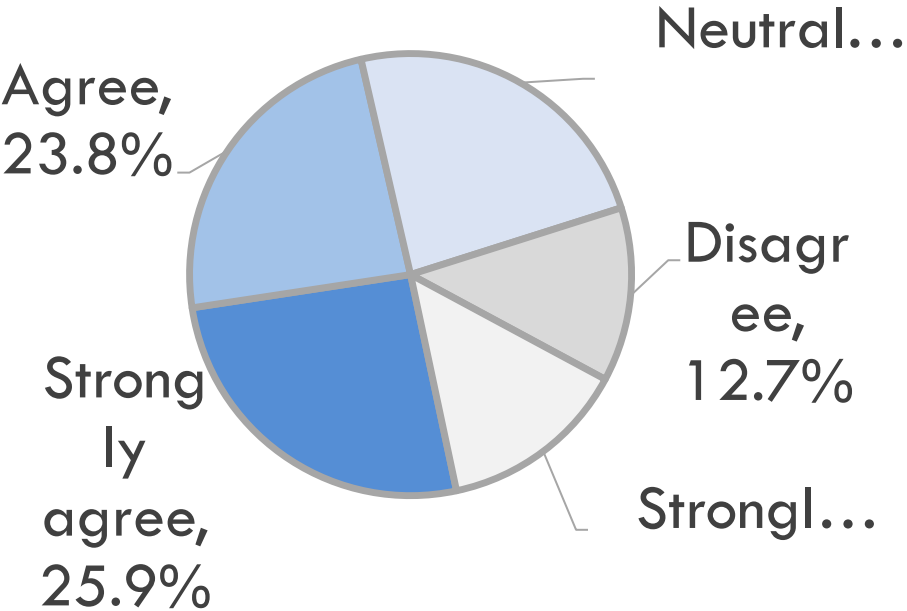
Historical data



TRAVEL UNTIL VACCINES ARE MADE WIDELY AVAILABLE

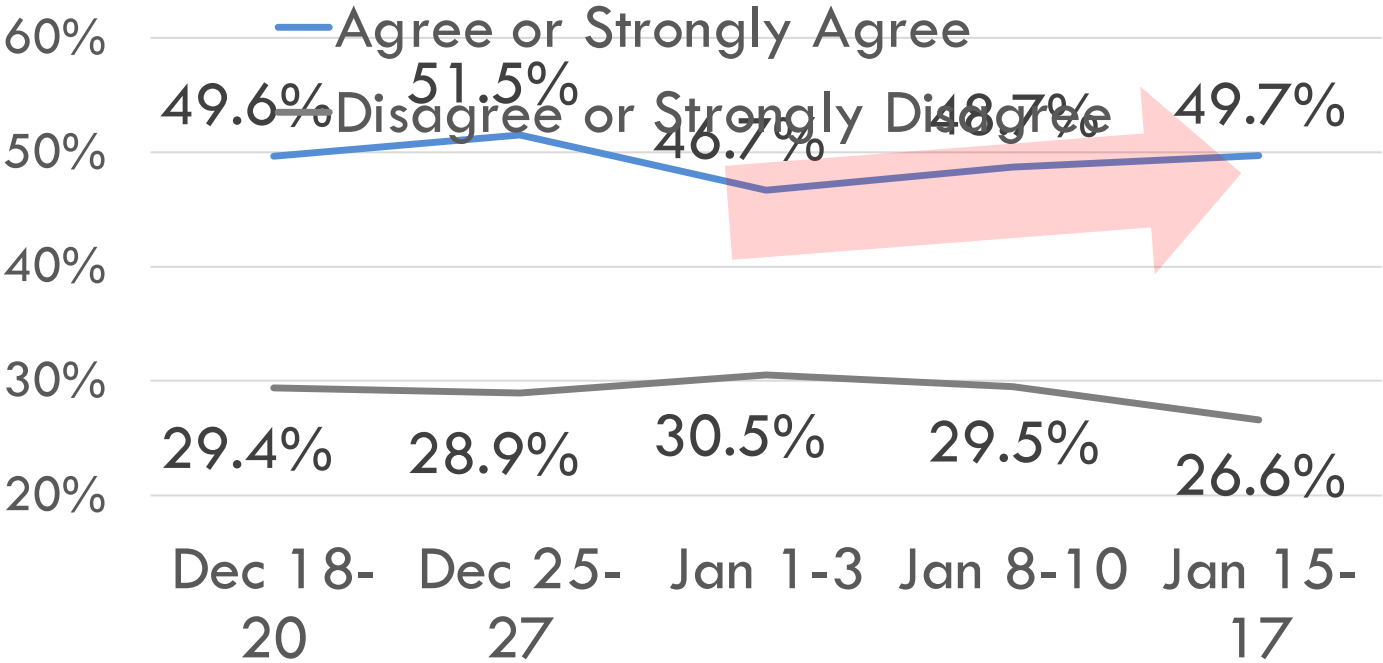
How much do you agree with the following statement?

Statement: I'm not traveling until vaccines are made widely available.



(Base: Waves 41-45. All respondents, 1,201, 1,207, 1,206, 1,225 and 1,205 completed surveys.)

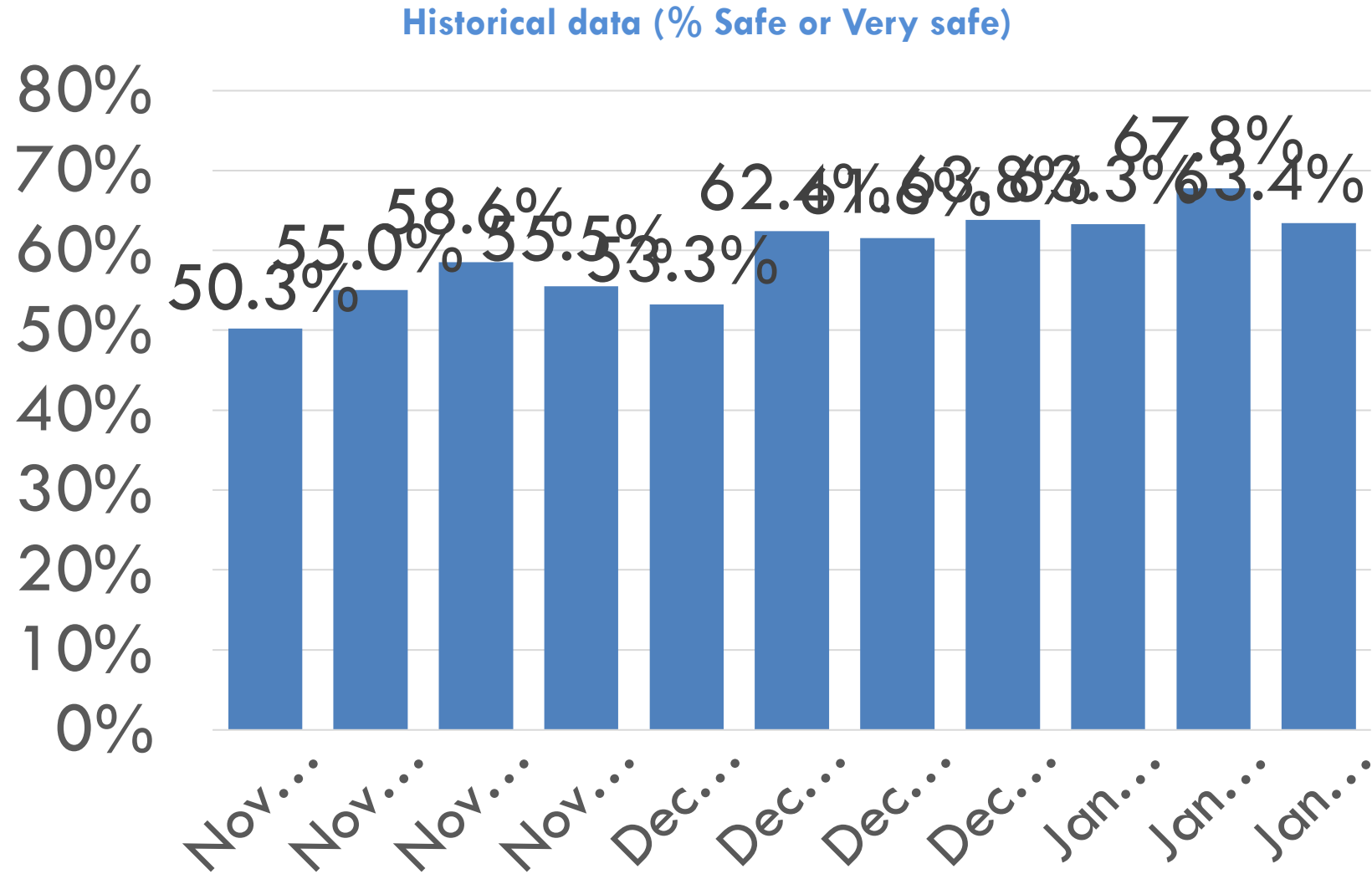
Historical data



EXPECTED SAFETY OF COVID-19 VACCINES

Question: How safe do you expect a COVID-19 vaccine will ultimately be? (Select one)

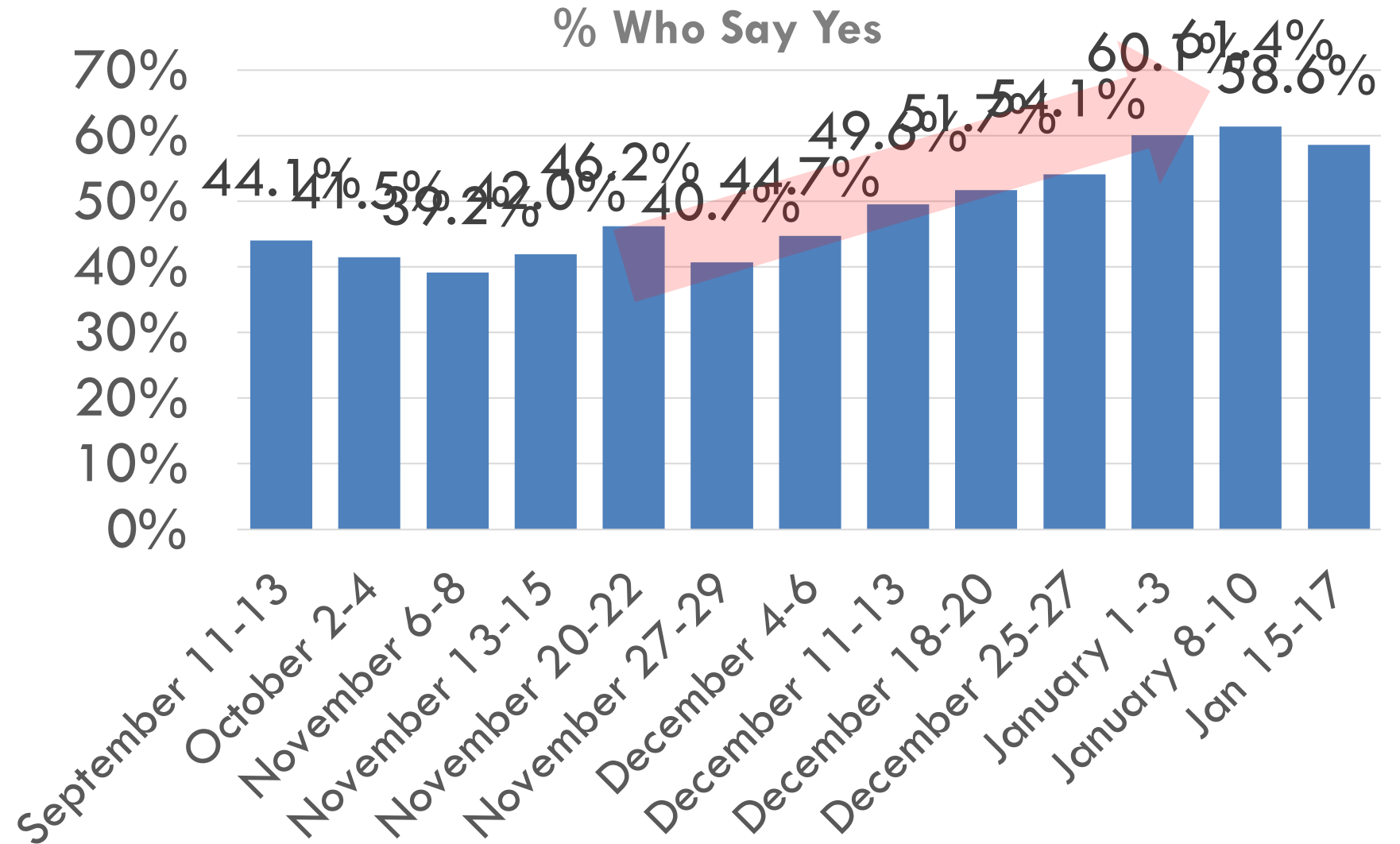
(Base: Waves 45 data. All respondents, 1,205 completed surveys. Data collected Jan 15-17, 2021)



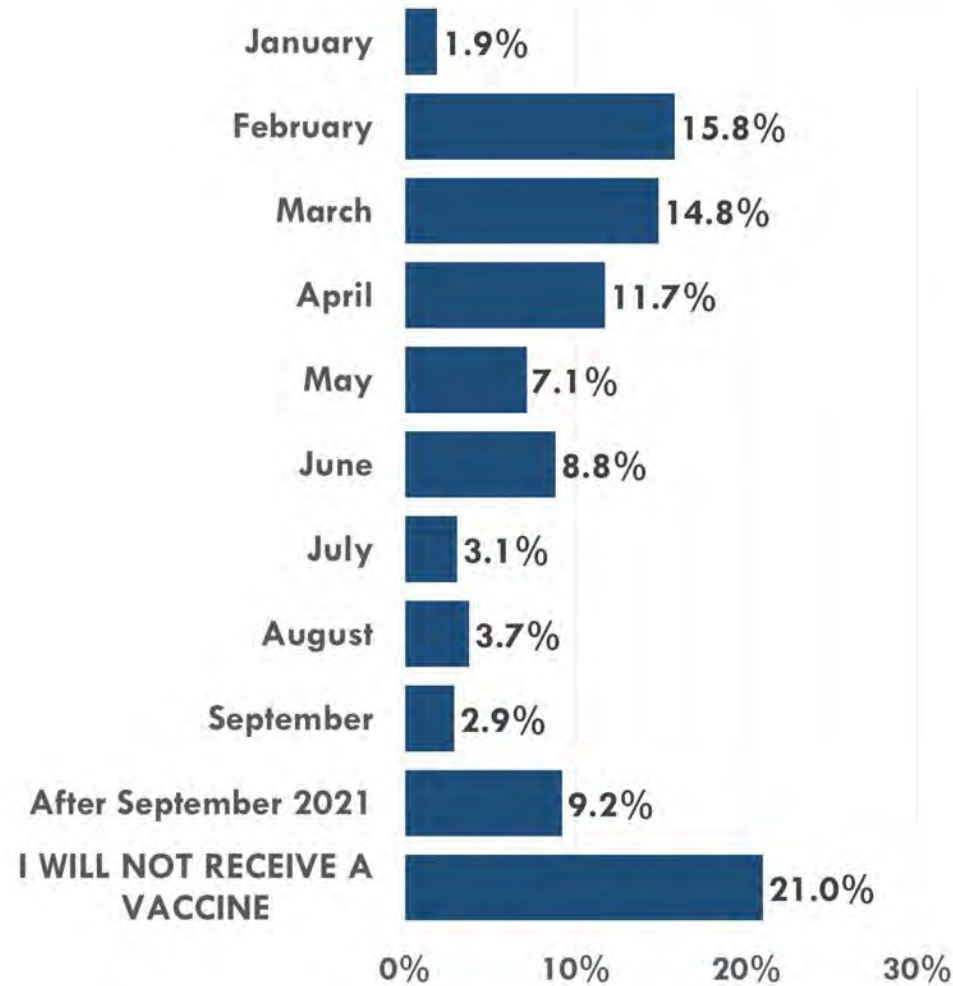
EXPECTATIONS TO TAKE A COVID-19 VACCINE

Question: Do you expect that you will take one of the recently developed COVID-19 vaccines?

(Base: Waves 45 data. All respondents, 1,205 completed surveys. Data collected Jan 15-17, 2021)



WHEN AMERICAN TRAVELERS EXPECT TO BE VACCINATED AS OF JANUARY 17TH



EXPECTED VACCINATION BY JUNE 2021

BY GENERATION:

Millennials/Gen Z: 52.7%
Gen X: 56.5%
Boomers: 68.6%

BY REGION:

West: 66.9%
Midwest: 61.3%
Northeast: 62.8%
South: 54.3%

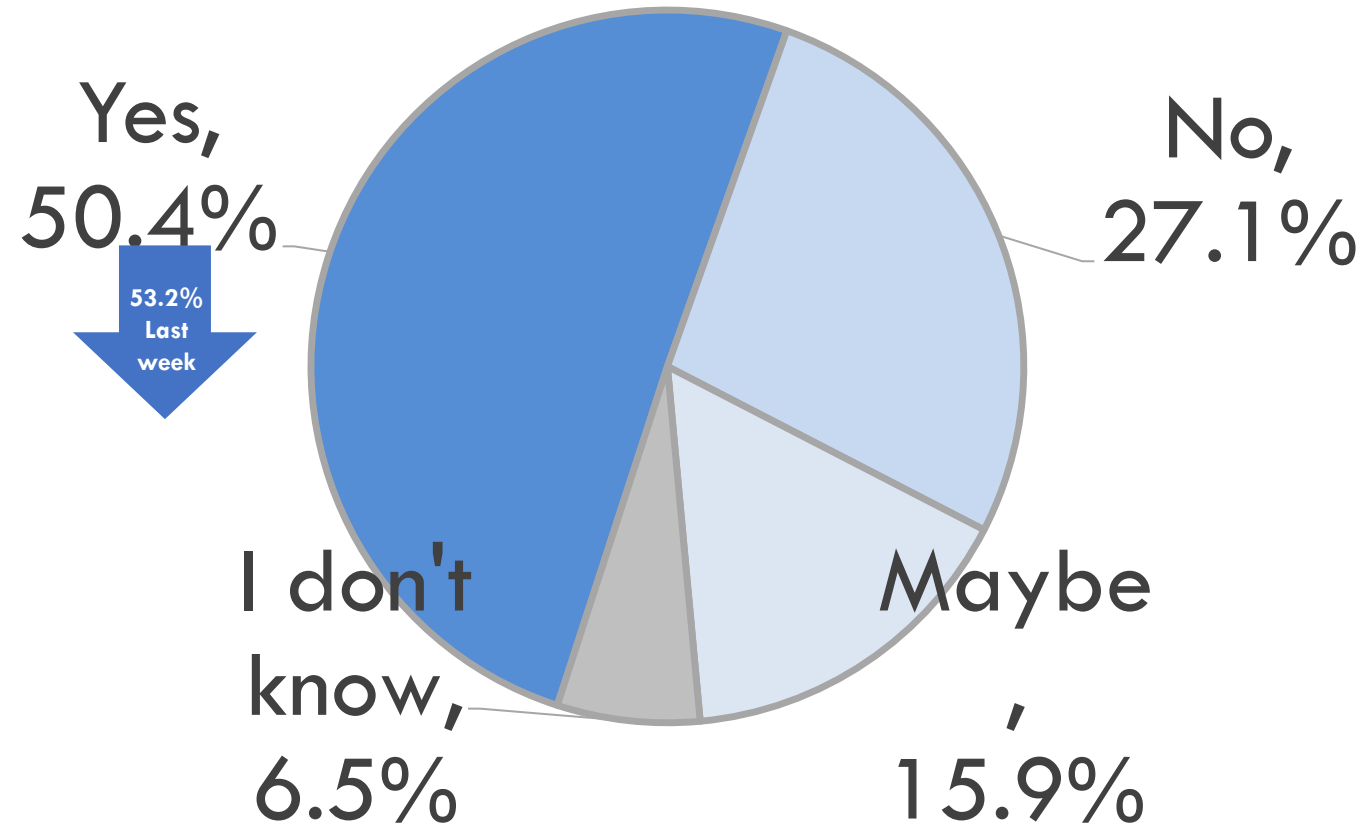
QUESTION: GIVEN WHAT YOU KNOW NOW, IN WHICH MONTH DO YOU EXPECT TO RECEIVE A VACCINE? (SELECT ONE)

(IF YOU ARE UNCERTAIN, SELECT THE MONTH YOU THINK IT IS MOST LIKELY YOU WILL GET A VACCINATION)

VACCINES FOR CHILDREN

Question: Will you have your children take a COVID-19 vaccine? (Select one)

(Base: Wave 45 data. Respondents with school-aged children, 441 completed surveys. Data collected Jan 15-17, 2021)

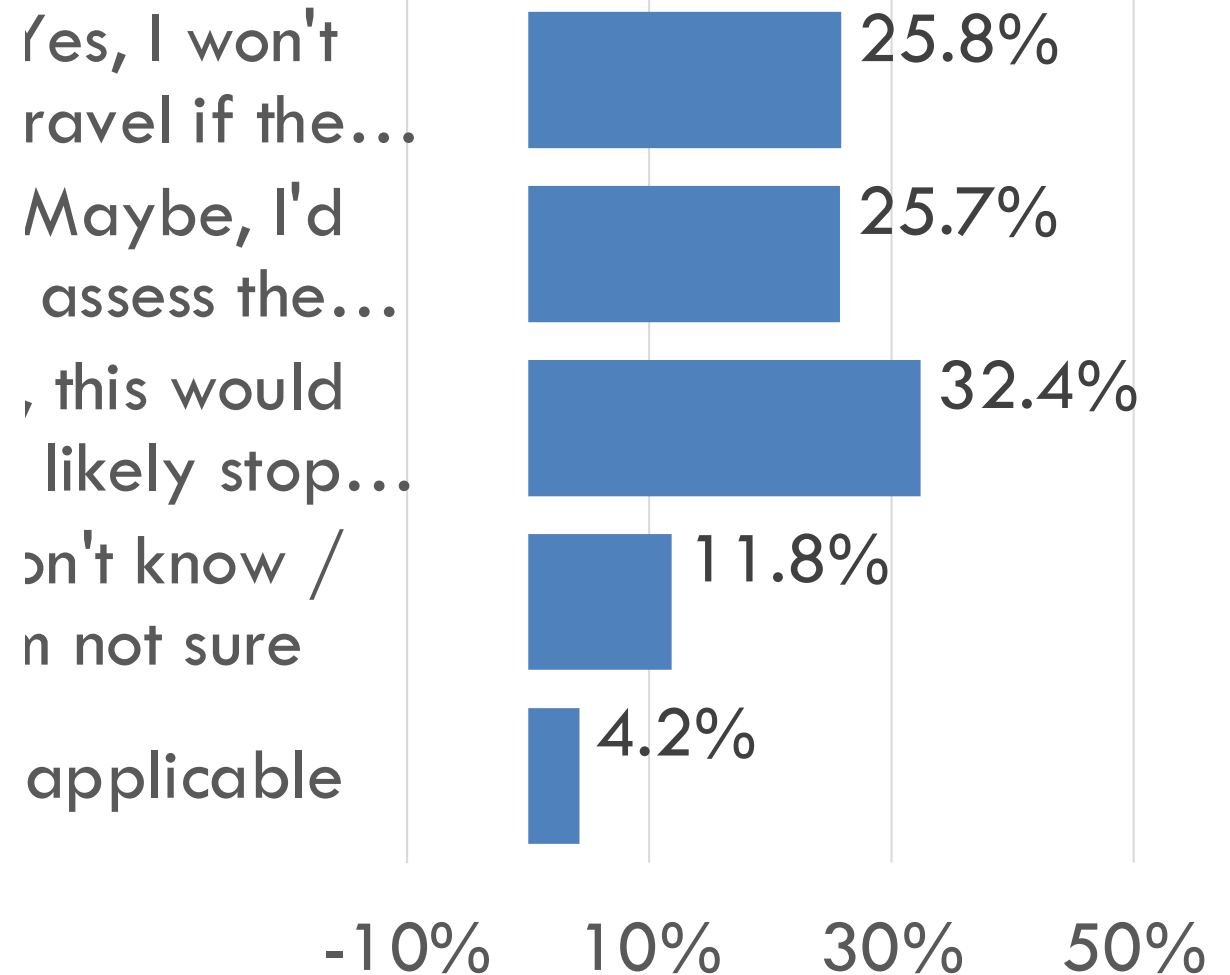


SUMMER TRAVEL & CHILDREN'S VACCINATION

Question: Please think now about your family travels NEXT SUMMER. Imagine that by next summer COVID-19 vaccinations have been widely distributed amongst adults, but children have not yet been widely vaccinated. Your children have not yet been vaccinated.

Would this situation be likely to stop you from taking a family vacation next summer? (Select one that best describes you)

(Base: Wave 39 data. Respondents with school age children they travel with, 353 completed surveys. Data collected December 4-6, 2020)



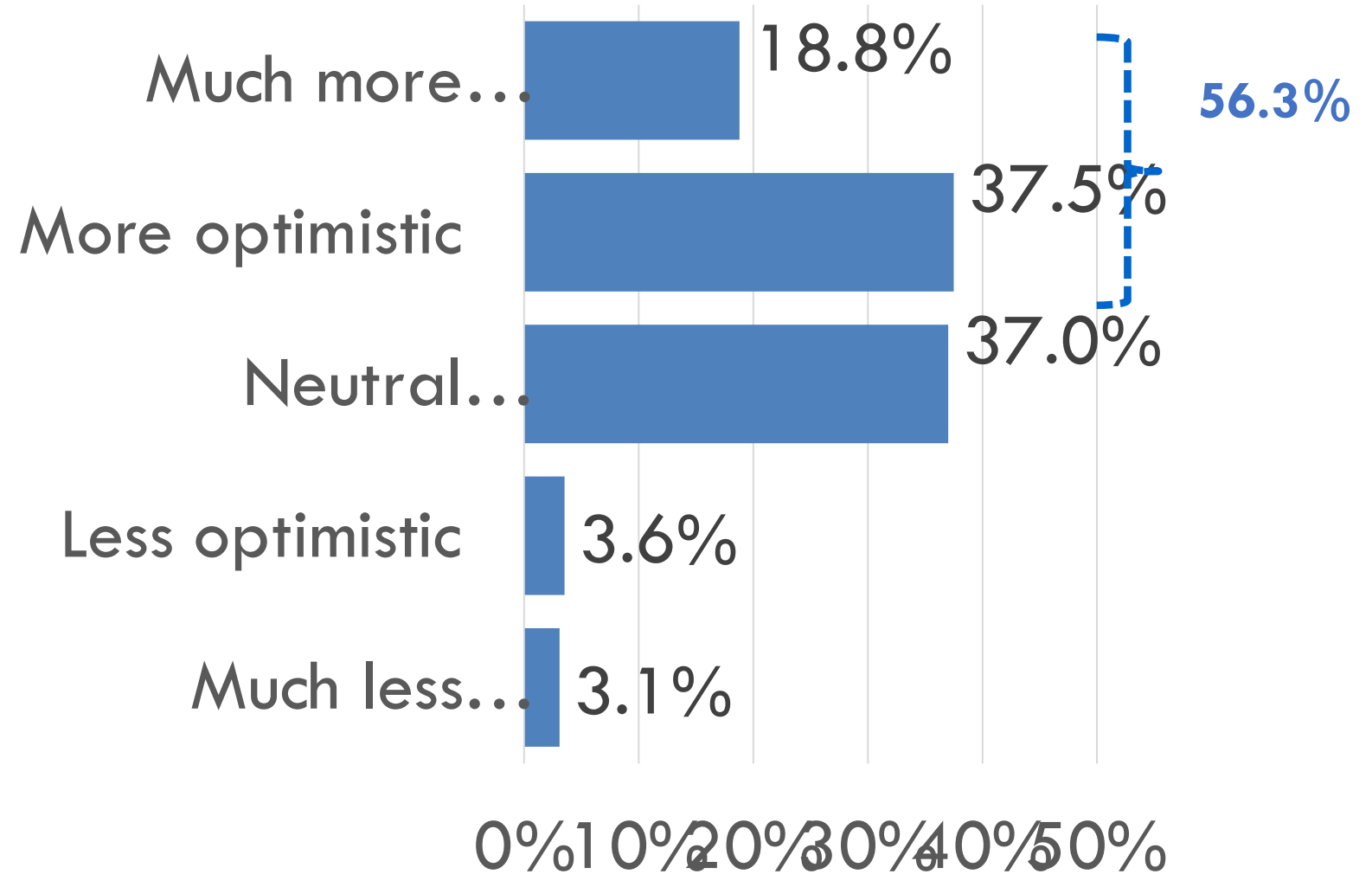
VACCINES AND OPTIMISM FOR A RETURN TO NORMAL

Question: Does recent news about vaccine developments affect your optimism about life returning to normal (or near normal) in the next SIX (6) MONTHS? (Select one to fill in the blank)

The vaccine news has made me

about life returning to normal (or near normal) in the next six months.

(Base: Waves 45 data. All respondents, 1,205 completed surveys. Data collected Jan 15-17, 2021)



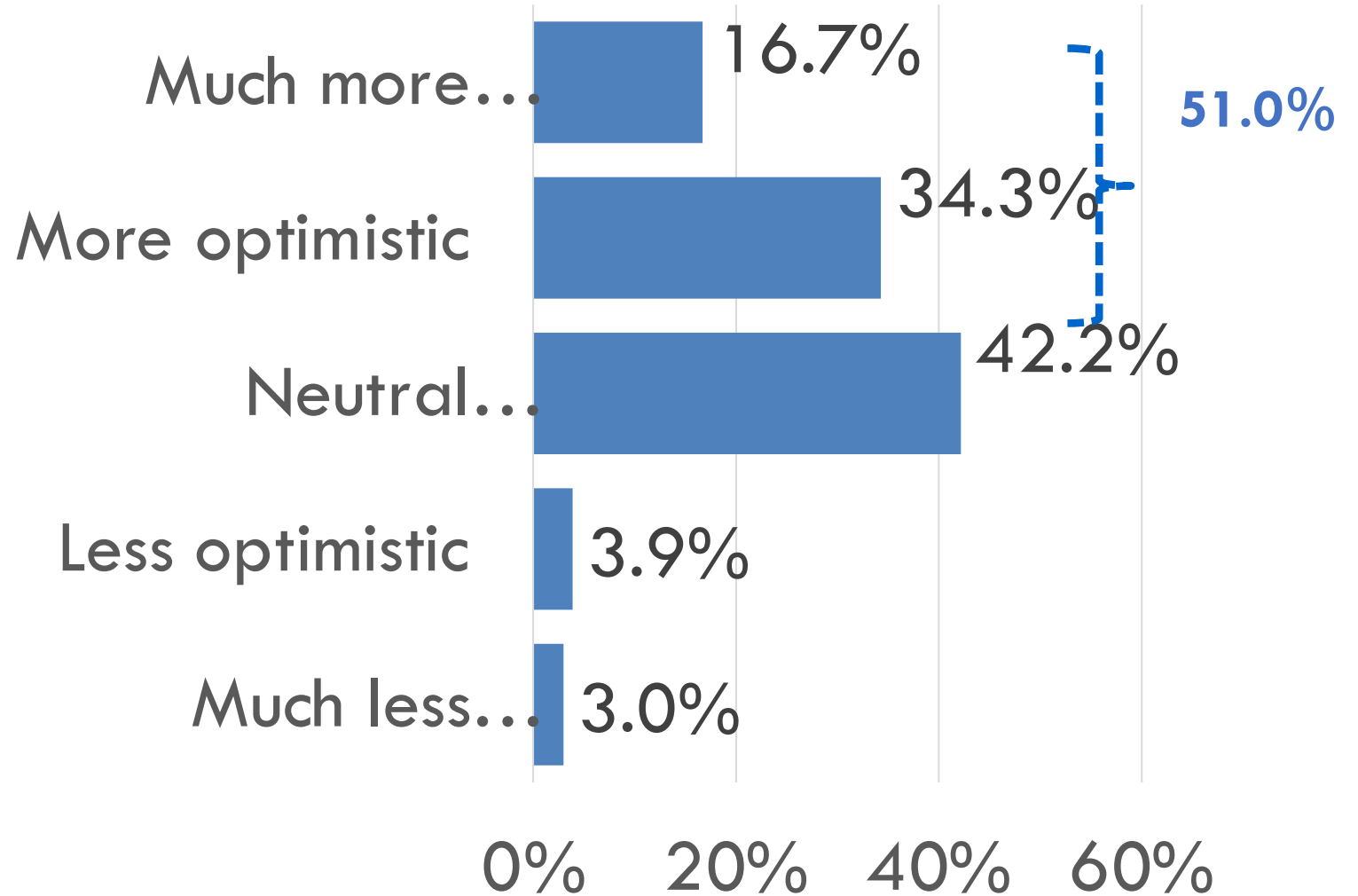
VACCINES AND OPTIMISM FOR SAFE TRAVEL

Question: Does recent news about vaccine developments affect your optimism about being able to travel safely in the next SIX (6) MONTHS? (Select one to fill in the blank)

The vaccine news has made me

about **BEING ABLE TO TRAVEL SAFELY** in the next six months.

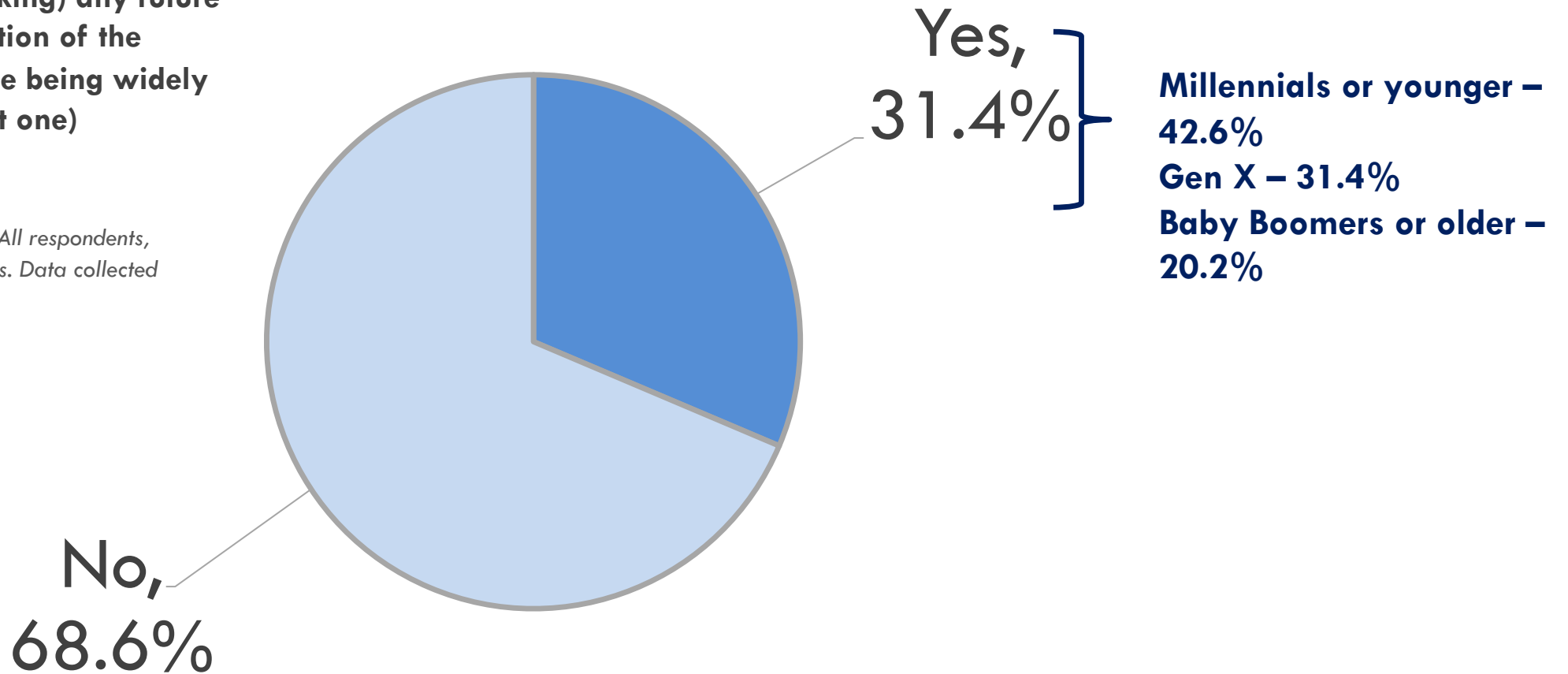
(Base: Waves 45 data. All respondents, 1,205 completed surveys. Data collected Jan 15-17, 2021)



TRAVEL PLANS DUE TO COVID-19 VACCINES

Question: Have you begun planning (or booking) any future travel in anticipation of the COVID-19 vaccine being widely available? (Select one)

(Base: Waves 45 data. All respondents, 1,205 completed surveys. Data collected Jan 15-17, 2021)

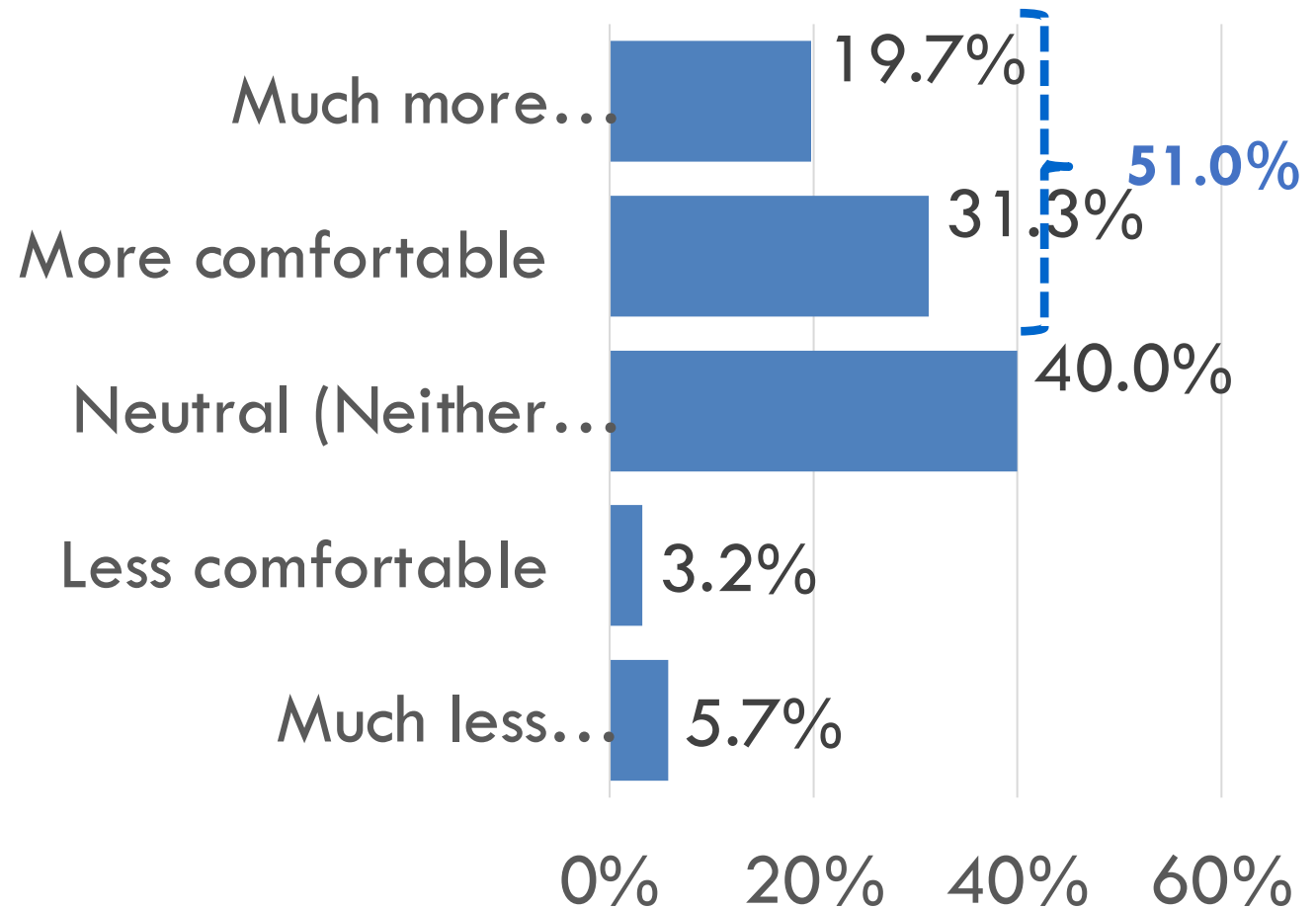


REQUIRED COVID-19 VACCINATIONS AND COMFORT ATTENDING

Question: If proof of having taken a vaccine is required of all attendees at a live event or festival, how would that affect your level of comfort in attending the event? (Select one to complete the sentence)

If all attendees were required to have taken a vaccine, I'd be _____ attending.

(Base: Waves 45 data. All respondents, 1,205 completed surveys. Data collected January 15-17, 2021)





KEY TAKEAWAYS

- Right now, 58.6 % of Americans expect to take a COVID-19 vaccine and the majority expect they will be inoculated by this June
- Older Americans are likeliest to feel the current COVID vaccines are safe and most willing to take one. Younger travelers, while not as likely as older travelers to take a vaccine, are likeliest to be planning travel in anticipation of vaccines being widely available
- Despite challenges, vaccine distribution is still driving optimism about a return to normal—and travel normal—in the next 6 months

FOLLOW US ON SOCIAL MEDIA FOR THE LATEST TRENDS



@Destination Analysts Research



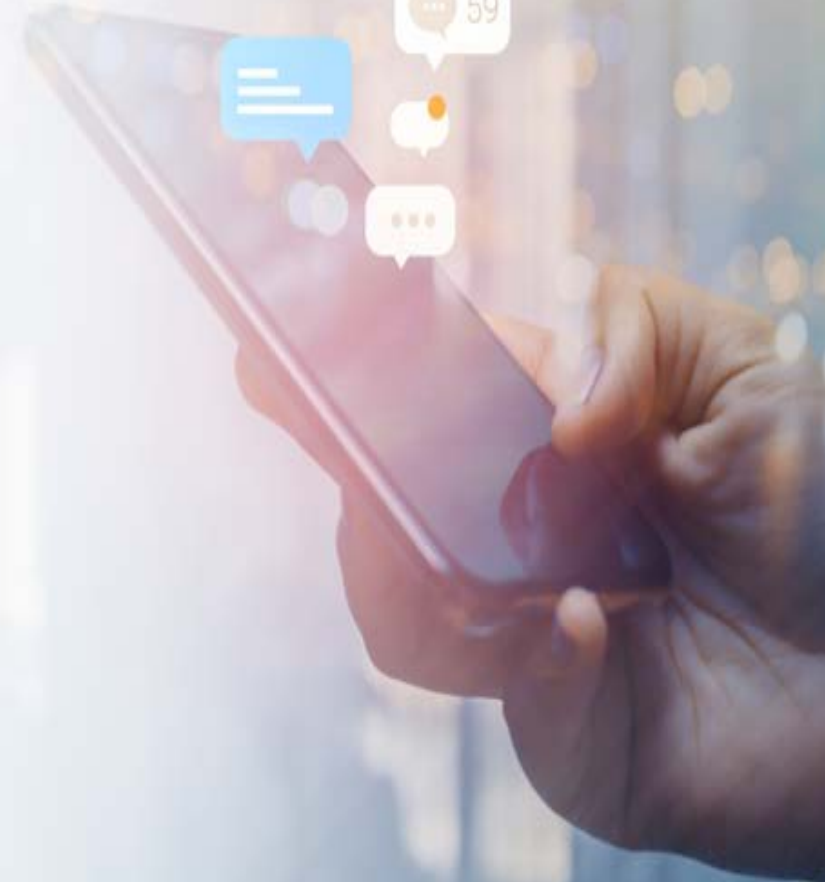
@Destination Analyst, Inc



@DestinationAnalysts



@DA_Research





THANK YOU



TORI EMERSON BARNES

**Executive Vice President,
Public Affairs and Policy
U.S. Travel Association**
