Update on Adult Immunization - A Call To Action!

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Disclosures

- I have no conflicts of interest.
- I do NOT intend to discuss an unapproved or investigative use of a commercial product/device in my presentation

Disclaimer

- The opinions expressed in this presentation are solely those of the presenter and do not necessarily represent the official positions of Immunize.org, or the National Adult and Influenza Immunization Summit

Outline

- Review the impact of the COVID-19 pandemic on adolescent and adult immunization coverage rates
- Discuss the August 2021 Call To Action released by the National Adult and Influenza Immunization Summit (NAIIS)
- Highlight strategies to improve coverage rates
- ACIP Updates

The COVID-19 pandemic demonstrates the enormous impact of vaccines.

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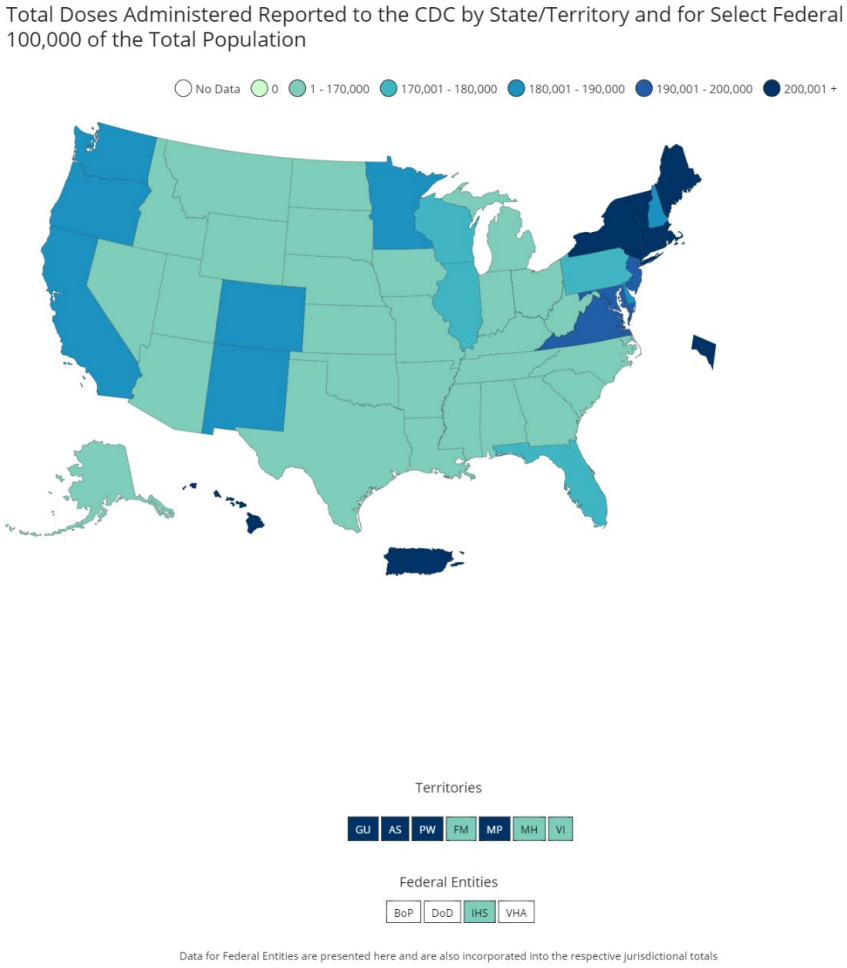
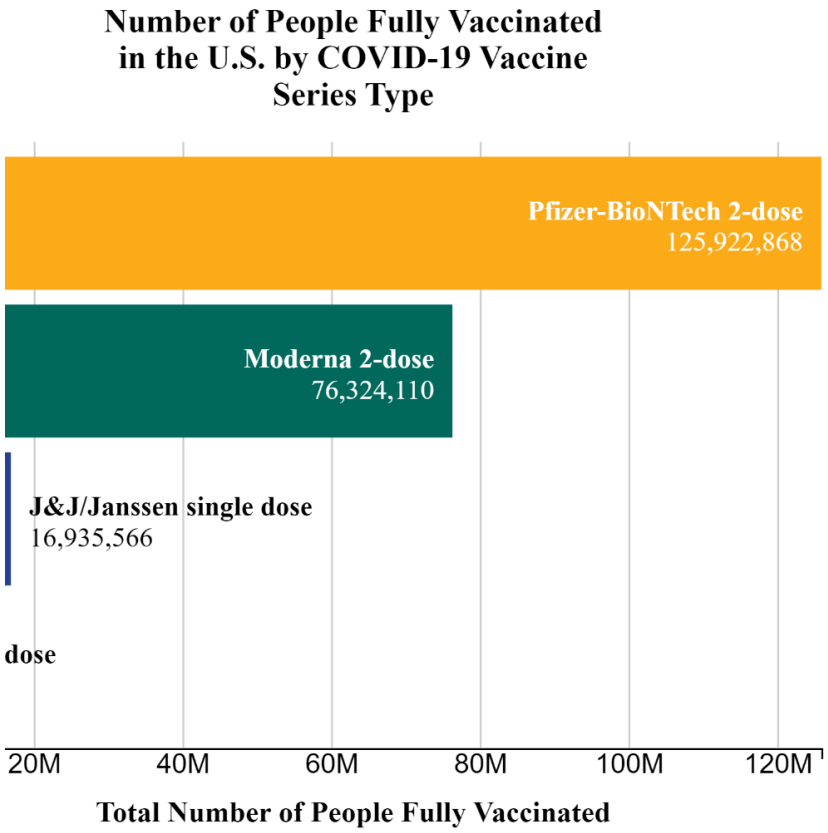
As of 04/24/2022, the U.S. has administered more than 572 million doses of COVID-19 vaccine





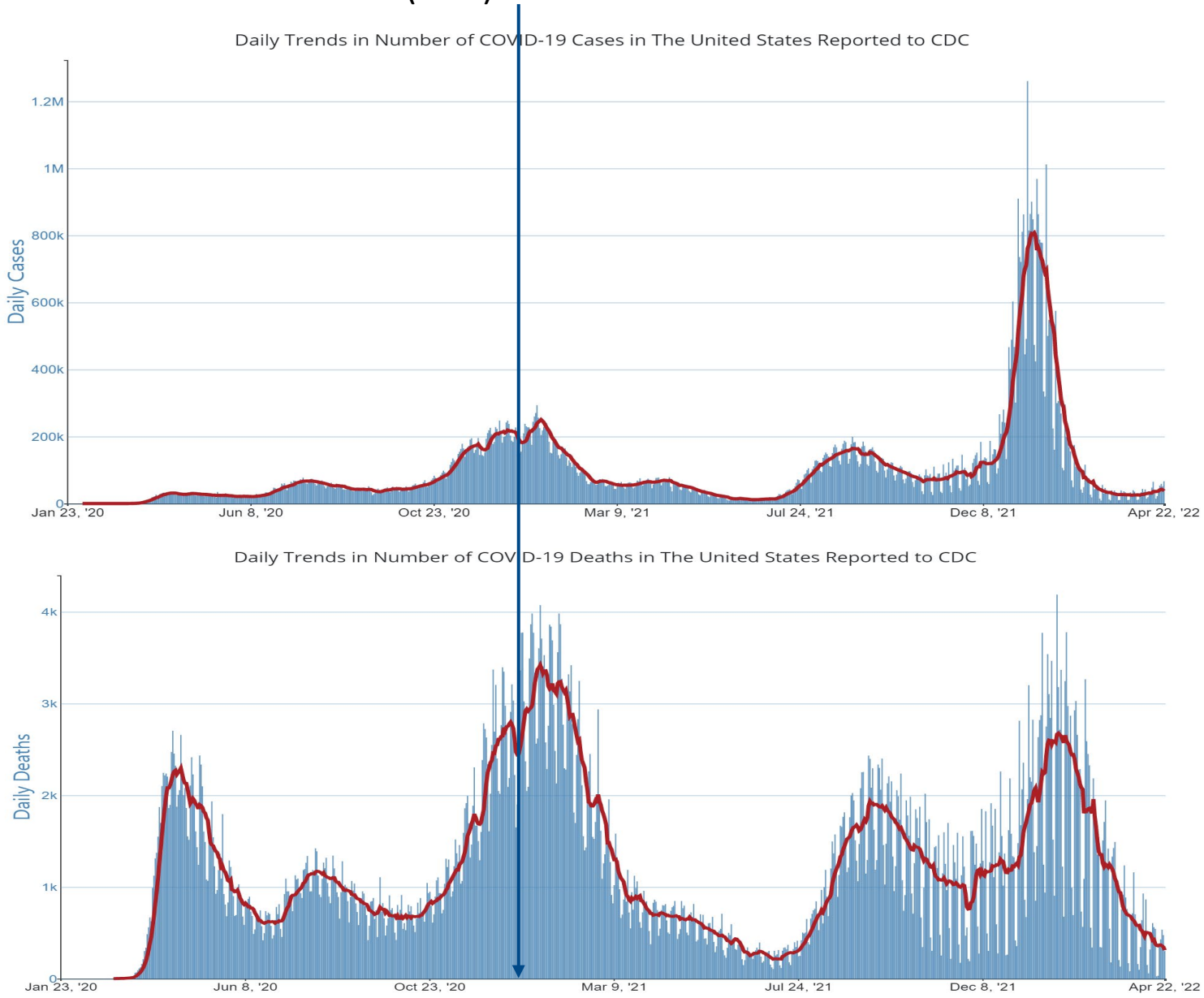
Among 18+, 76% fully vaccinated
Among 65+ year old, 90% fully vaccinated
Among persons in dialysis, 74% fully vaccinated (need to be better!)

We CAN get adults vaccinated!

Source: CDC Website: https://covid.cdc.gov/covid-data-tracker

COVID-19 Weekly Cases and Deaths per 100,000 Population: CDC COVID Tracker

Dec. 2020: FDA issues first Emergency Use Authorization (EUA) for a COVID-19 Vaccine.



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COVID-19 Vaccination Efforts That Can Benefit Routine Adult Vaccination

- Infrastructure improvements
  - Including expanded use of immunization information systems
- New or expanding partnerships
  - CDC funded partnerships focusing on equity, Area Agencies on Aging and Disability-focused organizations, HUD-HRSA collaboration for persons in HUD-supported housing, rural health association, others
- Greater awareness of barriers for adults
  - E.g., among persons with disabilities, in rural areas, homebound, other disproportionately impacted populations
- Leveraging experience with increasing access to COVID-19 vaccination to all adult vaccinations

Burden of Adult Vaccine-preventable Disease Among U.S. Adults

- Streptococcus pneumoniae[1]
  - Pneumococcal Pneumonia ~ 400,000 hospitalizations per year
  - Up to 36% of adult community-acquired pneumonias
  - Pneumococcal Bacteremia ~ 12,000 cases per year
  - Pneumococcal Meningitis ~ 3,000–6,000 cases per year
- Pertussis[2]
  - 19,000 total reported cases 2019
  - 4,400 among adults 20 years of age & older

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1. https://www.cdc.gov/vaccines/pubs/pinkbook/pneumo.html.
2. https://www.cdc.gov/pertussis/downloads/pertuss-surv-report-2019.pdf .

Burden of Adult Vaccine-preventable Disease Among U.S. Adults

- Hepatitis B[1]
  - 20,700 estimated new infections in 2019
  - 80% among adults 30-59 years of age
- Zoster[2]
  - 1 million cases per year - lifetime risk 32%
- Measles[3]
  - California/multi-state 2015 outbreak, 55% of infections were in adults 20 years of age and older

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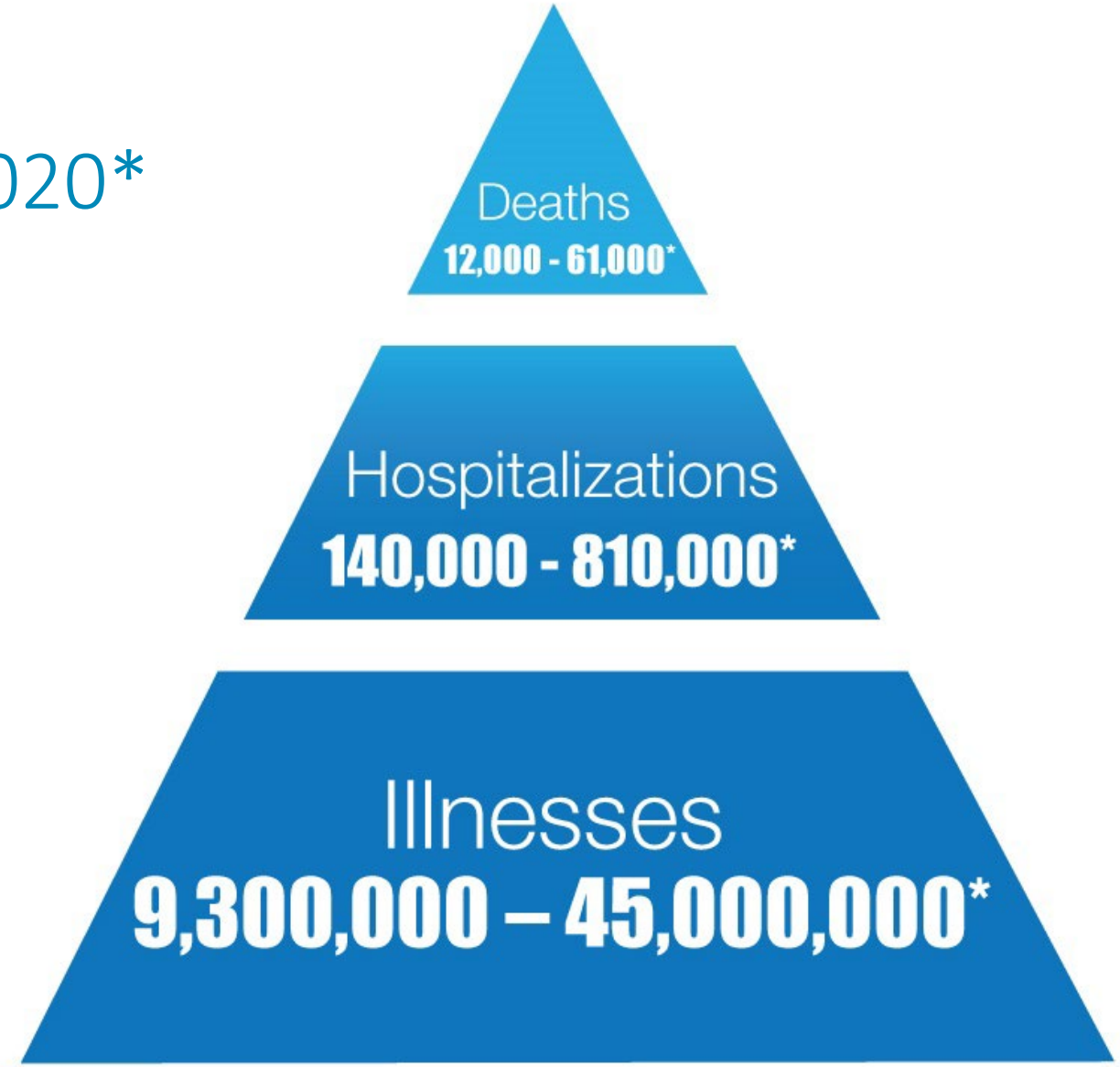
1. CDC. Viral Hepatitis Surveillance United States. www.cdc.gov/hepatitis/statistics/2016surveillance/pdfs/2016hepsurveillancerpt.pdf
2. https://www.cdc.gov/pertussis/downloads/pertuss-surv-report-2019.pdf.
3. Morbidity and Mortality Weekly Report. April 17, 2015 / 64(14);373-376

Burden of Influenza, 2010-2020*

- From 2010-2020, adults 65 years and older accounted for:
  - 45-67% of influenza-related hospitalizations
  - 62-87% of influenza-related deaths



*The top range of these burden estimates are from the 2017-2018 flu season. These are preliminary and may change as data are finalized.

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Cost Burden of 4 Adult Vaccine-Preventable Diseases in Persons Age 65 Years and Older, United States, 2013

Vaccine-Preventable Disease	Estimated # of CASES	Estimated COSTS (Medical & Indirect) *(in millions)*
Influenza	4,019,759	8,312.8
Pneumococcal	440,187	3,787.1
Zoster	555,989	3,017.4
Pertussis	207,241	212.5
		$15,329.8

Additional $**11.2 billion** in costs if ages 50 – 64 years included

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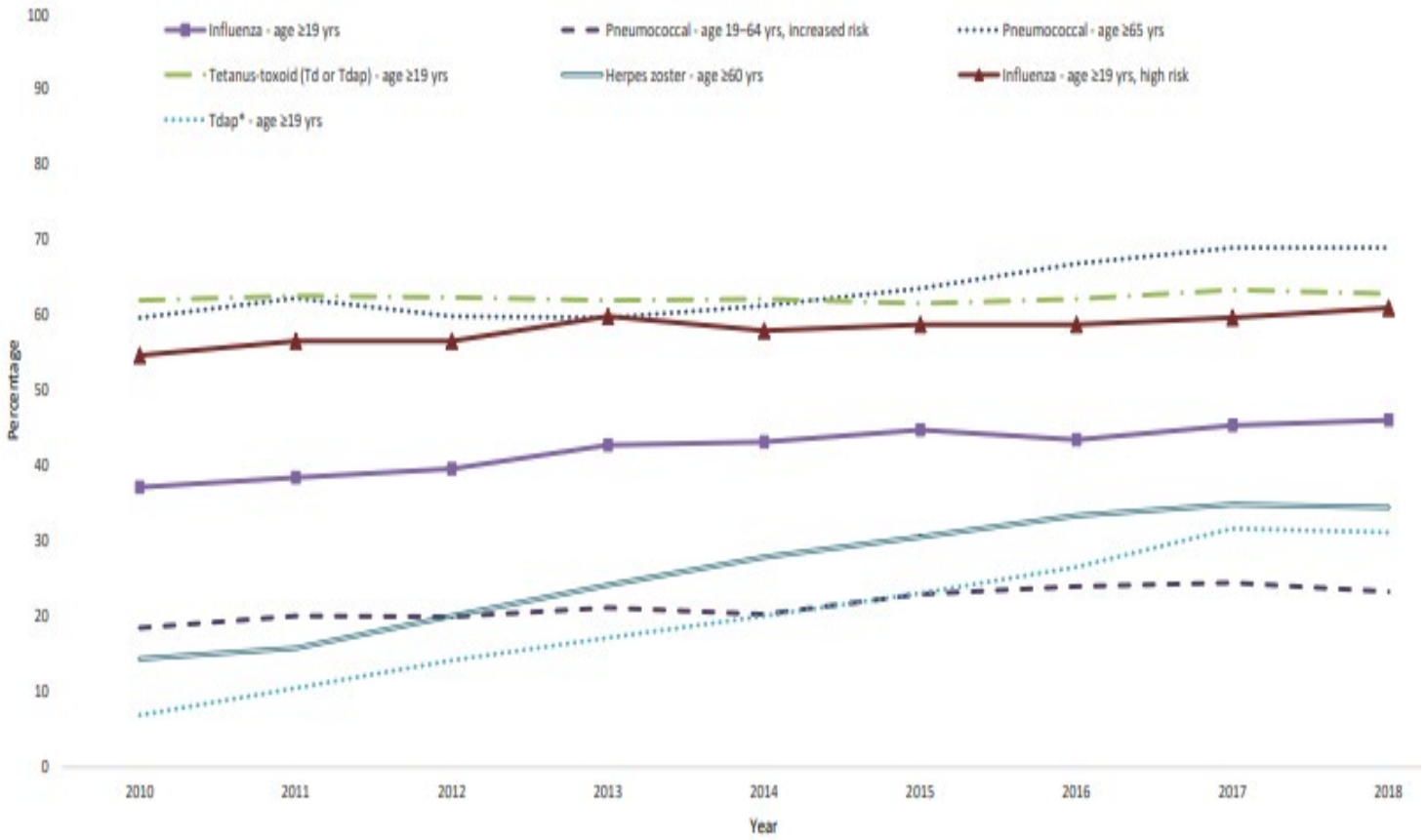
McLaughlin, JM, Tan L., et al. *J Primary Prevent* (2015) 36:259 - 273

Routinely recommended vaccines for adults

Routinely recommended vaccines for adults have historically low uptake, leaving adults vulnerable to vaccine-preventable illness, disability and death.



2018 NHIS Estimates

Flu **65**+ = 70%

Flu 18-64 = 42%

Pneumococcal 65+ = 69%

Pneumococcal high risk = 23%

Zoster 60+ = 34.5%

Td/Tdap past 10 yrs = 59%

HPV 19-26 yo = 53%

Hep A 19+ = 12%

Hep A liver dis. = 16%

Hep B 19+ = 30%

Hep B liver dis. = 33%

Disparities in routinely recommended vaccines for adults

Vaccination, age group, increased-risk status	% Vaccinated whites	Vaccination difference[§], blacks	Vaccination differences, Hispanics	Vaccination differences, Asians	Vaccination differences, other
Influenza vaccination, 2017-18 season[¶]					
≥19 yrs	49.3	-10.3**	-11.8**	1.4	-7.9**
19-49 yrs	36.5	-6.3**	-6.0**	5.1	-1.4
50-64 yrs	49.4	-3.1	-7.4**	2.8	-3.5
≥65 yrs	73.5	-13.8**	-4.6	5.7	-6.7
HCP[††],≥19 yrs	71.9	0.3	-0.2	0.7	-6.4
Pneumococcal vaccination, ever[§§]					
19-64 yrs, increased risk	23.6	2.1	-5.1**	1.4	2.2
≥65 yrs	72.6	-12.8**	-18.4**	-17.6**	-6.5
Tetanus vaccination (received in past 10 years)[¶¶]					
≥19 yrs	68.3	-18.1**	-14.3**	-13.6**	-6.4**
19-49 yrs	71.2	-18.3**	-15.5**	-12.9**	-7.7**
50-64 yrs	69.1	-22.9**	-18.1**	-20.3**	-10.6**
≥65 yrs	61.9	-15.1**	-13.0**	-12.6**	-3.0
Tetanus vaccination including pertussis vaccine (received in past 10 years)[***]					
≥19 yrs	36.7	-16.6**	-16.2**	-11.1**	-4.7
19-64 yrs	40.6	-19.6**	-18.9**	-13.1**	-7.5**
≥65 yrs	24.6	-8.8**	-13.0**	-8.9**	0.2
HCP,≥19 yrs	60.9	-22.9**	-14.1**	2.6	2.1
Hepatitis A vaccination (at least 2 doses)[†††]					
19-49 yrs	18.2	-5.4**	-2.5	5.8**	3.7
Hepatitis B vaccination (at least 3 doses)[§§§]					
19-49 yrs	43.6	-8.2**	-10.5**	1.6	-5.8
HCP,≥19 yrs	70.9	-14.5**	-13.6**	5.8	-9.6
Herpes zoster (shingles) vaccination, ever[¶¶¶]					
≥60 yrs	38.6	-19.9**	-19.1**	-9.5**	-7.7
60-64 yrs	25.4	-14.6**	-10.2**	-5.7	-7.8
≥65 yrs	44.0	-21.4**	-22.2**	-11.4**	-8.4
HPV vaccination among females (at least 1 dose), ever[****]					
19-26 yrs	56.5	-11.3	-6.9	-17.2**	1.4

Abbreviations: HCP = Health care personnel; HPV = Human papillomavirus; Td = Tetanus and diphtheria toxoids; Tdap = Tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccine.

Surveillance of Vaccination Coverage Among Adult Populations — United States, 2018: https://www.cdc.gov/mmwr/volumes/70/ss/ss7003a1.htm.

Call To Action – Adult Immunization rates must be improved!

AND…

- Routinely recommended vaccinations have fallen during the COVID-19 pandemic, impacting already low adult vaccination rates.

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Impact of the COVID-19 pandemic on immunization coverage rates

Impact of the COVID-19 Pandemic on Adult HPV, Pneumococcal, and Zoster Vaccinations – Mawuli Nyaku, DrPH, MBA, MPH, (Merck) - https://www.izsummitpartners.org/2021-07-15/#toc3.

The COVID-19 Pandemic: Impact on US Adolescent and Adult Vaccine Utilization Across Markets – Loren Becker (Avalere Health) - https://avalere.com/insights/updated-analysis-finds-sustained-drop-in-routine-vaccines-through-2020.

Vaccination Equity in the COVID-19 Era - https://covid19vdev.wpengine.com/wp-content/uploads/2022/01/CVEEP_WhitePaper_Jan-2022.pdf.

Vaccination Coverage with Selected Vaccines and Exemption Rates Among Children in Kindergarten — United States, 2020–21 School Year - https://www.cdc.gov/mmwr/volumes/71/wr/mm7116a1.htm?s_cid=mm7116a1_w.

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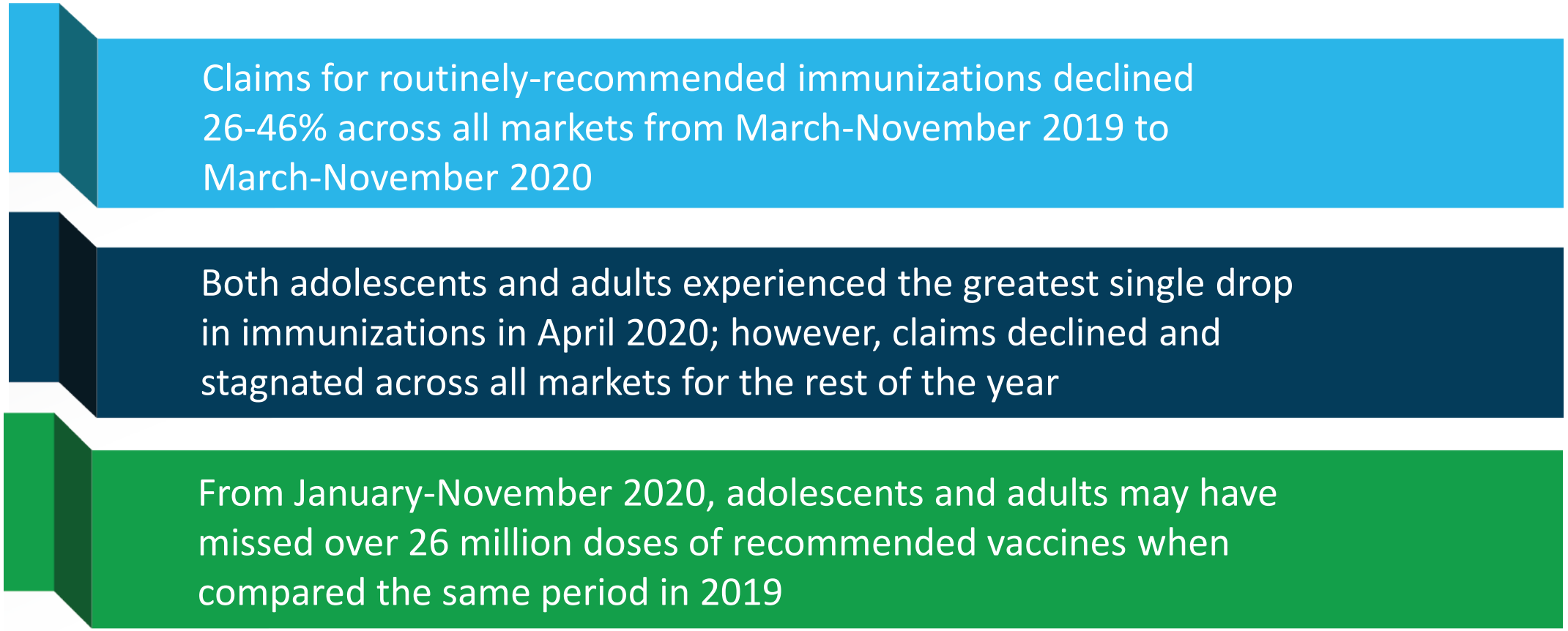
The Pandemic Has Led to a Significant and Sustained Drop In Immunization Rates Among Teens and Adults



Source: Avalere analysis of 2019-2020 Commercial, Managed Medicaid, and Medicare Advantage claims using the Inovalon MORE^2 Registry® and Medicare Fee-for-Service claims from a provider clearinghouse dataset maintained by Inovalon. Funding for this research was provided by GlaxoSmithKline. Avalere Health retained full editorial control.

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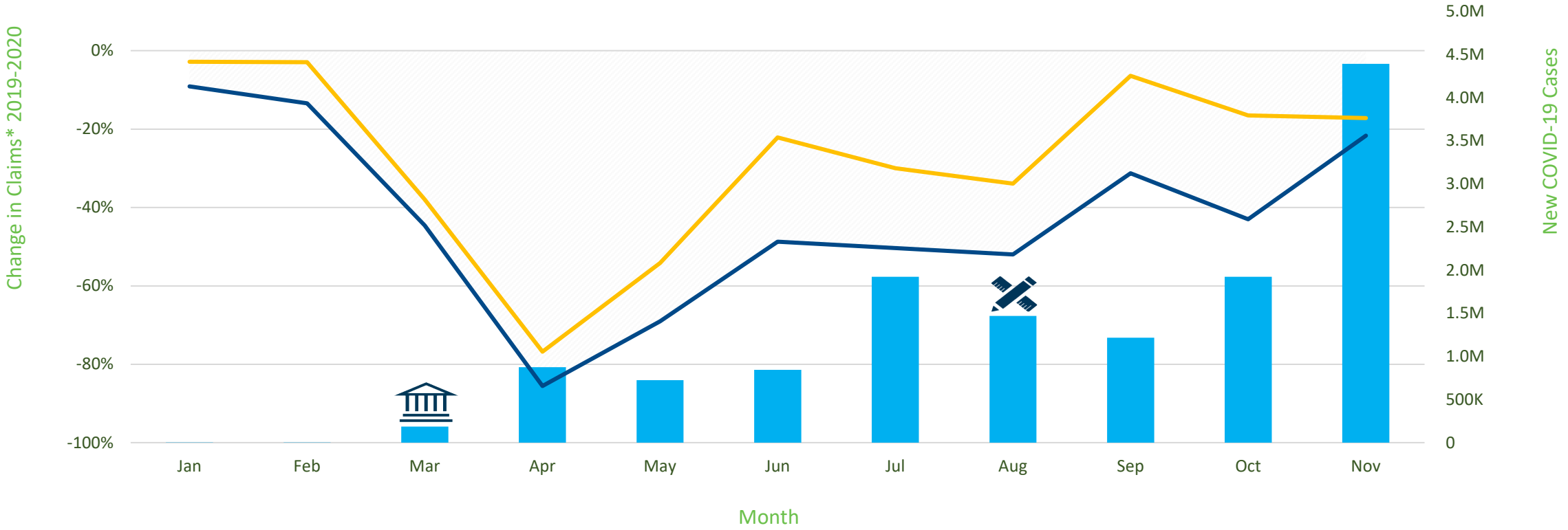
In 2020, Adolescent Vaccine Claims Rebounded Slightly in the Fall but Largely Remained Well Below 2019 Levels



Note: Influenza vaccine claims excluded due to seasonality
FFS: Fee-for-service; PREP: Public Readiness and Emergency Preparedness Act
Source: Avalere analysis of 2019-2020 Commercial and Managed Medicaid claims using the Inovalon MORE^2 Registry®.

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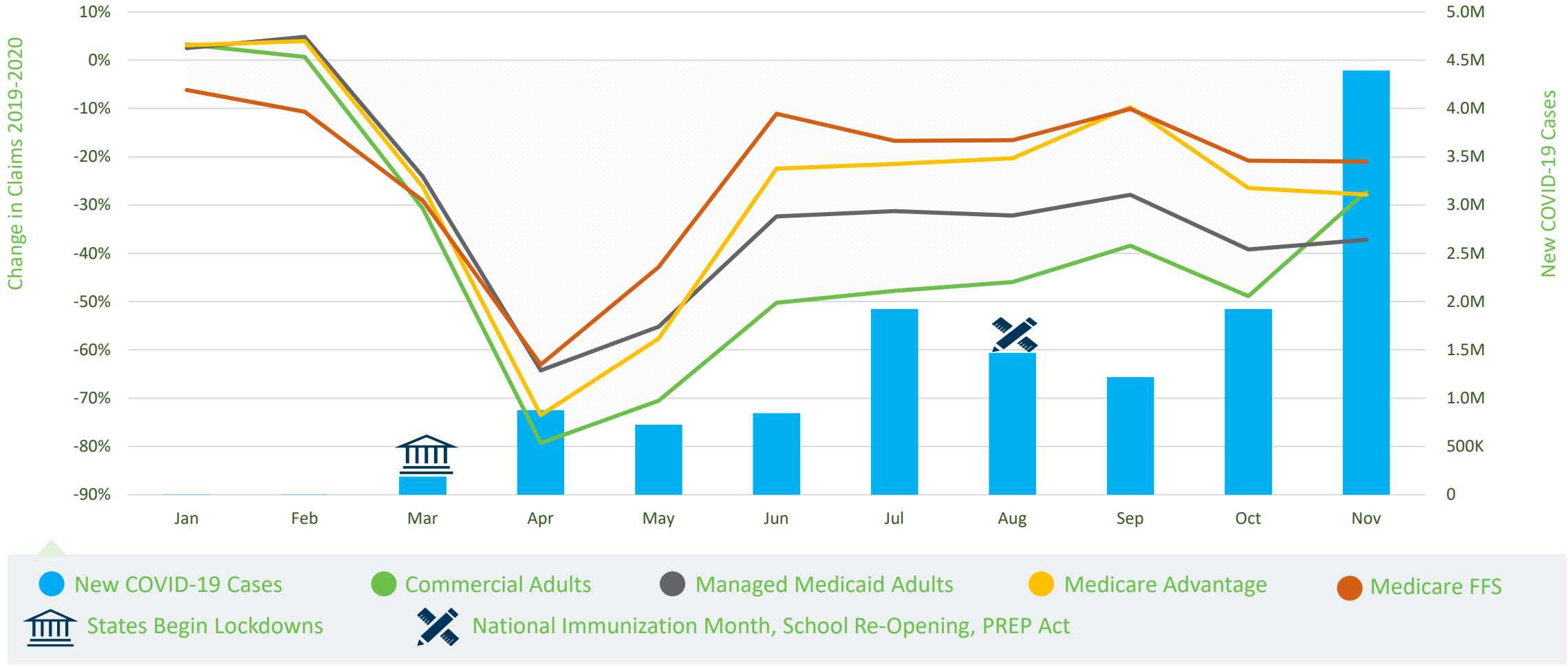
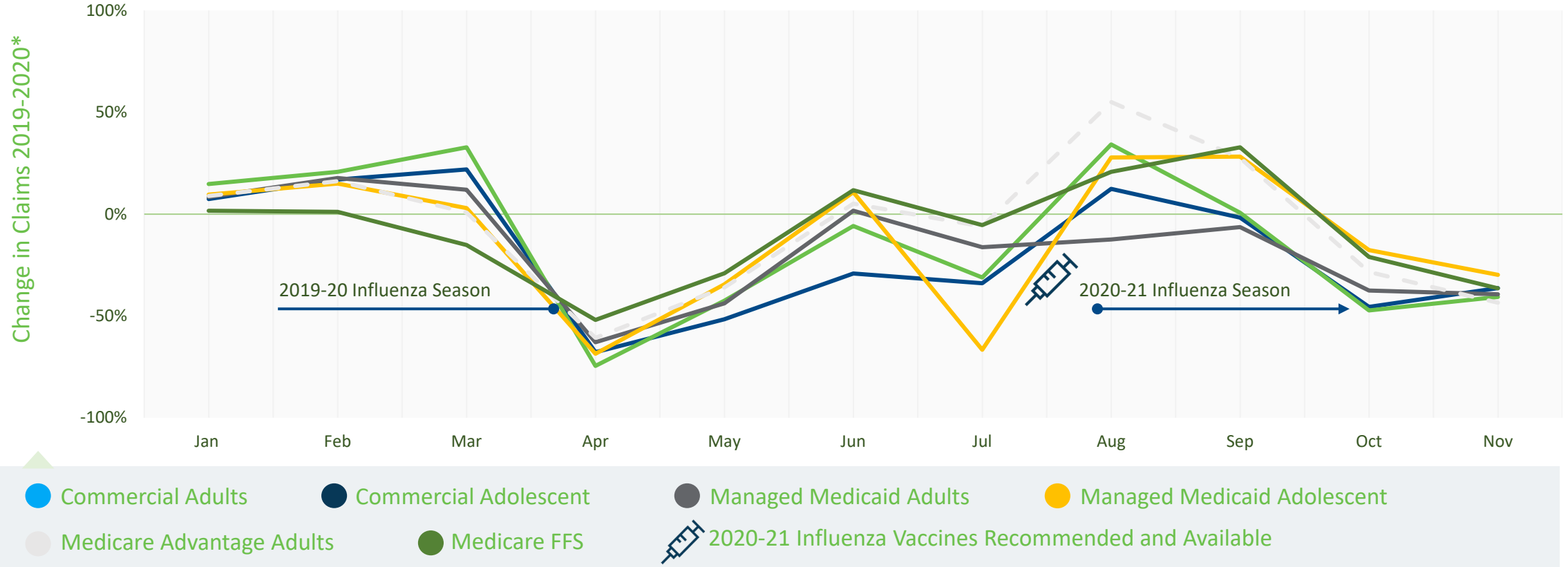
In 2020, Adult Vaccinations Declined Sharply As COVID-19 Cases Rose and Remained Well Below 2019 Levels



Note: Influenza vaccine claims excluded due to seasonality
FFS: Fee-for-service; PREP Act: Public Readiness and Emergency Preparedness Act
Source: Avalere analysis of 2019-2020 Commercial, Managed Medicaid, and Medicare Advantage claims using the Inovalon MORE^2 Registry® and Medicare Fee-for-Service claims from a provider clearinghouse dataset maintained by Inovalon.

In the 2020-2021 Flu Season, Early Gains in Flu Vaccination Dropped Off Later in the Fall



Heightened awareness of respiratory illness may have driven influenza vaccination uptake earlier in the 2020-2021 season compared to the 2019-2020 season.

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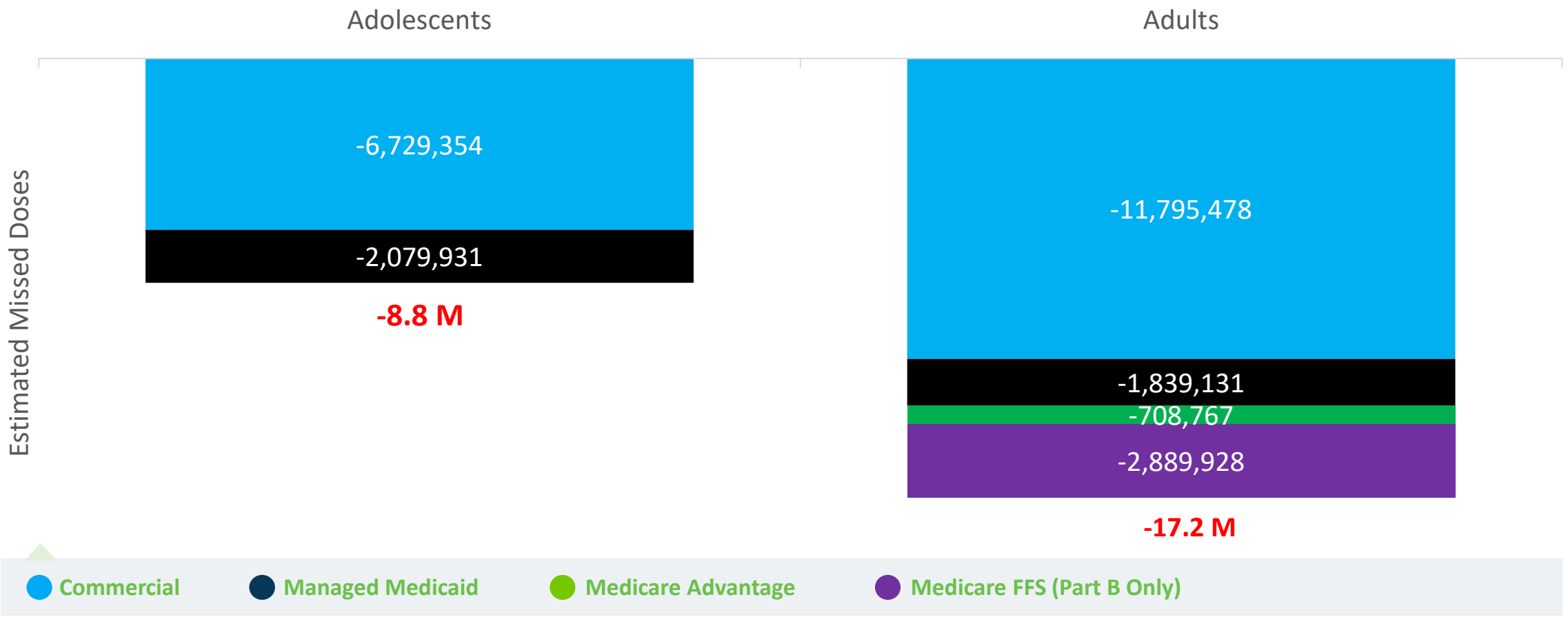
FFS: Fee-for-service

Source: Avalere analysis of 2019-2020 Commercial, Managed Medicaid, and Medicare Advantage claims using the Inovalon MORE^2 Registry® and Medicare Fee-for-Service claims from a provider clearinghouse dataset maintained by Inovalon.

Adolescents and Adults Missed An Estimated 26M+ Doses of Recommended Vaccines in 2020 vs. 2019



FFS: Fee-for-service
Note: Avalere used national enrollment data to extrapolate the difference between observed 2019 and 2020 vaccine claims to estimate the potential number of "missed doses" in 2020 on a national level. Here, "missed doses" refers to the decrease in doses of recommended adolescent and adult vaccines from 2019 to 2020.
Source: Avalere analysis of 2019-2020 Commercial, Managed Medicaid, and Medicare Advantage claims using the Inovalon MORE^2 Registry® and Medicare Fee-for-Service claims from a provider clearinghouse dataset maintained by Inovalon.

Recovery from the pandemic lows is still not there…even in pediatrics

- During the 2020–21 school year, vaccination coverage among kindergartners nationwide was lower than during the 2019–20 school year at approximately 94% for MMR, DTaP, and varicella vaccines, a level just under the target of 95%; coverage for all three vaccines decreased in a majority of states.[1]
- Administration of routine childhood vaccines returned to pre-pandemic levels in ten US jurisdictions from June-September 2020 after the substantial declines from March-May 2020 but noted that this rebound was insufficient to catch up all children that were behind.[2]

1. Vaccination Coverage with Selected Vaccines and Exemption Rates Among Children in Kindergarten — United States, 2020–21 School Year - https://www.cdc.gov/mmwr/volumes/71/wr/mm7116a1.htm?s_cid=mm7116a1
2. Impact of the COVID-19 Pandemic on Administration of Selected Routine Childhood and Adolescent Vaccinations – 10 US Jurisdictions, March-September 2020, https://www.cdc.gov/mmwr/volumes/70/wr/mm7023a2.htm?s_cid=mm7023a2

The majority of U.S. adults are missing at least one recommended vaccine.

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Routinely recommended vaccines for adults

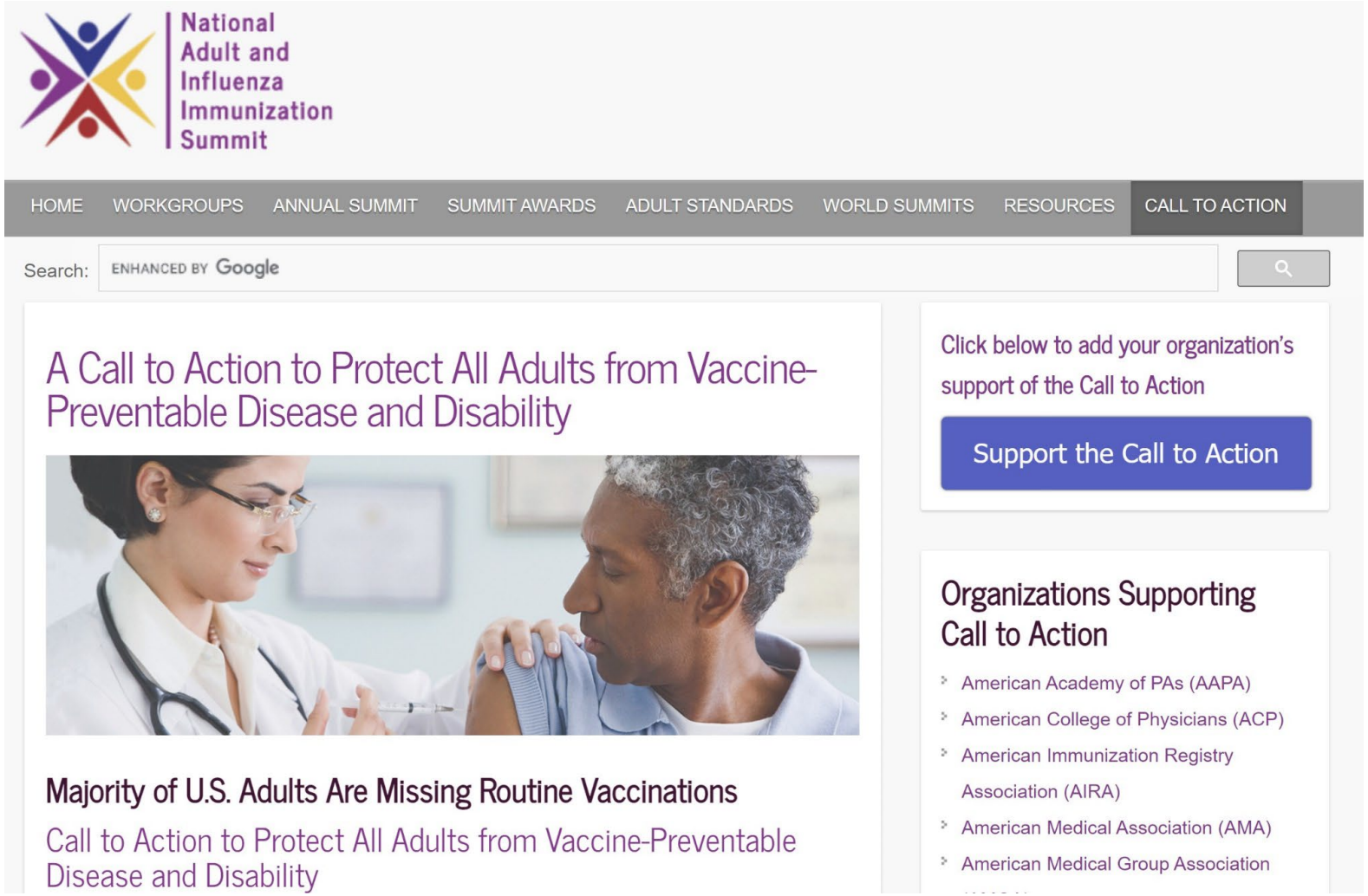
- Substantial disparities in vaccination rates by race, ethnicity, education, income, and insurance status
- At least 3 of every 4 adults are not up-to-date on just four of these routinely recommended vaccines.

Vaccination Coverage Estimates Using an Age-Appropriate Composite* Adult Vaccination Quality Measure and Individual Component Measures, by Age Group — National Health Interview Survey, United States, 2018. [Table reproduced from Lu P, et al., MMWR Surveill Summ 2021;70(No. SS-3):1–26.]

Proportion with age-appropriate vaccination for flu, Td/Tdap, pneumococcal and zoster vaccines	% (95% CI)			
	≥19 yrs	19–49 yrs	50–64 yrs	≥65 yrs
	(n = 25,207)†	(n = 11,318)†	(n = 6,592)†	(n = 7,297)†
Tdap only§	13.5 (12.7–14.3)	18.7 (17.4–19.9)	3.9 (3.2–4.8)	11.2 (10.0–12.5)
Td or Tdap¶	20.2 (19.4–21.0)	25.7 (24.5–26.9)	6.7 (6.0–7.6)	22.6 (21.2–24.0)

National Adult and Influenza Immunization Summit (NAIIS) Call to Action*

https://www.izsummitpartners.org/call-to-action-adult-immunizations/



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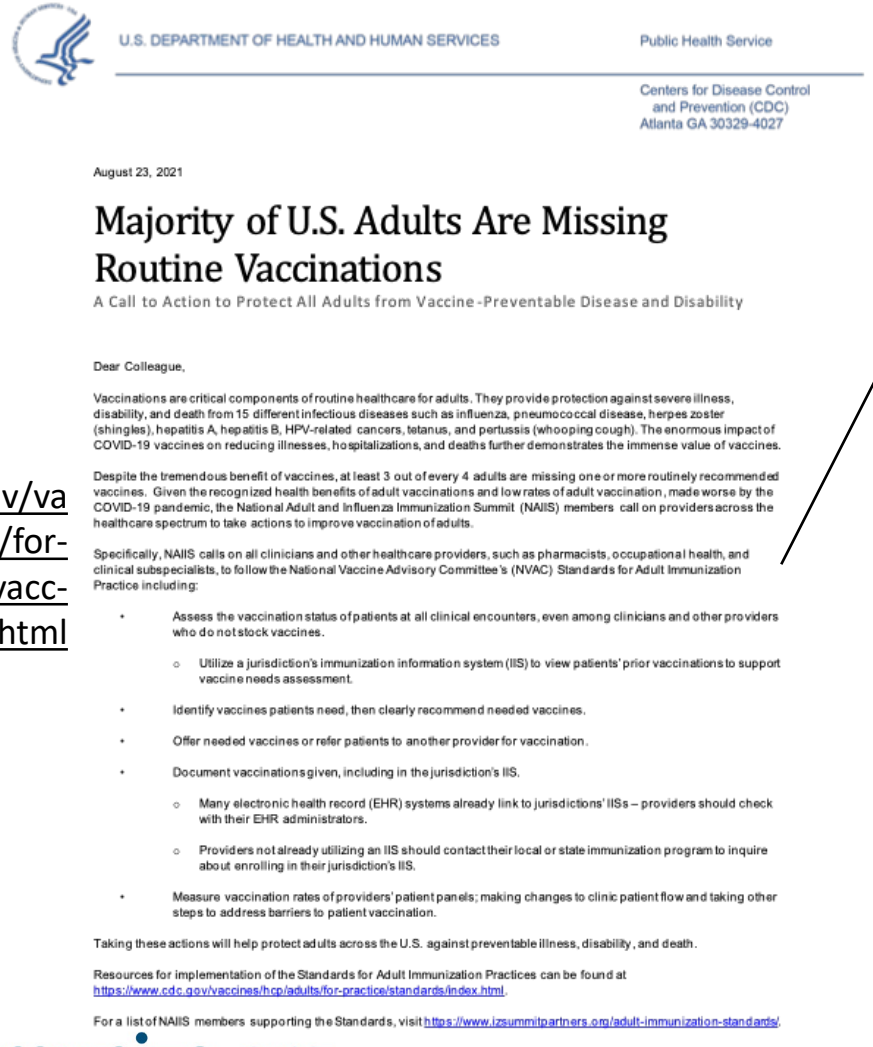
National Adult and Influenza Immunization Summit (NAIIS) Call to Action*



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES — Public Health Service

Centers for Disease Control and Prevention (CDC)
Atlanta GA 30329-4027

August 23, 2021

Majority of U.S. Adults Are Missing Routine Vaccinations

A Call to Action to Protect All Adults from Vaccine-Preventable Disease and Disability

Dear Colleague,

Vaccinations are critical components of routine healthcare for adults. They provide protection against severe illness, disability, and death from 15 different infectious diseases such as influenza, pneumococcal disease, herpes zoster (shingles), hepatitis A, hepatitis B, HPV-related cancers, tetanus, and pertussis (whooping cough). The enormous impact of COVID-19 vaccines on reducing illnesses, hospitalizations, and deaths further demonstrates the immense value of vaccines.

Despite the tremendous benefit of vaccines, at least 3 out of every 4 adults are missing one or more routinely recommended vaccines. Given the recognized health benefits of adult vaccinations and low rates of adult vaccination, made worse by the COVID-19 pandemic, the National Adult and Influenza Immunization Summit (NAIIS) members call on providers across the healthcare spectrum to take actions to improve vaccination of adults.

Specifically, NAIIS calls on all clinicians and other healthcare providers, such as pharmacists, occupational health, and clinical subspecialists, to follow the National Vaccine Advisory Committee's (NVAC) Standards for Adult Immunization Practice including:

- Assess the vaccination status of patients at all clinical encounters, even among clinicians and other providers who do not stock vaccines.
  - Utilize a jurisdiction's immunization information system (IIS) to view patients' prior vaccinations to support vaccine needs assessment.
- Identify vaccines patients need, then clearly recommend needed vaccines.
- Offer needed vaccines or refer patients to another provider for vaccination.
- Document vaccinations given, including in the jurisdiction's IIS.
  - Many electronic health record (EHR) systems already link to jurisdictions' IISs – providers should check with their EHR administrators.
  - Providers not already utilizing an IIS should contact their local or state immunization program to inquire about enrolling in their jurisdiction's IIS.
- Measure vaccination rates of providers' patient panels; making changes to clinic patient flow and taking other steps to address barriers to patient vaccination.

Taking these actions will help protect adults across the U.S. against preventable illness, disability, and death.

Resources for implementation of the Standards for Adult Immunization Practices can be found at https://www.cdc.gov/vaccines/hcp/adults/for-practice/standards/index.html.

For a list of NAIIS members supporting the Standards, visit https://www.izsummitpartners.org/adult-immunization-standards/.

https://www.cdc.gov/vaccines/hcp/adults/for-practice/increasing-vacc-rates.html

Standards for Adult Immunization Practice

- **Assess** the vaccination status of patients at all clinical encounters
- **Identify** vaccines patients need, then clearly **recommend** needed vaccines.
- **Offer** needed vaccines or refer patients to another provider for vaccination.
- **Document** vaccinations given.
- **Measure** vaccination rates of providers' patient panels.

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*https://www.izsummitpartners.org/call-to-action-adult-immunizations/.

Concrete steps needed to improve adult vaccination uptake.

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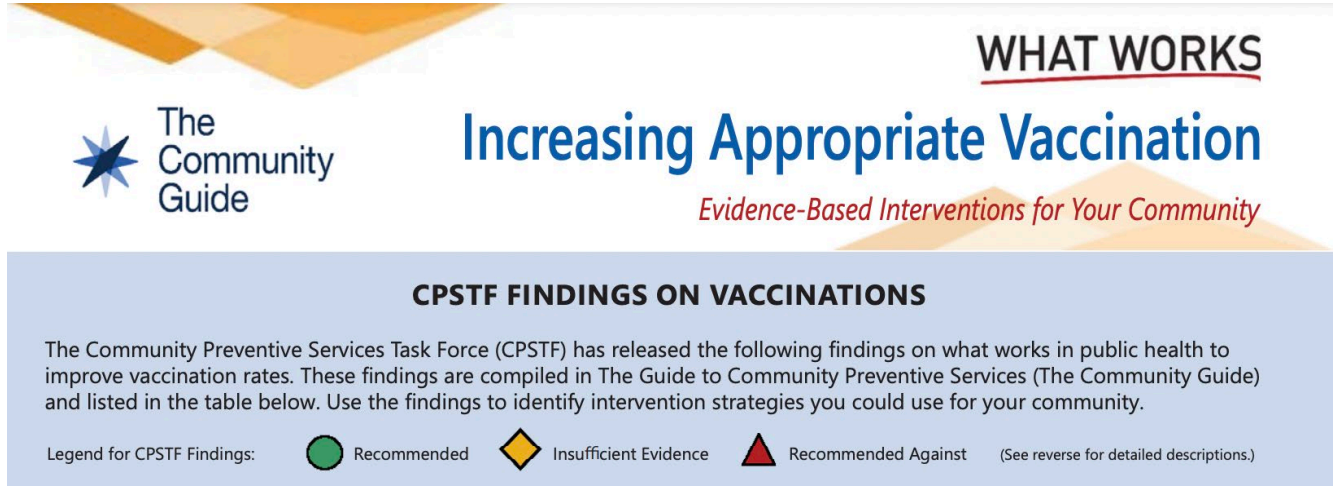
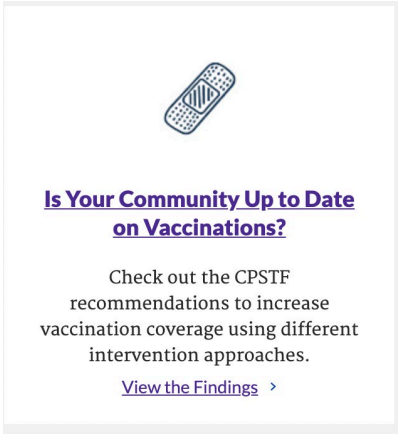
Additional Strategies to Promote Adult Vaccination





Three categories of strategies:

- Enhancing Access to Vaccination Services
- Increasing Community Demand for Vaccinations
- Provider- or System-Based Interventions

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https://www.thecommunityguide.org/topic/vaccination

From the Community Guide[1]

- Enhance Access to Vaccines
  - Innovative access points
  - Eliminate out-of-pocket costs
- Increase Community Demand for Vaccines
  - Patient reminder recalls
  - Family incentives
- Leverage your Healthcare Provider
  - Concise consistent confident recommendation
  - Presumptive
- Engage the healthcare system
  - Systems-based change: provider reminders, assessment and feedback, standing orders, health IT

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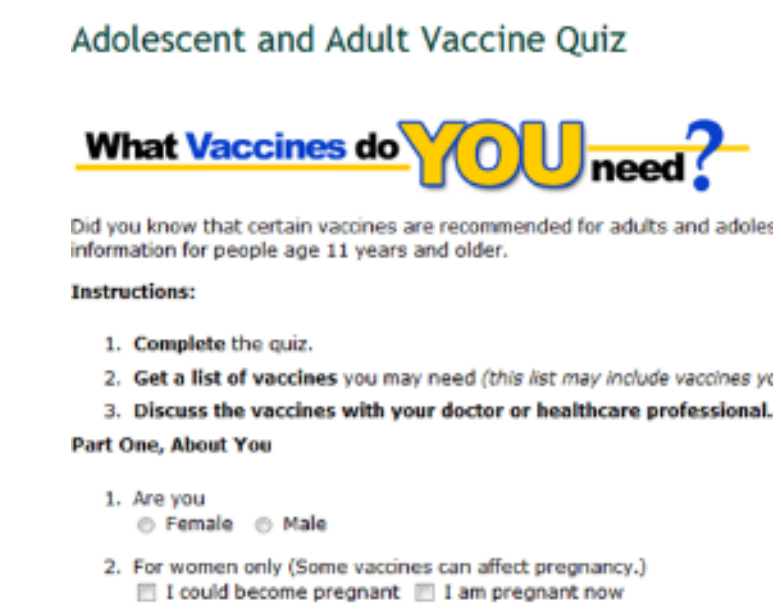
1. http://www.thecommunityguide.org/vaccines/index.html

Effective Strategies to Increase Adult Vaccination Coverage

Intervention	Population
Reducing client out-of-pocket costs for vaccinations	Adults
Client reminder/recall systems	Adults
Community-based interventions when implemented in combination	Adults
Provider reminder systems when used alone	Adults
Provider assessment and feedback	Adults
Standing orders	Adults
Health care-based interventions when implemented in combination	Adults
Worksite interventions with on-site, reduced-cost, actively promoted influenza vaccinations	Adults, healthcare personnel

Share Resources For Vaccine Needs Assessment

- Patient check-in vaccine questionnaire to be used at clinics: http://www.cdc.gov/vaccines/hcp/patient-ed/adults/downloads/patient-intake-form.pdf.
- Patient on-line quiz – direct patients to complete the quiz before coming to their appointment – gives them and you a starting point for talking about which vaccines they might need. http://www2.cdc.gov/nip/adultimmsched/.
- CDC adult vaccine schedule app at: http://www.cdc.gov/vaccines/schedules/hcp/schedule-app.html.


Adolescent and Adult Vaccine Quiz

What Vaccines do YOU need?

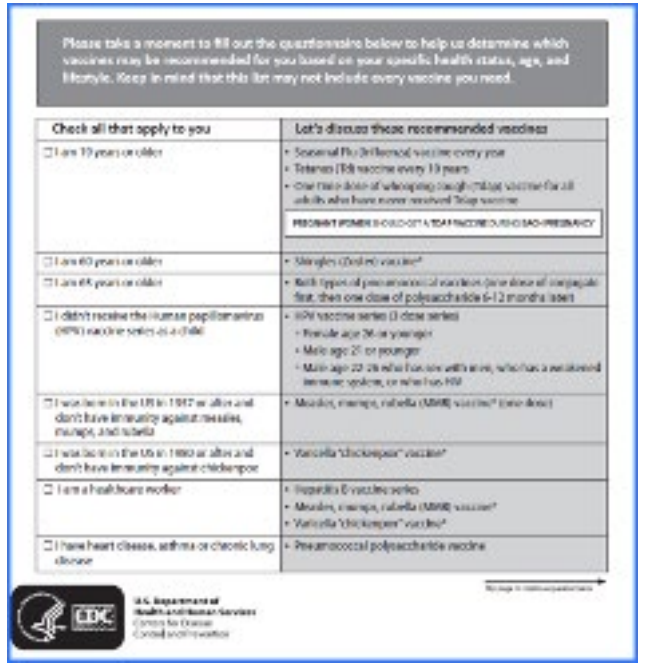
Did you know that certain vaccines are recommended for adults and adoles
information for people age 11 years and older.

Instructions:

1. **Complete** the quiz.
2. **Get a list of vaccines** you may need *(this list may include vaccines yo*
3. **Discuss the vaccines with your doctor or healthcare professional.**

Part One, About You

1. Are you
   Female Male
2. For women only (Some vaccines can affect pregnancy.)
   I could become pregnant I am pregnant now


Please take a moment to fill out the questionnaire below to help us determine which vaccines may be recommended for you based on your specific health status, age, and lifestyle. Keep in mind that this list may not include every vaccine you need.

Check all that apply to you	Let's discuss these recommended vaccines
☐ I am 19 years or older	• Seasonal flu (influenza) vaccine every year • Tetanus (Td) vaccine every 10 years • One time dose of whooping cough (Tdap) vaccine for all adults who have never received Tdap vaccine PREGNANT WOMEN SHOULD GET A TDAP VACCINE DURING EACH PREGNANCY
☐ I am 60 years or older	• Shingles (Zoster) vaccine*
☐ I am 65 years or older	• Both types of pneumococcal vaccines (one dose of each) starting first, then one dose of polysaccharide 6-12 months later
☐ I didn't receive the human papillomavirus (HPV) vaccine series as a child	• HPV vaccine series (3 dose series) • Female age 26 or younger • Male age 21 or younger • Male age 22-26 who has sex with men, who has a weakened immune system, or who has HIV
☐ I was born in the US in 1957 or after and don't have immunity against measles, mumps, and rubella	• Measles, mumps, rubella (MMR) vaccine* (one dose)
☐ I was born in the US in 1980 or after and don't have immunity against chickenpox	• Varicella "chickenpox" vaccine*
☐ I am a healthcare worker	• Hepatitis B vaccine series • Measles, mumps, rubella (MMR) vaccine* • Varicella "chickenpox" vaccine*
☐ I have heart disease, asthma or chronic lung disease	• Pneumococcal polysaccharide vaccine

Immunize.org has developed Mass Immunization Clinic Resource Repos

Mass Vaccination Res

https://www.mass-vaccination-resources.org/

Resources fo loping Mass Vaccination Clinics

Mass vaccin olve the administration of vaccine(s) to a large number o ver a relatively short period of time, allowing providers to rapidly and iciently immunize communities. Due to the unique nature of mass vaccination clinics, they frequently are held in non-traditional or temporary settings, such as in parking lots or large indoor spaces. Patient flow may be managed through a variety of venues, such as walk-through, drive-through, and curbside clinics, or by using mobile medical units.

Webinar

Related Resources

About

Harnessing COVID-19 vaccine R & D for future vaccines

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Future Directions for mRNA Vaccines

- mRNA vaccine research and development is not new! It has been in process for more than a decade and was used to develop a vaccine against the original SARS and MERS viruses
- The SARS-CoV-2 S protein is highly immunogenic; this will not translate to all diseases
- The ease and speed at which mRNA vaccines can be designed and produced
  - Represent a big step forward in vaccinology (iterative)
  - Lend mRNA vaccines to many applications

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Future Directions for mRNA Vaccines

Virus	Vaccine Candidate	Developer	Clinical Trial Status
CMV[a]	mRNA-1647	Moderna	Phase 2/phase 3 planned for 2021
RSV[a]	mRNA-1345	Moderna	Phase 1
HIV	eOD-GT8[b]	IAVI/Scripps	Phase 1
	mRNA-1644, mRNA-1574[a]	IAVI NIH	Phase 1 planned for 2021
Influenza virus[a]	mRNA-1010	Moderna	Phase 1 planned for 2021

IAVI, International AIDS Vaccine Initiative.

Future Directions for other platforms

Virus	Vaccine Platform	Developer	Clinical Trial Status
Chikungunya	adenoviral	Oxford- Jenner Institute	Phase 2
Malaria	VLP	Various, including NIAID, Oxford	Phase 1
HIV	adenoviral	Jannsen	Phase 3
Influenza virus[a]	VLP/nanoparticle	NIAID;Novavax	Phase 2/3

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ACIP Updates

Pneumococcal Vaccination Recommendations

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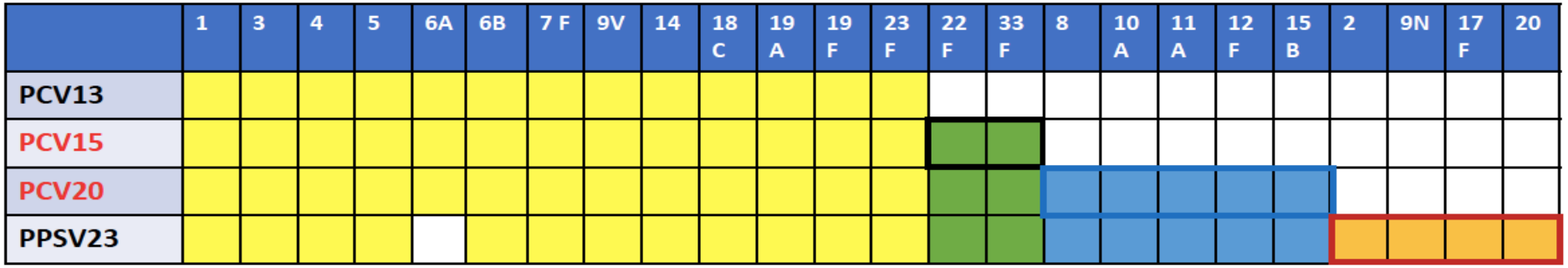
New pneumococcal conjugate vaccines

- Cover additional serotypes than PCV13
- PCV 15 and PCV20 not yet licensed for children

Serotypes Contained in Current and New Pneumococcal Vaccines



- **PCV15 non-PCV13**: includes serotypes **22F and 33F**
- **PCV20 non-PCV13**: includes serotypes **22F, 33F, 8, 10A, 11A, 12F, and 15B**
- **PPSV23 non-PCV20**: includes serotypes **2, 9N, 17F, and 20**

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ACIP Recommendation

- Adults aged ≥65 years who have not previously received PCV or whose previous vaccination history is unknown should receive 1 dose of PCV (either PCV20 or PCV15). When PCV15 is used, it should be followed by a dose of PPSV23
  - 1 dose of PCV20 or 1 dose of PCV15 followed by a dose of PPSV23 ≥1 years later.

ACIP Recommendation

- Adults aged 19–64 years with certain underlying medical conditions or other risk factors who have not previously received PCV or whose previous vaccination history is unknown should receive 1 dose of PCV (either PCV20 or PCV15). When PCV15 is used, it should be followed by a dose of PPSV23.
  - 1 dose of PCV20 or 1 dose of PCV15 followed by a dose of PPSV23 ≥1 years later

Resources for Implementation of Pneumococcal Vaccination in Adults

- Immunize.org's Updated Standing Orders Template - https://www.immunize.org/catg.d/p3075.pdf
  - Immunize.org's template breaks down which vaccine should be given based upon patient's previous history of pneumococcal vaccination
- PneumoRecs VaxAdvisor Mobile App for Vaccine Providers - https://www.cdc.gov/vaccines/vpd/pneumo/hcp/pneumoapp.html
- CDC Clinical Guidance: https://www.cdc.gov/vaccines/vpd/pneumo/hcp/who-when-to-vaccinate.html

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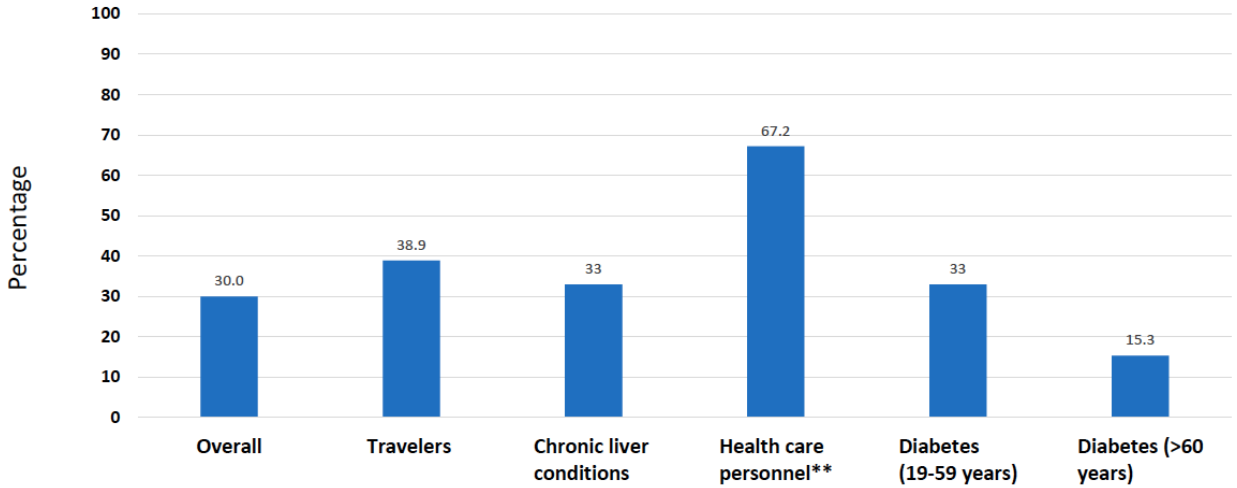
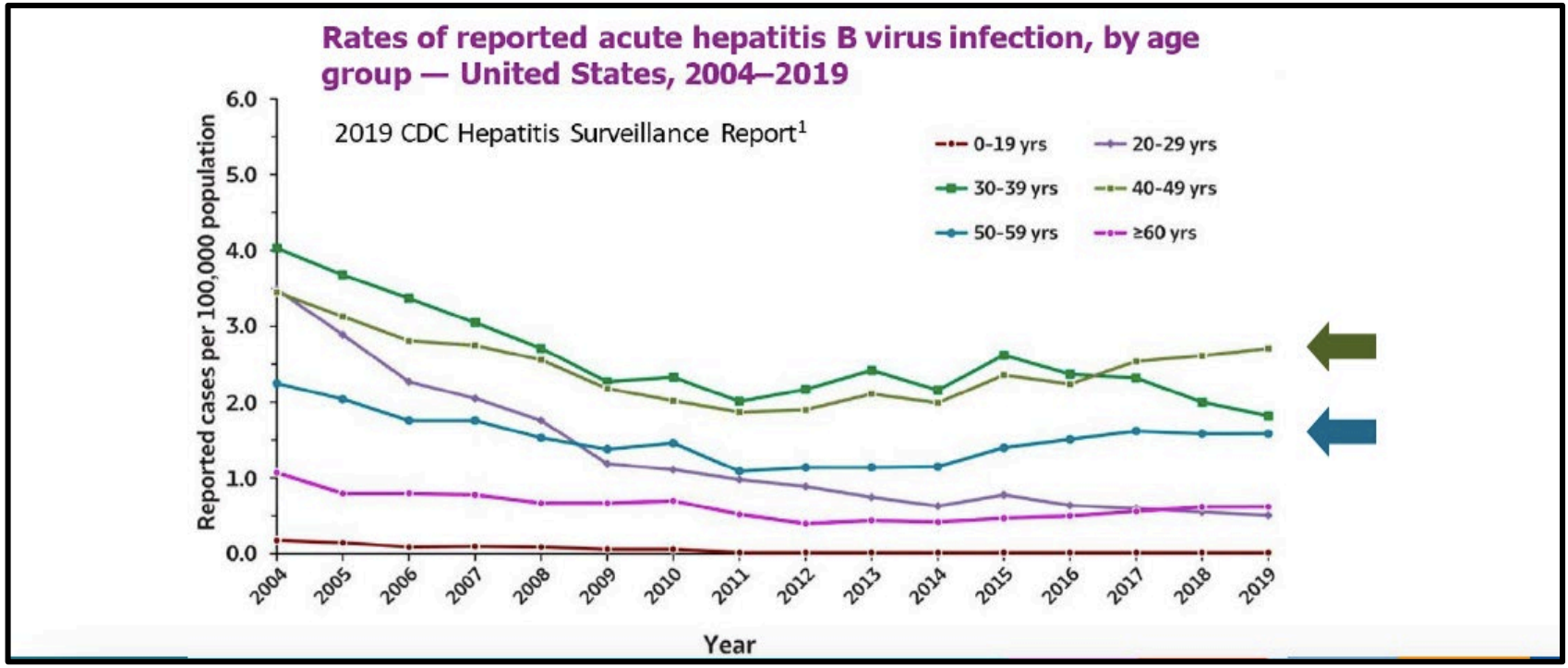
Hepatitis B Vaccination Recommendations

Hepatitis B vaccine coverage (≥3 doses) among adults aged ≥19 years*





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Failure of a risk-based hepatitis B vaccination recommendation

- New ACIP recommendation signals a paradigm shift for hepatitis B vaccination
- Success of the pediatric hepB vaccination program evident but continued increasing number of cases in adults older than 40 years
- Risk-based strategy challenging for many reasons, including:*
  - Many with no identified risk factors for Hepatitis B
  - Access to vaccination and limited implementation of risk-based strategies
- National survey: 68% of family physicians indicated patient nondisclosure of risk factors as a barrier and 44% indicated inadequate time to assess for risk factors*
- Routine hepB vaccination could increase the number of persons who receive vaccination before the onset of chronic conditions (e.g., obesity or diabetes) that might make vaccination less effective

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***Weng MK, Doshani M, Khan MA, et al. Universal Hepatitis B Vaccination in Adults Aged 19–59 Years: Updated Recommendations of the Advisory Committee on Immunization Practices — United States, 2022. MMWR Morb Mortal Wkly Rep 2022;71:477–483**

ACIP Recommendation

- The ACIP recommends the following groups should receive hepatitis B vaccines:
  - Adults 19 through 59 years of age
  - Adults 60 years of age and older with risk factors for hepatitis B infection
- The ACIP recommends the following groups may receive hepatitis B vaccines:
  - Adults 60 years of age and older without known risk factors for hepatitis B infection
- Infants and all other persons aged <19 years are already recommended to receive hepB vaccines
- Published recommendation at: https://www.cdc.gov/mmwr/volumes/71/wr/mm7113a1.htm
- Standing Orders template at: https://www.immunize.org/catg.d/p3076.pdf

Zoster Recommendations

Recombinant Zoster Vaccine (RZV) Background

- Recommended by ACIP/CDC January 2018 ACIP for age 50 years and older (replaced Zoster Vaccine Live)*
  - 96% (95% CI 93,98) efficacy among 50-, 60-, 70-year olds2
  - Subsequent study 90% (95% CI 84,94) effectiveness among ≥70 years
  - Immunogenicity persists at least 5 years post-vaccination
- Initially, only recommended for immunocompetent persons
- However, risk of post-herpetic neuralgia and other complications several fold higher among immunocompromised persons

*Recommendations of the Advisory Committee on Immunization Practices for Use of Herpes Zoster Vaccines. Available at: https://www.cdc.gov/mmwr/volumes/67/wr/mm6703a5.htm

ACIP Recommendation

- Zoster vaccination with recombinant zoster vaccine (RZV) is recommended for all immunocompromised persons 19 years and older
  - Two doses of RZV for the prevention of shingles and related complications in adults aged ≥19 years who are or will be immunodeficient or immunosuppressed because of disease or therapy. The second dose of RZV should typically be given 2–6 months after the first.
  - However, for persons who are or will be immunodeficient or immunosuppressed and who would benefit from completing the series in a shorter period, the second dose can be administered 1–2 months after the first
- Publication of the full recommendation
  - https://www.cdc.gov/mmwr/volumes/71/wr/mm7103a2.htm
  - Clinical guidance for implementation at: https://www.cdc.gov/shingles/vaccination/immunocompromised-adults.html
- Standing Orders template at: https://www.immunize.org/catg.d/p3092.pdf

Other Recommendations

Co-administration of Other Vaccines with COVID-19 Vaccines

- Current CDC guidance indicates that COVID-19 vaccines and other vaccines, including influenza, may be co-administered without regard to timing.
- Providers should check current CDC COVID-19 vaccination guidance for updated information concerning co-administration.
- Significant number of adults >65 years of age are getting COVID-19 boosters and should be offered other appropriate vaccinations at the same time!

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Spacing of Vaccine Doses

- General Best Practices: two different vaccines may be given simultaneously
  - Same clinic day, in anatomically separated sites (>1inch); give more reactive vaccines in separate arm
  - Some exceptions for certain vaccines and certain risk groups
    - PCV13 and Menactra (asplenia, HIV infection)
- General Best Practices: two different vaccines may be given at any interval
  - Some exceptions for certain vaccines and certain risk groups
    - Menactra and DTaP (asplenia, HIV infection, complement component deficiency)
    - Most injectable live vaccine pairs need to be separated by 28 days
    - LAIV and another live vaccine needs to be separated by 28 days
    - Yellow fever and another live vaccine (including LAIV) needs to be separated by 30 days
- **New resource**! How to Administer Multiple Intramuscular Vaccines to Adults During One Visit - https://www.immunize.org/catg.d/p2030.pdf

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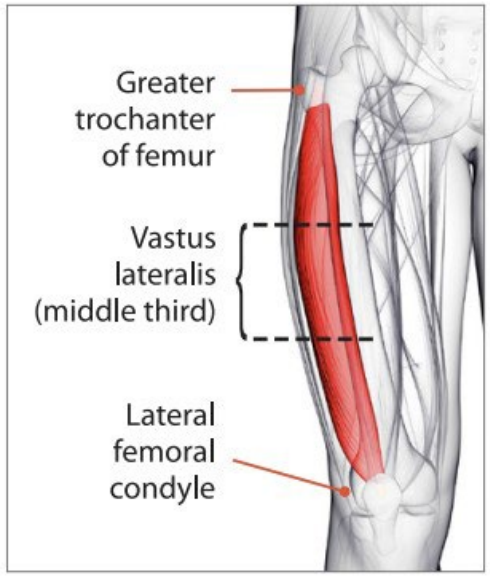
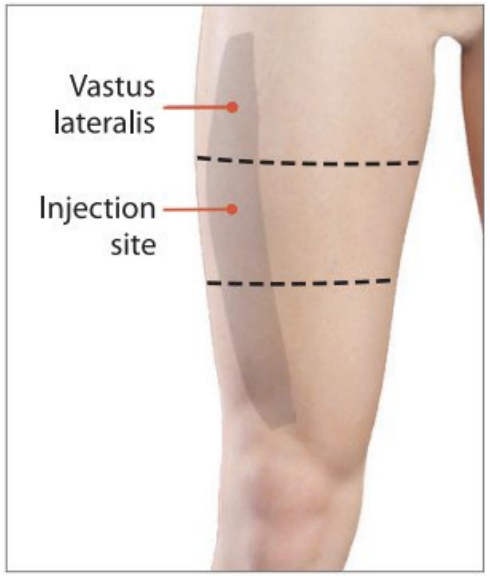
ACIP General Best Practice Guidelines for Immunization: https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html

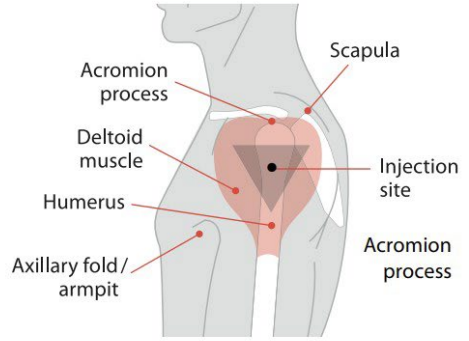
Spacing of Vaccine Doses

A single IM injection may also be administered in the anterolateral thigh muscle as shown below.



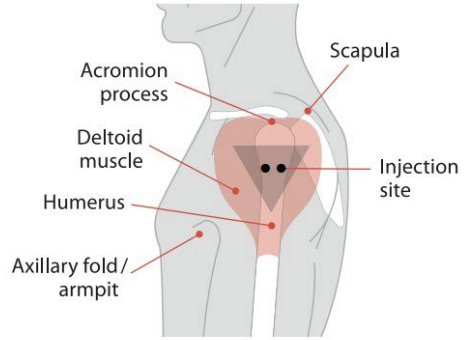


Single IM injection in deltoid



Two IM injections in deltoid

Space injections at least 1" apart.



Three IM injections in deltoid

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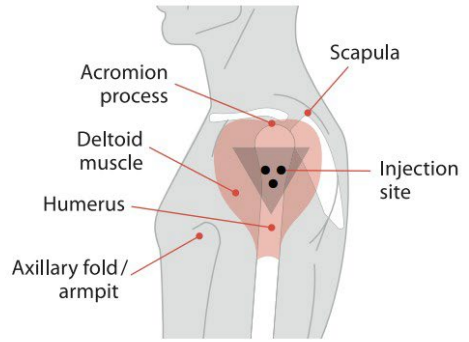

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ACIP General Best Practice Guidelines for Immunization: https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html

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- Immunize.org's Influenza Educational Materials
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Thank You for your attention!

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