COVID-19 vaccine implementation

Nancy Messonnier, MD
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Complex and evolving landscape for COVID-19 vaccine

- One vs. two dose series
- Products not interchangeable
- Varying presentations
- Vaccine efficacy and adverse event profile in different populations
- Varying cold-chain requirements
- Use in children and pregnant women
- Need for socially distanced vaccination practices
- Communication and education
- Some high-risk groups for COVID-19 may distrust public health
Rising to the challenge to achieve high coverage with COVID-19 vaccines

Influenza Vaccination Coverage, ≥18 years, by Race/Ethnicity:
2008-09 – 2017-18

- Vaccination coverage of racial and ethnic minorities is consistently lower than that of white populations
- We need novel and more robust strategies to increase uptake of COVID-19 vaccine, once available

Source: Vaccination Coverage among Adults in the United States, National Health Interview Survey, CDC, 2017. NH = Non-Hispanic. Vaccinations included in this assessment include influenza, pneumococcal, Td, Tdap, Zoster, HepA, HepB, and HPV.
Multiple Critical Components to Vaccine Implementation

Communication and Stakeholder Guidance
(state, local, special populations, private sector partners, public)

Prioritizing population
Allocation of Vaccine
Distribution (MFR – Dist- State)
Administration
Safety, Effectiveness, Uptake, Second dose
Vaccine Recovery

Data

Supply - Monitor, Track, Report

Vaccine Uptake, Use, and Coverage

ADE and Vaccine Effectiveness Monitoring and Reporting

Regulatory Considerations

Public health impact relies on rapid, efficient, and high uptake of complete vaccine series, with focus on high-risk groups

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Distribution will Adjust as volume of vaccine doses increases, moving from targeted to broader populations reached (phased approach)

**Limited Doses Available**

- Constrained supply
- Highly targeted administration required to achieve coverage in priority populations
- Tightly focus administration
- Administer vaccine in closed settings (places of work, other vaccination sites) specific to priority populations

**Large Number of Doses Available**

- Likely sufficient supply to meet demand
- Supply increases access
- Broad administration network required including surge capacity
- Expand beyond initial populations
- Administer through commercial and private sector partners (pharmacies, doctors offices, clinics)
- Administer through public health sites (mobile clinics, FQHCs, targeted communities)

**Continued Vaccination, Shift to Routine Strategy**

- Likely excess supply
- Broad administration network for increased access
- Open vaccination
- Administer through commercial and private partners
- Maintain PH sites where required

Doses available per month (baseline as of 07/16)

~660M cumulative doses available

Illustrative ramp-down, not based on OWS decisions or candidate projections

Illustrative scenario for planning purposes; will be adapted based on the clinical / manufacturing information on all OWS candidates and vaccine prioritization.

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Overview of Distribution and Administration

Contracted OWS Manufacturers

Ancillary Supplies & PPE

Kitting

Distributor

Partner Depots

Administration sites

Pharmacy

LTC Providers

Home Health

Indian Health Services

Other federal entity sites

Public Health Clinics/FQHCs

Hospitals

Doctor’s Office

Mobile Vaccination

Mass Vaccination

Select commercial partners and federal entities receive allocations

States receive allocations

OWS coordination

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To distribute and administer COVID-19 vaccine, we will leverage many partners to ensure success.

Leveraging public health expertise and assets from all-of-USG…

…and contributions from our private partners

- Federal
- State
- Local
- Distribution
- Administration
- Guidance & best practices
Planning is everything...

COVID-19 vaccine implementation will look different than prior pandemic vaccine planning

– Variation and complexity of vaccines in clinical development
– Federal engagement and review of state plans
– Federal and state end-to-end visibility on vaccine supply and uptake
– Augment public health implementation with federal commercial partnerships
## Draft Concept of Operations for Select Target Populations

Populations are not comprehensive; additional populations to be added.

<table>
<thead>
<tr>
<th>Target Population</th>
<th>Est. Population Size</th>
<th>Vaccination Site</th>
<th>CONOPS</th>
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</thead>
<tbody>
<tr>
<td>Nursing Home / Assisted Living Facility residents</td>
<td>~3M</td>
<td>• Within NHs/ALFs</td>
<td>• States allocate vaccine to NHs/ALFs; direct allocation to pharmacy providers for CMS certified NHs</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• USG offers federal assistance with facility-level vaccination service</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Vaccination occurs in facilities</td>
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<tr>
<td>Populations with Disabilities</td>
<td>TBD</td>
<td></td>
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<tr>
<td>Healthcare workers</td>
<td>~17M</td>
<td></td>
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<tr>
<td>Frontline essential workers</td>
<td>~14M</td>
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<tr>
<td>Elderly (65 years &amp; older)</td>
<td>~37M</td>
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<tr>
<td>National Security populations</td>
<td>~2M</td>
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<tr>
<td>Communities of color (Black, Hispanic, Native)</td>
<td>~100M</td>
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In the face of health crises or emergencies, communication, community engagement, and cultural competency are critical

<table>
<thead>
<tr>
<th>Targeted Messaging</th>
<th>Community Engagement</th>
<th>Cultural Competency</th>
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<tr>
<td>Epidemics do not increase vaccine acceptance in racial or ethnic minorities, meaning targeted communication from trusted messengers remains necessary—especially when a vaccine is new, data on safety or risks is limited, and negative informal messaging occurs (CDC, 2015).</td>
<td>Sustained community engagement is key in identifying the education and support required to implement health efforts—especially in communities that face instability with basic needs, such as employment, food, shelter, and clean water (Hutchins, 2009).</td>
<td>Health care staff and first responders should provide culturally competent messaging and care—and include minority groups in planning—to encourage equitable engagement and outcomes in a pandemic response (Hutchins, 2009).</td>
</tr>
</tbody>
</table>
CDC’s strategic framework for strengthening vaccine confidence and preventing outbreaks of vaccine preventable diseases.

**Protect communities**

**Strategy: Protect communities at risk from under-vaccination**
- Leverage immunization data to find and respond to communities at risk
- Work with trusted local partners to reach at-risk communities before outbreaks
- Ensure vaccines are available, affordable, and easy-to-get in every community

**Empower families**

**Strategy: Get providers and parents effective information resources**
- Expand resources for health care professionals to help them have effective vaccine conversations with parents
- Work with partners to start conversations before the first vaccine appointment
- Help providers foster a culture of immunization in their practices

**Stop myths**

**Strategy: Stop misinformation from eroding public trust in vaccines**
- Work with local partners and trusted messengers to improve confidence in vaccines among key, at-risk groups
- Establish partnerships to contain the spread of misinformation
- Educate key new stakeholders (e.g., state policy makers) about vaccines

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# Microplanning with jurisdictions for COVID-19 vaccination response will begin next week

## Objectives of program

1. Accelerate state, local, tribal readiness for a large-scale vaccination campaign
2. Better inform OWS's understanding of jurisdiction plans & technical assistance needs
3. Provide technical assistance to jurisdictions on their COVID-19 vaccine planning process
4. Develop model plans to be shared with all jurisdictions prior to COVID-19 vaccine release
5. Build on expanded influenza vaccination campaign planning work

## Key facts

- 5 jurisdictions: ND (on site), FL (on site), CA, MN, PHI (virtual)
- Multi-agency microplanning teams, including
  - CDC
  - DOD
  - IHS

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For more information, contact CDC
1-800-CDC-INFO (232-4636)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.