Maintaining and strengthening routine childhood vaccination during the COVID-19 pandemic

Sarah Mbaeyi, MD MPH
August 4, 2020

Substantial disruptions to outpatient medical care during COVID-19 pandemic

As number of COVID-19 cases increased and stay-at-home orders implemented, nearly 70% reduction in outpatient in-person visits before starting to rebound

Disruptions in outpatient medical care among all pediatric age groups during COVID-19 pandemic
COVID-19 pandemic and disruptions to routine childhood vaccination

All non-influenza vaccines

Measles-containing vaccine

Source: CDC
What is the capacity among pediatric providers to administer vaccines?

- Vaccines for Children (VFC) program: provides vaccines at no cost to eligible children; ~38,000 enrolled practices encompass ~86% of U.S. pediatricians

- Among 1,933 VFC-enrolled practices the majority are: currently open, offering vaccines, and able to accept new patients (as of May 20, 2020)

![Circle charts showing percentages of practices open, offering vaccines, and accepting new patients.](source)

- 90% of practices are open
- 96% of open practices are offering vaccines
- 59% of open practices are accepting new patients (through August 1st)

82% have reduced hours

*Among open practices; 81% offering vaccines to all patients

Immunization infrastructure remains strong during COVID-19

Conclusions from survey of VFC providers

- As of May, 2020, immunization infrastructure sufficient to meet patient needs and ensure catch-up vaccination, though some access issues remain

- Majority of providers will be able to administer vaccines during the critical back-to-school period

- To help ensure routine childhood vaccine services get back on track, efforts needed to support providers and parents
CDC activities with immunization programs and partners to support routine childhood vaccination

- **Monitor** vaccination service delivery to inform targeted interventions

- **Support**
  - Providers through the development of guidance and support materials
  - Immunization awardees in identifying and responding to disruptions in vaccination
  - Catch-up vaccination through reminder/recall systems
  - Access to vaccines by identifying gaps in VFC provider network
  - Identification of policy interventions to support healthcare providers

- **Communicate**
  - Importance of vaccination to parents, providers, and partners
  - Information on VFC program to families

- **Plan** back-to-school vaccination activities during the summer and influenza vaccination in the fall
Routine vaccination prevents illnesses that lead to increased medical visits and hospitalizations, further straining the healthcare system.

Influenza vaccination will be critical to reduce the impact of respiratory illnesses and resulting burdens on the healthcare system.

Routine vaccination services remain critical

https://www.cdc.gov/vaccines/pandemic-guidance/index.html

Routine vaccination across the lifespan

- **Children and adolescents:** Reschedule missed well-child visits and/or vaccinations
  - Start with newborns, infants and children up to aged 24 months, young children, and extending through adolescence

- **Pregnant women:** If vaccination has been delayed, administer vaccines during the next in-person appointment

- **Adults:** Administer all recommended vaccines
  - Especially important in older adults and those with underlying conditions

https://www.cdc.gov/vaccines/pandemic-guidance/index.html
Decreasing immunization rates mean it is particularly important to:

- Assess the vaccination status of all patients to avoid missed opportunities and ensure timely vaccination catch-up.
- Administer all vaccines due or overdue according to the recommended [CDC immunization schedules](https://www.cdc.gov/vaccines/pandemic-guidance/index.html) during each visit.

Catch-up vaccination strategies

- **Reminder/recall systems**
- **Forecasting through EMR or IIS**
- **Standing orders**

[Links to CDC guidance](https://www.cdc.gov/vaccines/pandemic-guidance/index.html)
Vaccination administration during the COVID-19 pandemic

- Vaccination in the medical home ideal to ensure patients receive other preventive services that may have been deferred

- Regardless of vaccination location, best practices for storage and handling of vaccines and vaccine administration should be followed.

- Information on vaccines administered should be documented so that providers have accurate and timely information, and to ensure continuity of care in the setting of COVID-19 related disruptions

Vaccination of persons with confirmed or suspected COVID-19

- Routine vaccination should be deferred in persons with confirmed or suspected COVID-19, regardless of symptoms
Follow CDC guidance to prevent the spread of COVID-19 in healthcare settings

- Screen patients for COVID-19 symptoms before and during visit
- Ensure physical distancing (at least 6 feet apart, where possible)
- Limit and monitor facility points of entry and install barriers to limit physical contact with patients at triage
- Implement policies for cloth face masks for persons aged ≥2 years (if tolerated)
- Ensure adherence to respiratory hygiene, cough etiquette, and hand hygiene
- Enhanced surface decontamination


Use appropriate personal protective equipment

<table>
<thead>
<tr>
<th>Face mask</th>
<th>Eye protection</th>
<th>Gloves</th>
</tr>
</thead>
<tbody>
<tr>
<td>• <strong>Recommended:</strong> All healthcare providers (N95 masks not recommended)</td>
<td>• <strong>Recommended:</strong> Areas of moderate/substantial community transmission</td>
<td>• <strong>Recommended:</strong> Intranasal or oral vaccines</td>
</tr>
<tr>
<td></td>
<td>• <strong>Optional:</strong> Areas of minimal/no community transmission</td>
<td>• <strong>Optional:</strong> Intramuscular or subcutaneous vaccines</td>
</tr>
</tbody>
</table>

Ensure physical distancing during vaccination visits

Separate sick from well patients

- Schedule well and sick visits at different times of the day
- Place sick visits in different areas of the facility or different locations

Ensure physical distancing measures

- At least 6 feet during all aspects of visit: check-in, checkout, screening procedures, postvaccination monitoring
- Use strategies such as physical barriers, signs, ropes, floor markings

Reduce crowding in waiting room

- Ask patients to wait outside (e.g., in their vehicles) until called in

Reassure parents through communication

- Encourage parents to return for well-child visits
- Discuss the safety protocols put in place to ensure patients can be safely vaccinated

https://www.cdc.gov/vaccines/pandemic-guidance/index.html
Promote awareness of vaccines for Children (VFC) program among parents

- Prior to the pandemic, ~50% of U.S. children eligible to receive free vaccines through VFC
  - More may be eligible now due to recent loss insurance

- Parents of recently-eligible children may not be aware of VFC

- Partners and providers can help improve vaccine access by increasing awareness and enrollment in VFC program

Preparation for back-to-school vaccination

School vaccination requirements provide a critical checkpoint for children’s vaccination status

- Many school-age children at risk for undervaccination and non-compliance with school vaccine requirements

- Important to augment back-to-school vaccine clinics to ensure that children have an opportunity for vaccination
Signs of recovery in routine childhood vaccination


All non-influenza vaccines

Gap narrowing between 2019 and 2020

Source: CDC

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Resources for routine vaccination during the COVID-19 pandemic

- CDC resources for parents and immunization partners
- AAP’s #CallYourPediatrician campaign
- Immunization Action Coalition Repository of Resources

https://www.immunizationcoalitions.org/resource-repository/
Conclusions

- Substantial disruptions to routine childhood vaccination services has occurred during the COVID-19 pandemic, though signs of recovery have appeared.

- Immunization programs, partners, and providers can help get childhood vaccination back on track by supporting catch-up vaccination efforts and communicating with parents about safe vaccination during the pandemic.

Thank you

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

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Vaccination Planning for the 2020-2021 Influenza Season

Tara C. Jatlaoui, MD MPH
Immunization Services Division

2019-2020 Influenza Activity
Summary of 2019-2020 influenza season

- Two consecutive waves
  - 1st wave predominantly influenza B/Victoria viruses
  - 2nd wave driven by influenza A (H1N1)
- Pediatric deaths reported to CDC for the 2019-2020 season: 185*

Deaths
24,000-62,000

Hospitalizations
410,000-740,000

Medical visits
18,000,000-26,000,000

Illnesses
39,000,000-56,000,000

*As of June 13, 2020
https://www.cdc.gov/flu/about/burden/preliminary-in-season-estimates.htm

Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, 2019-2020 and Selected Previous Seasons
Since the nadir of visits in late March, there has been a substantial rebound in visits among people covered by Medicare. The rebound among people covered by Medicaid has lagged.

By the week of June 14th, visits by adults $\geq 75$y were depressed only 3% from baseline. But among children ages 3 to 5, visits remain depressed 43% from baseline.
Adult immunization has also decreased with COVID: Medicare Data, by week, 2019 and 2020

Flu vaccination
COVID prevention may be influenza prevention...

**Australia's flu season has been suppressed by covid-19 lockdown**

[Graph showing influenza cases in Australia (laboratory-confirmed)]

- In 2019, influenza cases were lower compared to 2020 due to the COVID-19 lockdown.


**However, in the US, we must plan to increase influenza vaccine coverage to decrease healthcare utilization**

- We expect SARS-CoV-2 to continue to circulate in the fall.
- Increasing influenza vaccine coverage can decrease stress on the healthcare system:
  - Decrease doctor visits and hospitalizations
  - Decrease individuals needing diagnostic testing
- Focus increased flu vaccination efforts on adults at higher risk from COVID-19:
  - Staff and residents of long-term care facilities
  - Adults with underlying illnesses
  - African-American and Hispanic communities
  - Adults who are part of critical infrastructure
Racial and ethnic disparities in influenza coverage
Reducing existing disparities will be important to protect minority and at-risk populations for both influenza and future COVID-19 vaccines.

Cumulative Rate of Laboratory Confirmed Influenza-Associated Hospitalizations, FluSurvNet, 2009-10 through 2019-20
Influenza-Associated Mortality

Pneumonia and Influenza Mortality from the National Center for Health Statistics Mortality Surveillance System. Data through the week ending June 13, 2020, as of June 18, 2020.

Source: National Health Interview Survey

* Other includes Asian, American Indian/Alaska Native, and multiple races.
Racial and ethnic disparities in influenza coverage

Reducing existing disparities will be important to protect minority and at-risk populations for both influenza and future COVID-19 vaccines

Safe Vaccination Strategies
Increasing Seasonal Influenza Vaccine Coverage to Decrease Healthcare Utilization, 2020-21

- Expect SARS-CoV-2 to continue to circulate in the fall
- Increasing flu vaccination coverage will reduce stress on the healthcare system
  - Decrease doctor visits and hospitalizations
  - Reduce use of diagnostics
- Focus on adults at higher risk from COVID-19
  - staff and residents of LTCF
  - adults with underlying illnesses
  - African-Americans, Hispanics, American Indians and Alaska Natives
  - adults who are part of critical infrastructure

Influenza vaccination

Use every opportunity to administer influenza vaccines to all eligible persons, including:

- **Essential workers**: Healthcare personnel and other critical infrastructure workforce
- **Persons at increased risk for severe illness from COVID-19**, including older adults and those with underlying medical conditions
- Severe illness from COVID-19 has been shown to disproportionately affect members of certain racial/ethnic minority groups.
- **Persons at high risk for influenza complications**

https://www.cdc.gov/vaccines/pandemic-guidance/index.html
Information for alternative vaccination sites

Alternative vaccination sites

- Pharmacies
- Non-traditional facilities such as schools and churches
- Curbside clinics
- Drive-through clinics
- Mobile outreach units
- Home visits
Alternative vaccination site guidance during COVID-19

Follow clinical setting guidance and take additional precautions:

- Select a space large enough to ensure physical distancing.
- Provide specific appointment times and use other strategies to manage patient flow and avoid crowding.
- Set up unidirectional site flow with signs, ropes, or other measures.
- Have a separate vaccination area or separate hours for persons at increased risk for severe illness from COVID-19.

https://www.cdc.gov/vaccines/pandemic-guidance/index.html

Guidance for Planning Vaccination Clinics Held at Satellite, Temporary, or Off-Site Locations

- Assist with jurisdictional planning and implementation of vaccination clinics
- Public and private vaccination organizations or preparedness professionals
- Clinical considerations
  - Vaccine storage, handling, administration, and documentation
  - General public
  - Targeted populations (i.e., critical workforce personnel and/or higher-risk priority groups)
  - Routine vaccination
  - Emergency vaccination in preparedness scenario

https://www.cdc.gov/vaccines/hcp/admin/mass-clinic-activities
Guidance for Planning Vaccination Clinics Held at Satellite, Temporary, or Off-Site Locations

Planners are encouraged to use

- Resources for hosting an off-site vaccination clinic
- Checklist of Best Practices for Vaccination Clinics Held at Satellite, Temporary, or Off-Site Locations
  - patient safety and vaccine effectiveness
  - vaccine shipment, transport, storage, handling, preparation, administration, and documentation at temporary clinics

https://www.cdc.gov/vaccines/hcp/admin/mass-clinic-activities
Updates and resources

Vaccination guidance is continuously being reviewed and updated

- Visit [https://www.cdc.gov/vaccines/pandemic-guidance/index.html](https://www.cdc.gov/vaccines/pandemic-guidance/index.html) for the most recent guidance.
- Sign up to be notified when information on the web page changes.
COVID-19 operational guidance


Additional CDC Resources

- CDC Influenza homepage: https://www.cdc.gov/flu/
- Influenza surveillance: https://www.cdc.gov/flu/weekly/fluactivitysurv.htm
- Influenza vaccination coverage: https://www.cdc.gov/flu/fluvoxview/index.htm
- For Professionals: https://www.cdc.gov/flu/professionals/index.htm
  - Vaccination homepage: https://www.cdc.gov/flu/professionals/vaccination/index.htm
  - 2017-18 ACIP Influenza Recommendations: https://www.cdc.gov/mmwr/volumes/66/rr/rr6602a1.htm
  - Antiviral homepage: https://www.cdc.gov/flu/professionals/antivirals/index.htm
Influenza vaccination planning for 2020-2021 season

- Maximize available vaccine supply
  - Expect >190M doses for U.S. market

- Operational considerations
  - Outreach to those at higher risk
  - Planning for potential need for social distancing
  - Extending influenza vaccination season (September through December or later)

- Enhancing communication
  - Align with COVID-19 messaging
  - Messaging for African-American and Hispanic communities

Supplemental Resources for Public Sector Influenza Vaccination for the 2020-2021 Influenza Season

- Two Components
  - Cooperative Agreement with 64 Immunization Program Awardees (2020-2021; $141 million)
  - Supplemental influenza vaccine doses (2020; 9.3 million doses)

- Funding to support operational costs associated with planning and implementation of expanded influenza vaccination program

- Supplemental vaccine doses to be allocated among the awardees
  - Strong recommendation for awardee partnerships with Community Health Centers (CHCs)
  - Facilitating connections with CHCs through CDC relationship with the National Association of Community Health Centers
August: National Immunization Awareness Month

- Toolkits
- Resources for healthcare professionals
- Resources for parents and patients
- Sample newsletter content
- Graphics
- Webinar
- Live Instagram Q&A

COVID-19 vaccine planning
Preparing for COVID-19 Vaccine

- CDC is working with cross-USG Operation Warp Speed to plan vaccine trials, program, and safety and effectiveness monitoring
- State Immunization programs updating immunization information systems (IIS) for documenting vaccination and second dose reminder/recall
- Planning underway for public sector vaccine distribution
- ACIP WG and full ACIP are considering recommendations for COVID-19 vaccine use
- NASEM is considering prioritization of vaccine when supply is limited

COVID-19 vaccines in human clinical trials – United States*

<table>
<thead>
<tr>
<th>Candidate</th>
<th>Manufacturer</th>
<th>Type</th>
<th>Phase</th>
<th>Trial characteristics</th>
<th>Trial #</th>
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<td>mRNA-1273</td>
<td>Moderna TX, Inc.</td>
<td>mRNA</td>
<td>II</td>
<td>• 2 doses (0, 28d) • IM administration • 18-55, 56+ years • Phase III: July 2020</td>
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<td>mRNA-BNT162</td>
<td>Pfizer, Inc./BioNTech</td>
<td>mRNA</td>
<td>I/II</td>
<td>• Single or 2 doses • IM administration • 18-85 years</td>
<td>NCT04368728</td>
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<td>INO-4800</td>
<td>Inovio Pharmaceuticals, Inc.</td>
<td>DNA plasmid</td>
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<td>• 2 doses (0, 4w) • SC administration/ electroporation • ≥18 years</td>
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<td>KBP-COVID-19</td>
<td>Kentucky BioProcessing, Inc.</td>
<td>Protein subunit</td>
<td>I/II</td>
<td>• 2 doses (1,22d) • IM administration • 18-49, 50-70</td>
<td>NCT04473690</td>
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