

COVID-19 vaccine update

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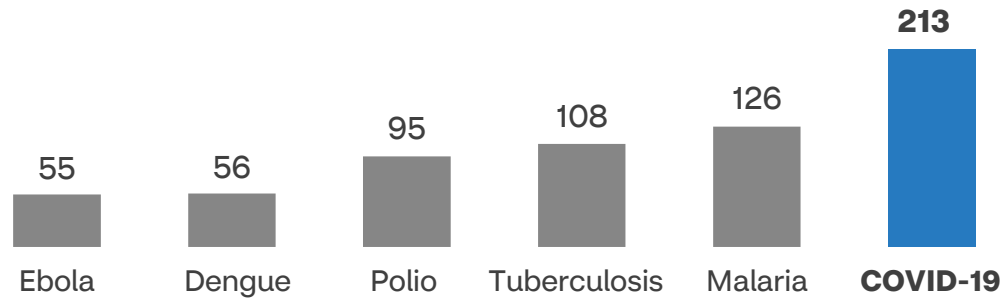
 **CVS**Health®



COVID-19 vaccine:

An unprecedented global response

Number of candidates in trials



Multiple vaccines will be available, each with different efficacy and safety profiles and eligible populations

Ensuring the right patients get the right vaccine at the right time will be critical as more candidates enter the market

Source: Candidates in trials ©2020 by Boston Consulting Group. All rights reserved. Updated 25 August 2020.
COVID-19 number – October 22, 2020: <https://covid-19tracker.milkeninstitute.org/>
The source for data in this presentation is CVS Health Enterprise Analytics unless otherwise noted.
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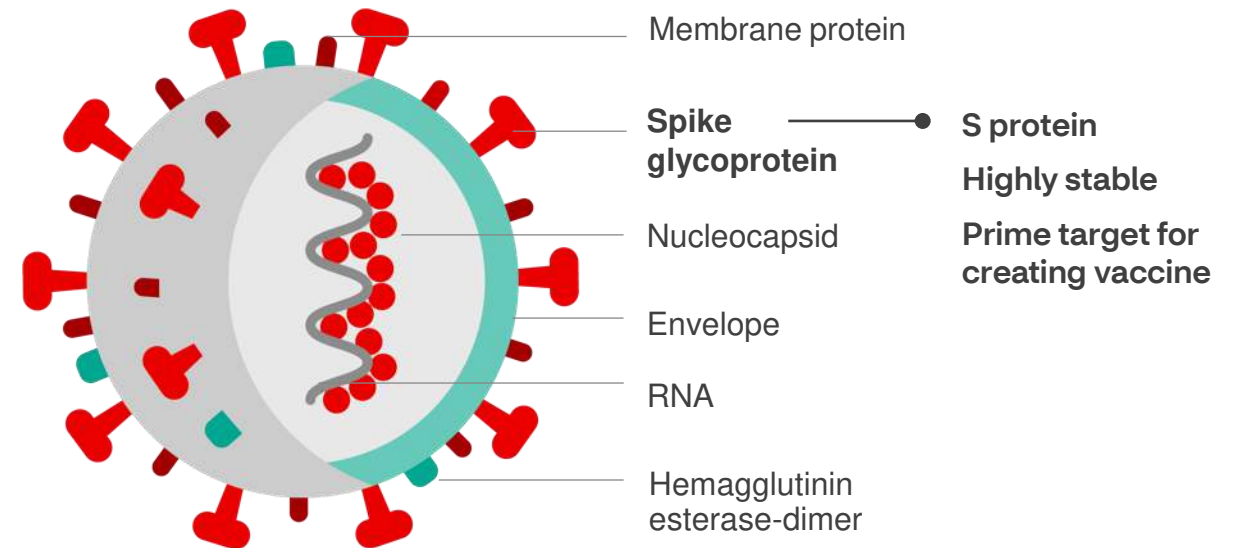
The goal of the COVID-19 vaccine

**To train the immune
system to identify
coronavirus**

and create an army
of memory cells that
provide immunity

There are several vaccine
technologies in play

SARS-CoV-2 Structure



Fast tracking the development of a COVID-19 vaccine



Head start

Initial step of exploratory vaccine design shortened due to data from SARS-CoV-1 and MERS CoV vaccine development



Government investment

Emergency authorities invoked to enable manufacturing to start alongside clinical trials



Pandemic recruitment

Ability to show efficacy quicker due to higher rate of infections, more participants



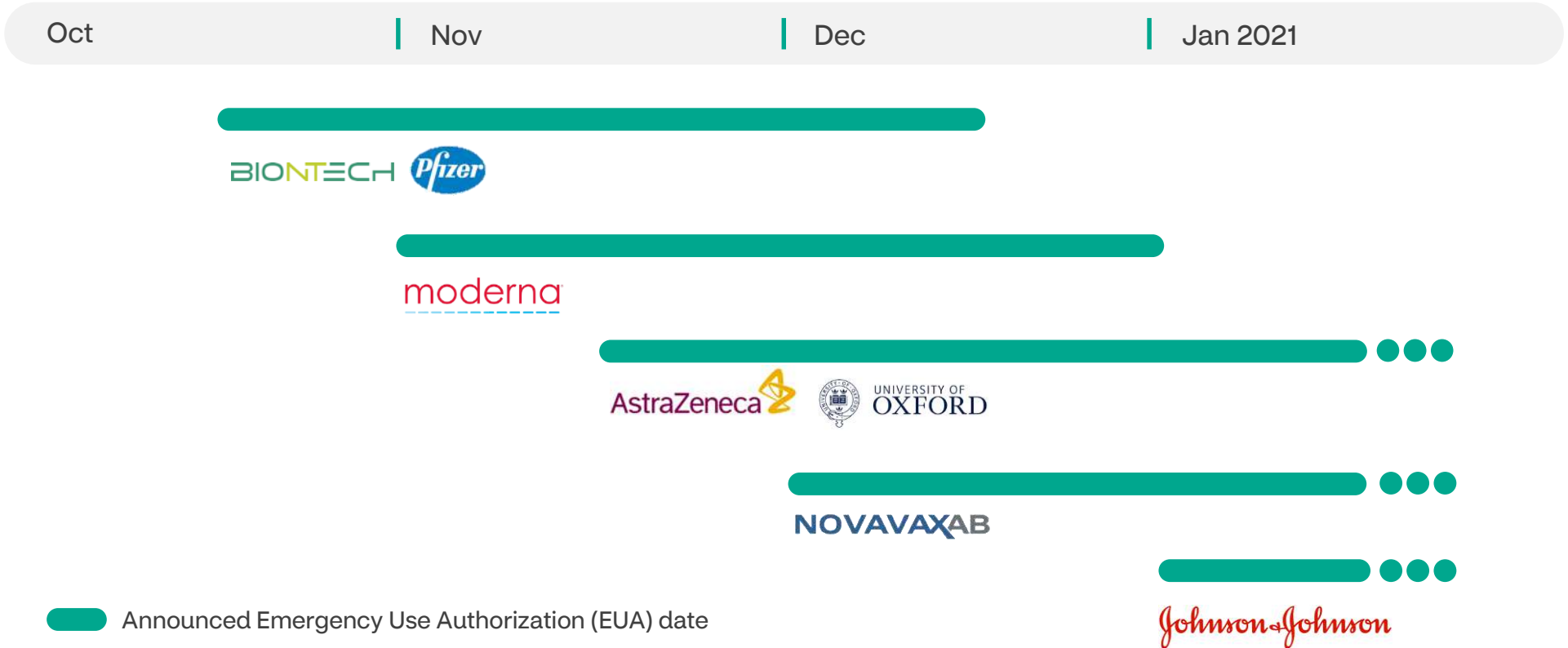
Cutting-edge approaches

New manufacturing technologies accelerating vaccine production

Nine leading vaccine candidates

with the potential for emergency use authorization by early 2021

Preclinical Phase I
or Phase II



Not comprehensive. Preliminary – Not meant to communicate clinical, legal, or regulatory advice.
Sources: BioCentury; ClinicalTrials.gov; Milken Institute COVID-19 Treatment and Vaccine Tracker.
<https://www.statnews.com/2020/10/12/johnson-johnson-covid-19-vaccine-study-paused-due-to-unexplained-illness-in-participant/>

Select evaluation criteria for COVID-19 vaccines



Efficacy



Safety



Age of vaccine
recipient



Route of administration



Distribution/storage
requirements



Dosing
frequency

Overview

Product name **BNT162b2**



Vaccine platform

mRNA



Route / frequency

2 doses, 21 days apart
(days 17-21)



Supply timeline

Distribution began
December 13, 2020
100M dose commitment,
~20M doses per month;
option for up to
500M additional



Storage

Frozen (-70° C±10° C)
for transport;
refrigerated (2-8° C)
at final site of
administration for
up to 5 days



Shelf-life (opened)

Post-dilution
use for **up to 6 hours**

Efficacy

Final efficacy analysis
demonstrated vaccine

95%
effective

Efficacy evaluated 7 days after second dose

Efficacy demonstrated protection 28 days after vaccine initiation

**162 cases in the placebo group versus
8 cases in the treatment group**

- Efficacy was consistent across age, gender, race and ethnicity demographics
- Observed efficacy in adults ≥ 65 years was $> 94\%$
- 10 severe COVID-19 infections, 9 of which were in the placebo group

Efficacy rate after first dose: **52.4%**

Efficacy for 12- to 15-year-old age group: **still pending**

Safety

Overall safe profile

reported in Phase III clinical trial

Adverse events similar
with other vaccines

The majority of adverse events were mild to moderate:

Depending on age events ranged:

Injection-site pain 66%-83%

Fatigue 34%-59%

Headache 25%-52%

Myalgia 14%-37%

Chills 6%-35%

Arthralgia 9%-22%

Fever 1%-16%

Other adverse events more common with vaccine:
appendicitis, Bell's palsy

Older adults had fewer and milder side effects
than younger participants

Grade 3 events \geq 2% of participants
included fatigue (3.7%) and headache (2%)

2 reports of anaphylactoid reactions in United Kingdom

Common questions and clinical considerations



Administration

Is one dose enough or do I need two?

What happens if I'm late for my second dose?

Do I need the same brand of vaccine for both doses?



Special populations

Can immunocompromised people be vaccinated?

Can someone pregnant or breastfeeding be vaccinated?

Can children under the age of 16 be vaccinated?



Prior infection/exposure

Do I need the vaccine if I already had COVID-19?

Do I need to be tested for COVID-19 before I get vaccinated?

Can I be vaccinated if I currently have COVID-19 or I'm in quarantine from an exposure?

Trial design and vaccine details

Product name **mRNA-1273**



Vaccine platform

mRNA



Route / frequency

2 doses;
28 days apart
(-3/+7 days)



Regulatory authorization[‡]

Anticipated
December 18,
2020



Supply timeline

Anticipated distribution
December 20, 2020
200M dose
commitment, **~20M**
doses per month;
option for up to
300M additional



Storage

Frozen (-20° C) for
transport/storage
for up to 6 months;
refrigerated (2-8° C)
at final site of
administration for
up to 30 days and/or
room temperature
for **up to 24 hours**



Shelf-life (opened)

Vials **must be**
used within
6 hours after
opening

[‡] Manufacturer estimate of when regulatory authorization will occur; subject to change pending clinical trial results.

[†] Manufacturer estimate of when vaccine doses will be available. Availability via Emergency Use Authorization (EUA) may precede commercial availability.

Efficacy

Full efficacy analysis
demonstrated vaccine

94.1%
effective

Efficacy evaluated 14 days after
second dose

Efficacy demonstrated protection 28 days after vaccine initiation

**185 cases in the placebo group
vs. 11 cases in the treatment group**

95.6% effective in volunteers aged 18-64 years

156 cases in the placebo group
vs. 7 cases in the treatment group

86.4% effective in volunteers over the age of 65

29 cases in the placebo group
vs. 4 cases in the treatment group

30 severe COVID-19 infections occurred, all in the
placebo group

Safety

Overall safe profile

reported in Phase III clinical trial

Adverse events similar with
other vaccines

The majority of adverse events were mild or moderate in severity

Depending on age events ranged:

Injection-site pain 74%-90.1%

Fatigue 33.3%-67.6%

Headache 24.5%-62.8%

Chills 5.4%-48.3%

Myalgia 6.1%-46.9%

Arthralgia 16.4%-45.2%

Older adults had fewer and milder side effects
than younger participants

Grade 3 injection-site reactions (pain, redness or swelling) 9.1%

CVS Health survey findings showed significant hesitancy across multiple populations

28%

were interested in a vaccine as soon as it is available

35%

would wait until others had been vaccinated

20%

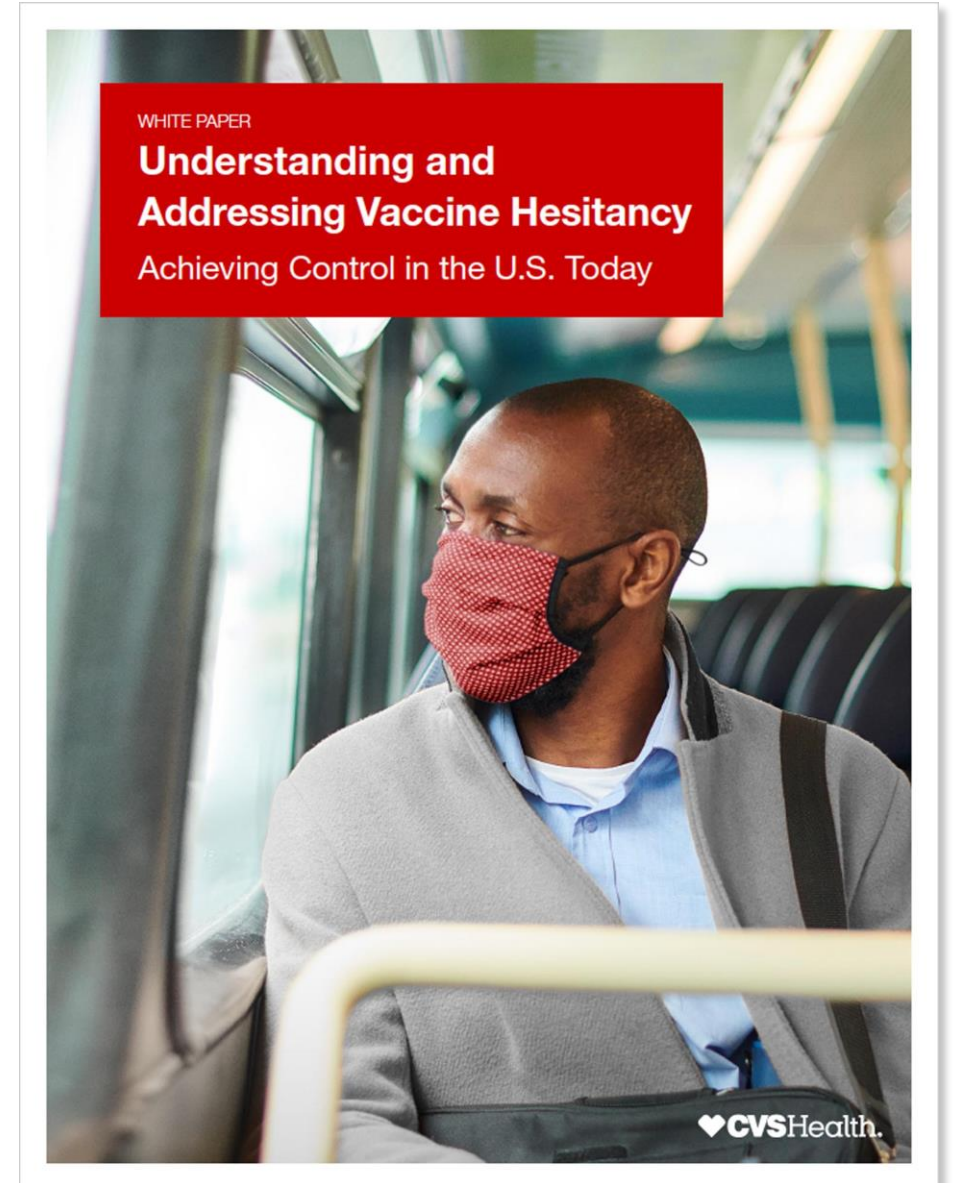
were uncertain about receiving a vaccination

17%

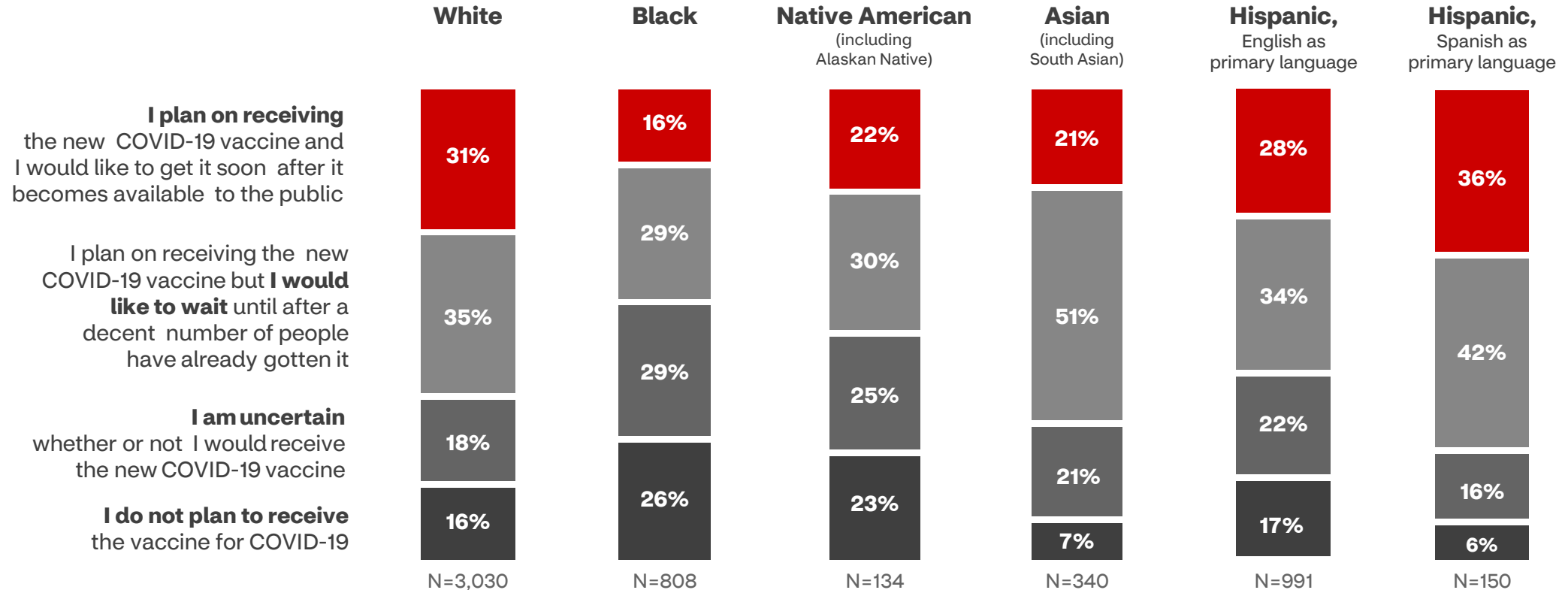
did not plan on being vaccinated

Movable middle

CVS Health Survey Methodology: 5,153 individuals participated in a nationwide survey conducted November 10 – 15, 2020, Sample representative of the U.S. population as described by the U.S. Census Bureau. Participants had the option of choosing more than one race/ethnicity. The percentages are significance tested at the 95 percent and 90 percent levels of confidence using a Z-test. Due to a variety of reasons, including a respondent's choice not to answer and the option to choose more than one answer, data totals may vary and percentages may not add up to 100.



Culturally competent education will be key to addressing vaccine hesitancy



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Clinicians and health authorities are key influencers

	Total N=5153	White N=3030	Black N=808	Native American N=134	Asian N=340	English- speaking Hispanic N=991	Spanish speaking Hispanic N=150
Your own doctor	54%	56%	48%	51%	62%	53%	36%
Dr. Anthony Fauci	29%	29%	28%	22%	45%	29%	18%
Someone from the CDC	28%	26%	29%	38%	42%	32%	26%
Someone from the FDA	23%	21%	21%	21%	35%	27%	21%
Joe Biden’s Coronavirus Task Force	18%	17%	18%	17%	21%	22%	20%
Joe Biden	14%	13%	16%	15%	16%	19%	21%
A publication you respect	9%	8%	7%	8%	17%	11%	7%
A celebrity you admire and respect	3%	3%	4%	6%	3%	5%	5%
An athlete you admire and respect	3%	3%	4%	3%	2%	4%	5%
Other — Please specify	14%	15%	17%	19%	7%	13%	9%

Nearly all respondents who replied “Other” stated that **there was no one whose opinion would influence whether they would get vaccinated**

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How CVS Health plans to address vaccine hesitancy and access



Data and reporting



Providers and other influencers as educators



Targeted messaging



Convenient access to vaccination services

CVS Pharmacy offers convenient locations to meet the needs of vulnerable populations

Social vulnerability index	Number of stores	% of total US population within store radius			
		1 mile	2 miles	5 miles	10 miles
Very high (0.75-1.00)	2,095	8%	14%	19%	22%
High (0.50-0.75)	2,462	8%	15%	20%	23%
Moderate (0.25-0.50)	2,697	7%	14%	19%	22%
Low (0-0.25)	2,692	7%	13%	18%	20%
Total	9,946	30%	57%	77%	86%



Potential prioritization of critical populations across phases

Phase 1* (~261M+)

Phase 1a

Health care personnel: **~21M**

Long-term care facility residents: **~3M**

Phase 1b

Essential workers (non-health care): **~87M**

Phase 1c

Adults with high-risk medical conditions: **>100M**

Adults ≥ 65 years^{**}: **~50M**

Additional prioritization to be determined in later phases

Staff and residents of other congregate
living facilities

People of all ages with conditions that put them
at moderately higher risk

Prisoners, detainees and staff

Young adults

Children

Everyone residing in the United States who did not
have access to the vaccine in previous phases

*CDC ACIP Dec 2020 Meeting Presentation

**Excluding older adults in LTCFs

Source: Supporting an Equitable Distribution of COVID-19 Vaccines: [Key Themes, Strategies, and Challenges Across State and Territorial COVID-19 Vaccination Plans](#).

COVID-19 vaccine administration at long-term care (LTC) facilities

We're playing a critical role to ensure these
vulnerable patients are protected

Our ongoing partnership

with the federal government

CVS Health leadership meets regularly with members of Operation Warp Speed and the CDC to discuss:

Supporting distribution and administration of COVID-19 vaccine in LTC facilities and CVS Pharmacy locations at no cost to the patient—31K facilities have selected CVS Health

Providing community access through our national footprint

Sharing administrative information

**CVS Health
made important
enhancements**

to our technology, infrastructure and processes to ensure we can be a trusted partner for payors, providers and the American people

Note: administration fee will be billed to patient's insurance or the federal program for the uninsured

**Ready to
vaccinate
long-term care
residents and staff**

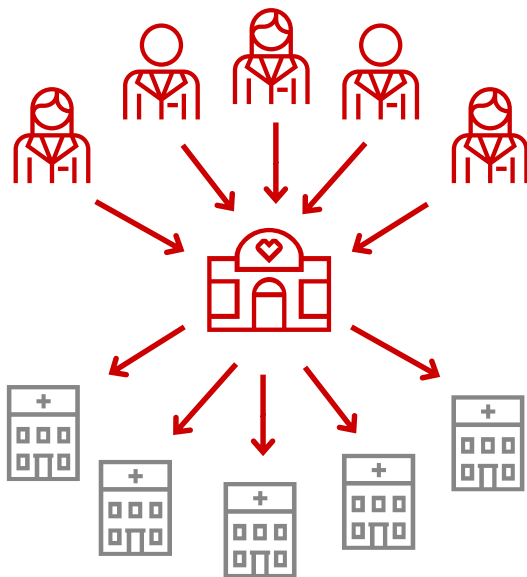
40,000+
LTC facilities selected
CVS Pharmacy with
minimum 2 clinics per site

~8M
Number of vaccines
to be administered
through this effort*

*reflects 2 doses per person

Leveraging depot stores for distribution to LTC facilities

Immunizing pharmacists pick up vaccines from the depot store on day of clinic



Key operational procedures

Single depot store will manage inventory for multiple LTC facilities

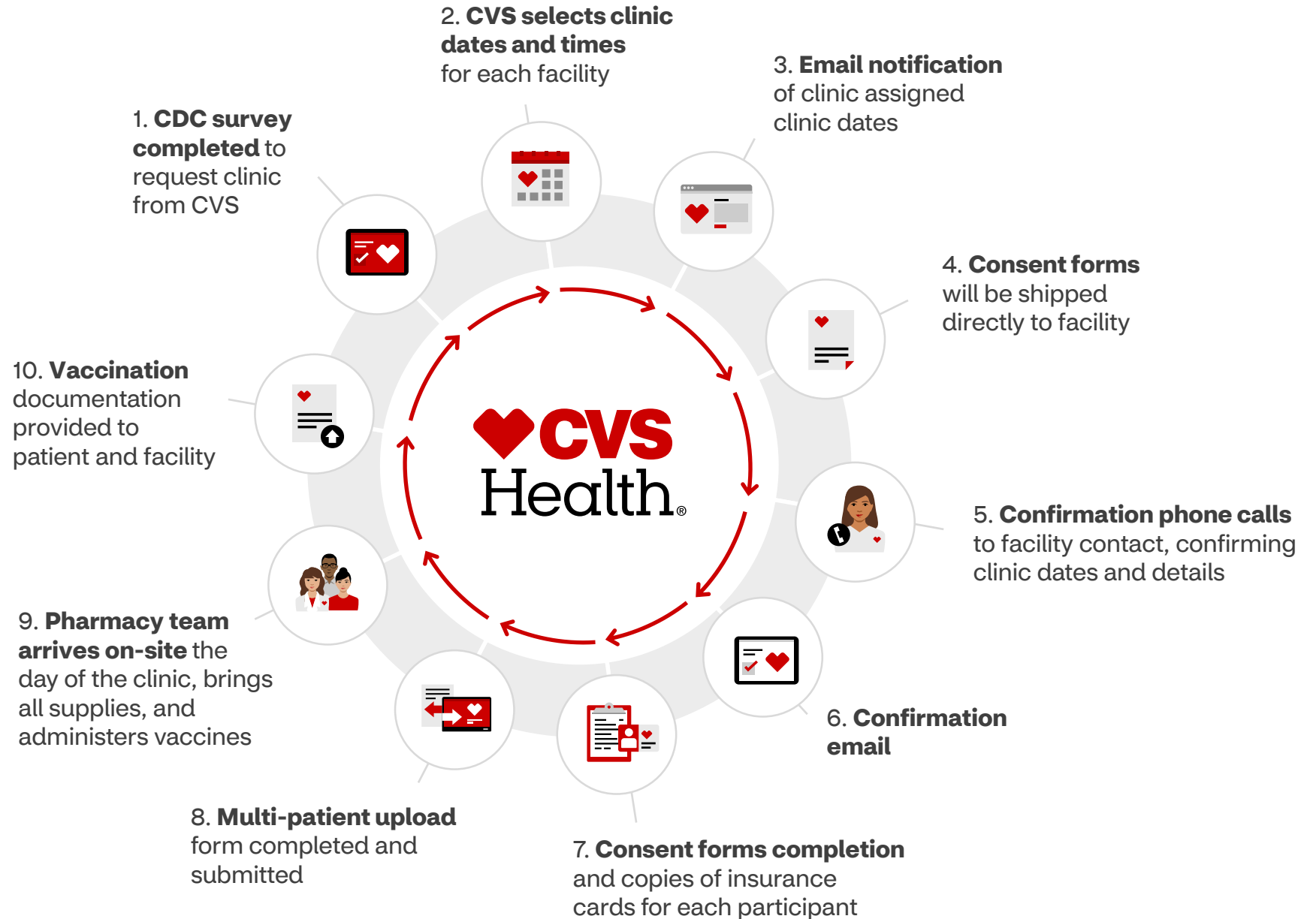
All product will be returned to the depot store at the end of the day for continued storage or waste handling

Product will be transported using refrigerated storage totes

Centralized Rapid Response team will monitor temperature excursions and guide on product handling

Reducing the number of locations managing vaccine will minimize inventory complexities and limit risk.

Clinic model



On-site clinic logistics



Product and supplies

are picked up at depot store

Clinic team arrives on-site

30 minutes prior to the clinic

Set-up areas

for registration table and immunization

Long-term care facility

provides all patient consent forms and appointment schedule

Clinic technician processes Rx

on laptop at the time of patient's appointment

Pharmacist/immunizer

verifies the Rx, consults with patient, and administers vaccine

After clinic

product and supplies returned to depot store

COVID-19 vaccine readiness at CVS Pharmacy

Supporting administration and education for people across the U.S.



Using our nationwide footprint and experience to support vaccine administration

Convenient access

Digital scheduling

Nearly 10K retail locations nationwide

85%+ of the population within 10 miles of a CVS Pharmacy

Trusted clinicians

Up to 90K immunizers: pharmacists and pharmacy technicians

Experience

Incorporate learnings from this year's flu season and extensive COVID-19 testing:

15M+ flu vaccines

~40K clinics for flu vaccination

Investments to ensure safe storage of all vaccine candidates

Our existing and newly-procured freezers can accommodate a range of storage requirements — all equipped with temperature alert technology. We will upgrade equipment as needed to ensure we can safely store all vaccines.

Storage requirements	-20°C or warmer	-70°C or colder*	Currently unknown
Vaccine candidates	   	      	
CVS prepared to support	Yes	Yes	To be assessed once requirements are known

*Stored at CVS Pharmacy in specialized shipping containers



Digital tools to provide greater convenience

Convenient scheduling tool
lets patients reserve a time
for their vaccination

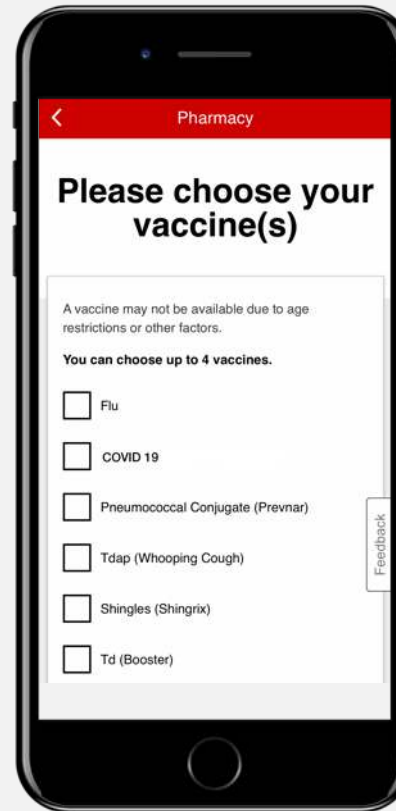
Text and email reminders, including
link to scheduling tool

Reduces time spent in store

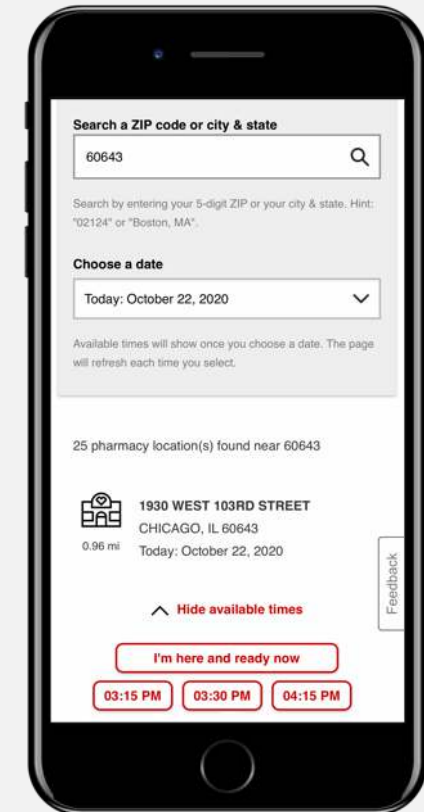
Easy access to
scheduling tool via
mobile device



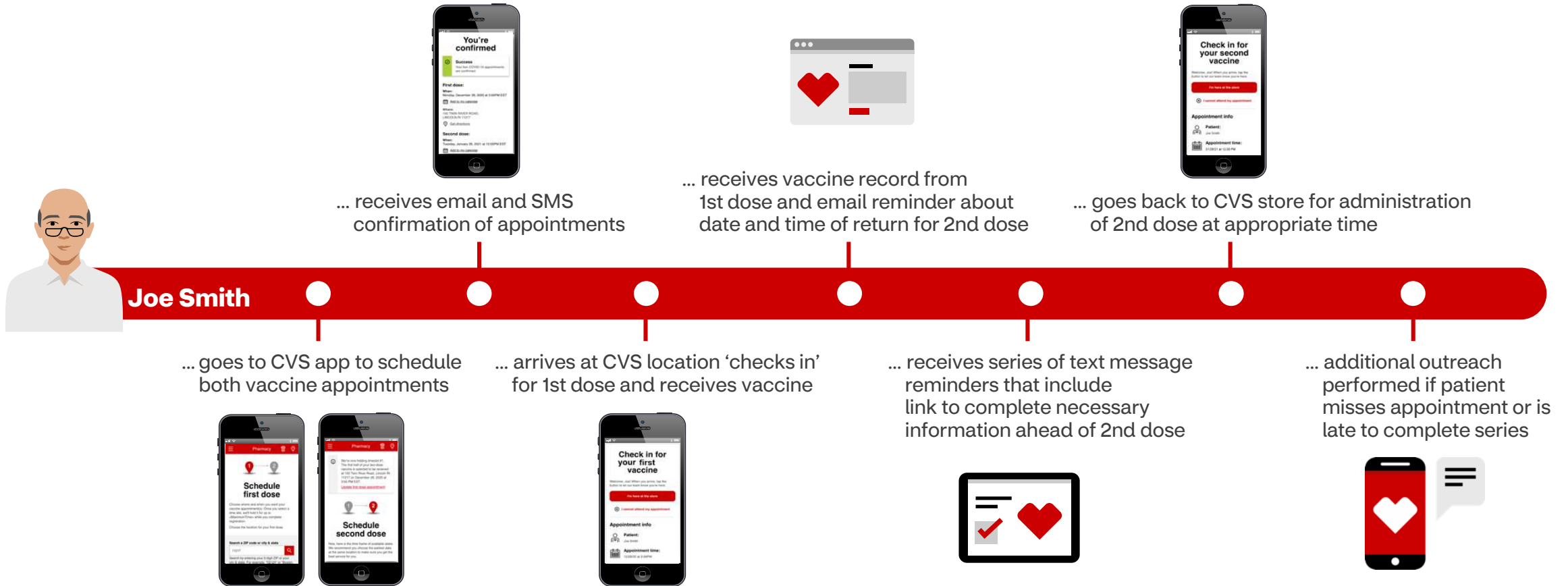
Digital consent forms
captured prior to entering
CVS Pharmacy



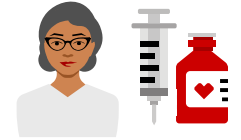
Illustrative



Enhanced digital flow will enable safe and efficient experience for in-store COVID-19 vaccinations



CVS Health will be ready to support patients seeking out only their second dose

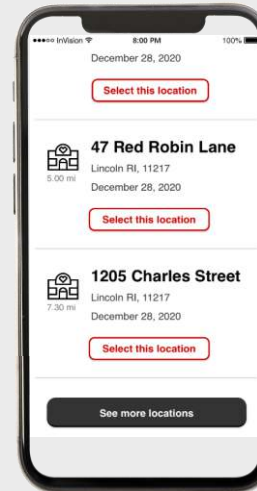
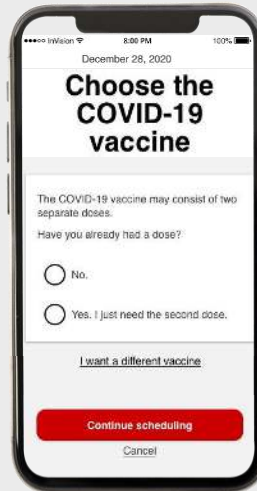


Patient already received 1st dose



Patient inputs COVID-19 vaccine information from the vaccine record card of their 1st dose into CVS Pharmacy digital appointment scheduler tool

Only stores that have the product the patients received for their first dose in stock will appear as available for appointments



OR

Patient brings card to pharmacy for validation

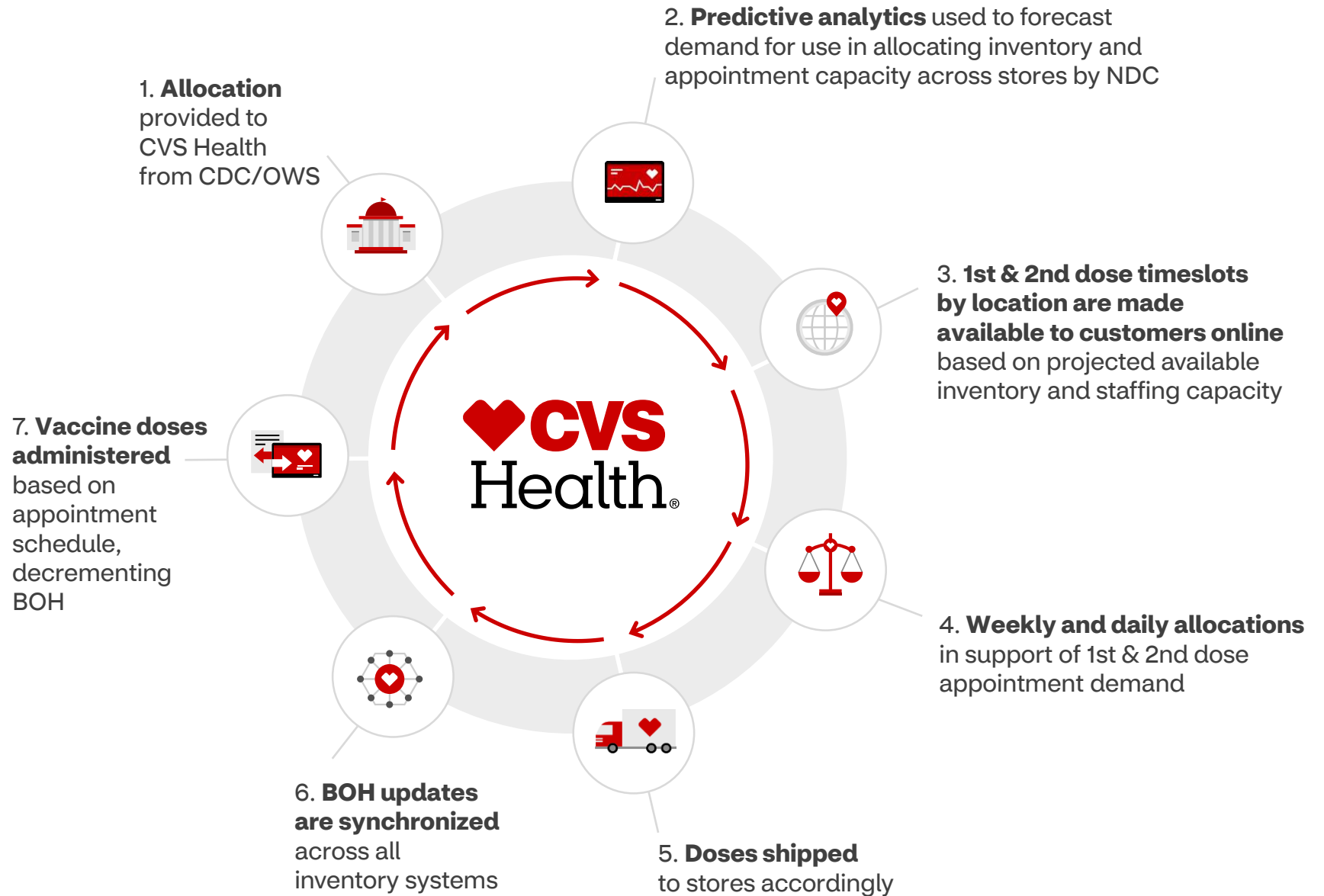
If patient doesn't have their card, our RPh or call center can look it up in patient's immunization profile that queries state registries or reach out to prior provider



Patient receives 2nd dose



CVS Pharmacy logistics and operations



CVS Health is mobilizing broad reaching efforts to support COVID-19 vaccine awareness and education

Retail



Distribute educational materials in-store + drive thru

- National scale with nearly 10K retail locations
- 4.5M consumers visit per day



Leverage trusted health care colleagues to support education in thousands of communities

- ~30K Pharmacists
- ~60K Pharmacy techs and interns
- ~3K MinuteClinic NPs and PAs



Communications drive to in-store and online vaccination information, support and appointment scheduler

- Circular
- POS terminal messaging
- Register receipt messaging
- In-store radio / IVR
- Prescription bags
- Rx Delivery inserts

Digital



Offer consumers convenient access to online vaccine information, support and appointment scheduler

- CVS.com – Dedicated vaccine resources / scheduling tool



- SMS – Reaching 90M consumers
- App integration



- Email – Reaching 20M ExtraCare members

Source: <https://cvshealth.com/about/facts-and-company-information>



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All data sharing complies with applicable law, our information firewall and any applicable contractual limitations.

Adherence results and savings projections are based on CVS Caremark data. Actual results may vary depending on benefit plan design, member demographics, programs implemented by the plan and other factors. Client-specific modeling available upon request.

The Maintenance Choice program is available to self-funded employer clients that are subject to ERISA. Non-ERISA plans such as fully insured health plans, plans for city, state or government employees and church plans need CVS Caremark legal approval prior to adopting the Maintenance Choice program. Prices may vary between mail service and CVS Pharmacy due to dispensing factors, such as applicable local or use taxes.

Specialty Expedite is available exclusively for providers who use compatible electronic health record (EHR) systems, including Epic Systems and others that participate in the Carequality Interoperability Framework.

Specialty delivery options are available where allowed by law. In-store pick up is currently not available in Oklahoma. Puerto Rico requires first-fill prescriptions to be transmitted directly to the dispensing specialty pharmacy. Products are dispensed by CVS Specialty and certain services are only accessed by calling CVS Specialty directly. Certain specialty medication may not qualify. Services are also available at Long's Drugs locations.

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