The Year in Review
&
What's on the Horizon

Plus ACIP updates !

Barbara Pahud MD MPH

Associate Professor of Pediatrics

BEST CHILDREN'S HOSPITALS U.S.News RANKED IN 10 SPECIALTIES 2018-19

MAGNET RECOGNIZED AMERICAN NURSES CREDENTIALING CENTER

UMKC School of Medicine

Children's Mercy

CNN Health +

Measles cases in United States rise to 1,044

By **Jacqueline Howard**, CNN

Updated 10:42 AM ET, Mon June 17, 2019

Polio Is Back in Pakistan: Public Health Watch

JUL 31, 2019 | BRIAN P. DUNLEAVY

Global measles outbreaks make 2019 a record-setting year

Filed Under: **Measles**

Stephanie Soucheray | News Reporter | CIDRAP News | Aug 12, 2019

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Pertussis outbreak reported in Waco, TX a

by NEWS DESK

July 26, 2019 US News No Comments

Health

A flight attendant who contracted measles has died amid a global rise in outbreaks

By **Morgan Krakow**

August 13

The Washington Post
Democracy Dies in Darkness

NEWS / HEALTH

Tampa Bay Times

It's not just Florida. Hepatitis A is sweeping the country.

Florida cases have spiked this year, prompting an emergency declaration earlier this month. But the virus is spreading in most other states too. "It's scary," says an official in Ohio.

Doctors warn of further mumps surge as cases exceed 1,600

Students at increased risk of disease when schools and colleges reopen next week

Tue, Aug 13, 2019, 16:44 | Updated: Tue, Aug 13, 2019, 17:04

JAMA Network Open.

Original Investigation | Pediatrics

Association of Rotavirus Vaccination With Inpatient and Emergency Department Visits Among Children Seeking Care for Acute Gastroenteritis, 2010-2016

Daniel C. Payne, PhD, MSPH; Janet A. Englund, MD; Geoffrey A. Weinberg, MD; Natasha B. Halasa, MD; Julie A. Boom, MD; Mary Allen Staat, MD, MPH; Rangaraj Selvarangan, MD; Parvin H. Azimi, MD; Eileen J. Klein, MD, MPH; Peter G. Szilagyi, MD, MPH; James Chappell, MD, PhD; Leila C. Sahni, PhD, MPH; Monica McNeal, MS; Christopher J. Harrison, MD; Mary E. Moffatt, MD; Samantha H. Johnston, MD, MPH; Slavica Mijatovic-Rustempasic, PhD; Mathew D. Esona, PhD; Jacqueline E. Tate, PhD; Aaron T. Curns, MS, MPH; Mary E. Wikswo, MPH; Iddrisu Sulemana, MPH, MBA; Michael D. Bowen, PhD; Umesh D. Parashar, MBBS, MPH

Abstract

IMPORTANCE Rotavirus vaccines have been recommended for universal US infant immunization for more than 10 years, and understanding their effectiveness is key to the continued success of the US rotavirus vaccine immunization program.

OBJECTIVE To assess the association of RotaTeq (RV5) and Rotarix (RV1) with inpatient and emergency department (ED) visits for rotavirus infection.

DESIGN, SETTING, AND PARTICIPANTS This case-control vaccine effectiveness study was performed at inpatient and ED clinical settings in 7 US pediatric medical institutions from November 1, 2009, through June 30, 2016. Children younger than 5 years seeking medical care for acute gastroenteritis were enrolled. Clinical and epidemiologic data, vaccination verification, and results of stool sample tests for laboratory-confirmed rotavirus were collected. Data were analyzed from November 1, 2009, through June 30, 2016.

MAIN OUTCOMES AND MEASURES Rotavirus vaccine effectiveness for preventing rotavirus-associated inpatient and ED visits over time for each licensed vaccine, stratified by clinical severity and age.

RESULTS Among the 10 813 children included (5927 boys [54.8%] and 4886 girls [45.2%]; median [range] age, 21 [8-59] months), RV5 and RV1 analyses found that compared with controls, rotavirus-positive cases were more often white (RV5, 535 [62.2%] vs 3310 [57.7%]; RV1, 163 [43.1%] vs 864 [35.1%]), privately insured (RV5, 620 [72.1%] vs 4388 [76.5%]; RV1, 305 [80.7%] vs 2140 [87.0%]),

Key Points

Question Is rotavirus vaccination in the United States associated with a decrease in hospitalization and emergency department visits for rotavirus in children?

Findings This case-control vaccine effectiveness study included 1193 children with rotavirus infection and 9620 controls younger than 5 years with acute gastroenteritis in 7 US inpatient and emergency departments from 2010 to 2016. Both vaccines studied were associated with decreased inpatient visits and severe infections and among younger children.

Meaning These findings suggest that rotavirus vaccines continue to perform well, particularly among important target populations, continuing the justification of rotavirus vaccination in US infants.

Rotavirus Vaccination Still Reducing Hospitalizations For Severe Infections, Researchers Say

Reuters (10/1) reports, "More than a decade after the rotavirus vaccine was added to the roster of routine shots recommended for all infants in the U.S., vaccination is still reducing hospitalizations for severe infections," researchers concluded after tracking "hospitalizations for children under age five from 2009 to 2016, a period following the debut of two new rotavirus vaccines in the U.S." The study revealed that "compared to unvaccinated kids, children who got just one dose of the rotavirus were 82% less likely to be admitted to the hospital with a rotavirus infection and 75% less likely to have an emergency department visit because of the disease." The
: Open.

Vaccinattitudes…

Poll looks at flu vaccine attitudes in the US

Only 52% of US adults ages 18 and older reported planning to receive flu vaccinations for the 2019-20 flu season, even though 60% said they believed that immunizations provided the best protection against flu-related hospitalizations and deaths, according to a National Foundation for Infectious Diseases survey. The poll also showed that 63% of youths ages 6 months to 17 years received flu vaccinations during the 2018-19 flu season, a 5% increase over the previous season, compared with 45% of adults, but NFID President-elect Dr. Patricia Whitley-Williams said that more efforts are needed to boost pediatric flu immunization rates.

CNN (9/26), Healio (free registration)/Infectious Disease News (9/26)

Flu-related hospitalizations among infants may be underestimated

CDC researchers found that focusing on real-time RT-PCR-confirmed influenza and respiratory diagnoses missed infant flu-related hospitalizations in four low- and middle-income countries by a factor of 2.6, even after applying syndromic severe acute respiratory infection criteria. The findings in The Lancet Child & Adolescent Health suggest the high prevalence of atypical flu presentations among infants should prompt continued improvements in flu vaccine coverage among pregnant women and babies older than 6 months, said researcher Mark Thompson.

Healio (free registration)/Infectious Diseases in Children (9/18)

Fisher Price's Rock 'n Play Recall: A Reminder That Perfect Safety Is Impossible

The toy company allegedly failed to test its miracle cure for cranky baby syndrome.

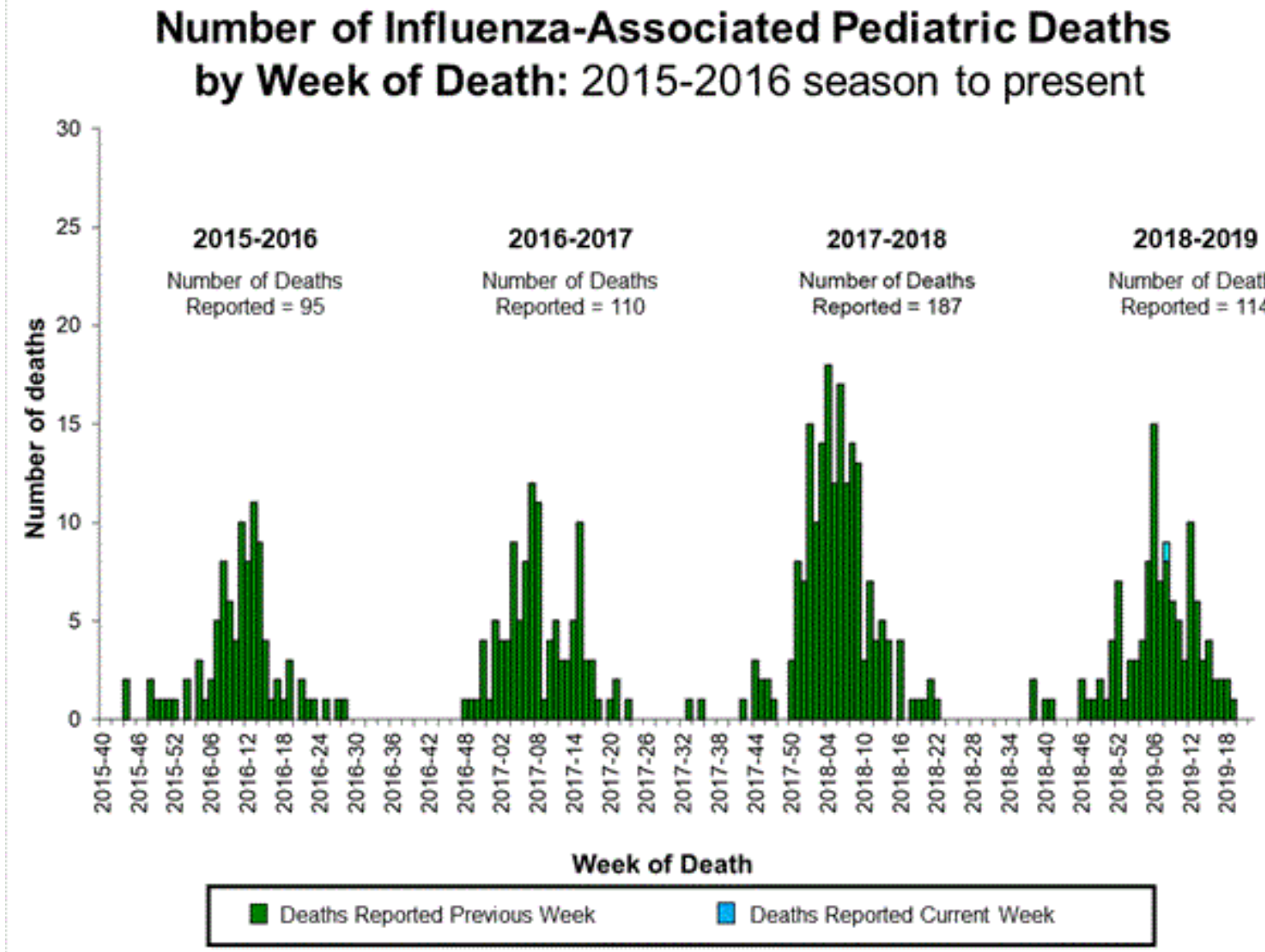
LENORE SKENAZY | 6.3.2019 12:55 PM

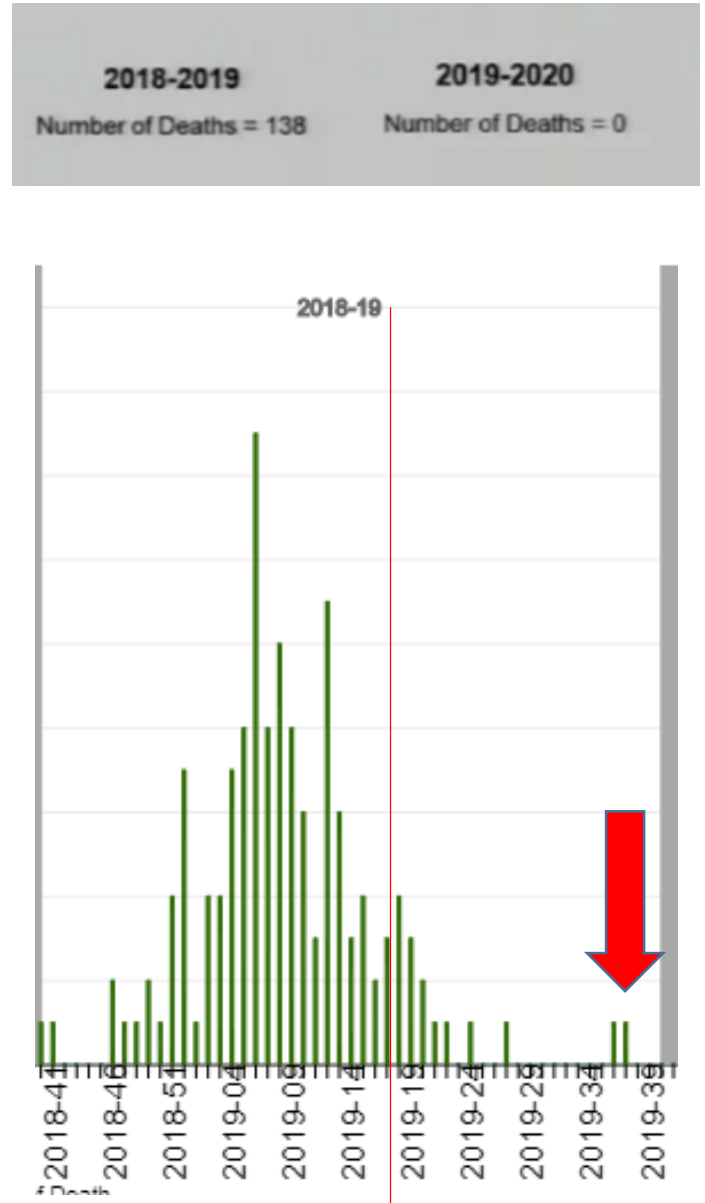
~30 infant deaths in 10 years

The Consumer Product Safety Commission said more than 30 babies died in the product after they turned over while unrestrained or “under other circumstances.”

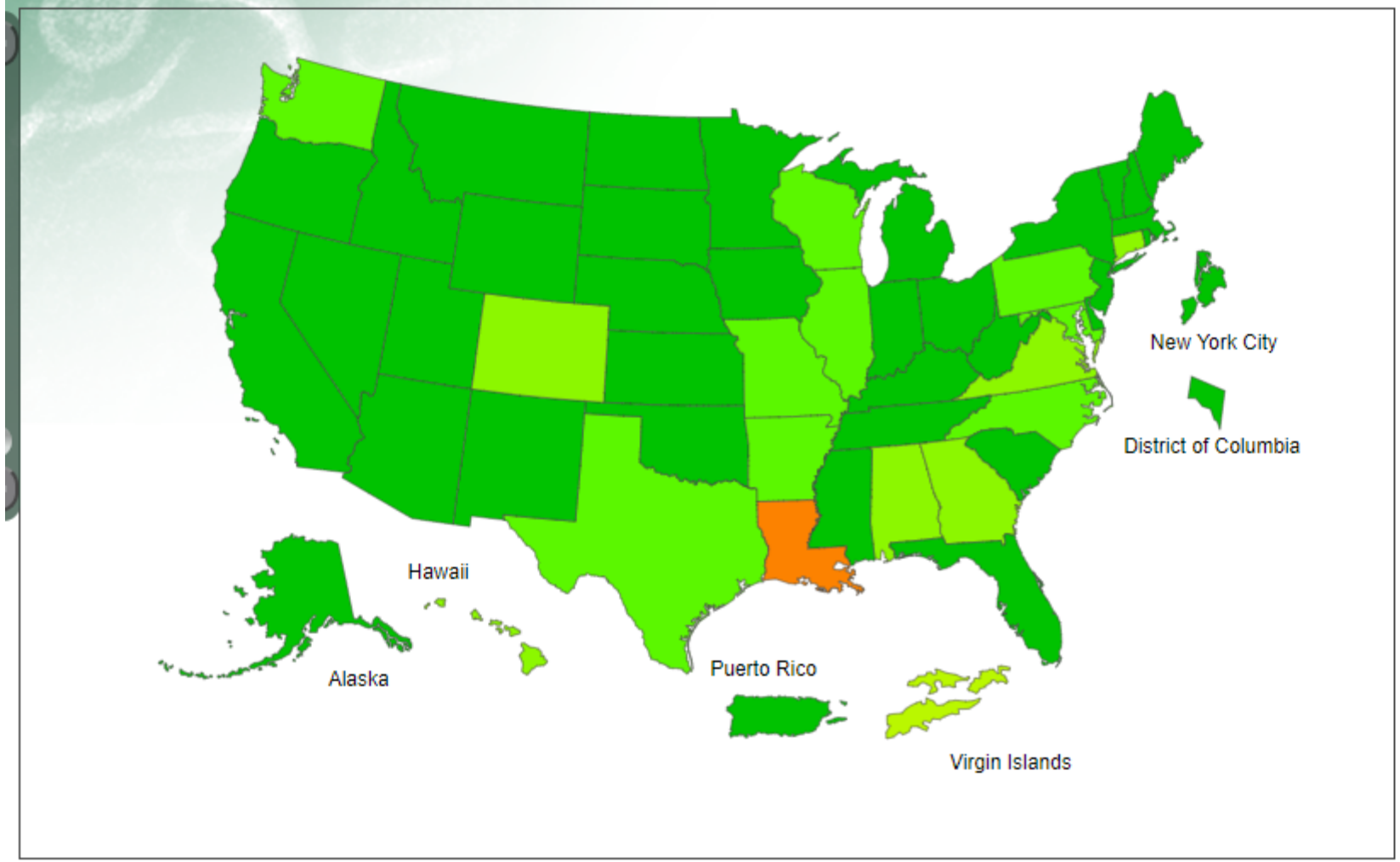
Influenza-Associated Pediatric Mortality:

Update ACIP





2019-20 Influenza Season Week 41 ending Oct 12, 2019



ILI Activity Level

- High
- Moderate
- Low
- Minimal
- Insufficient Data

Children's Mercy

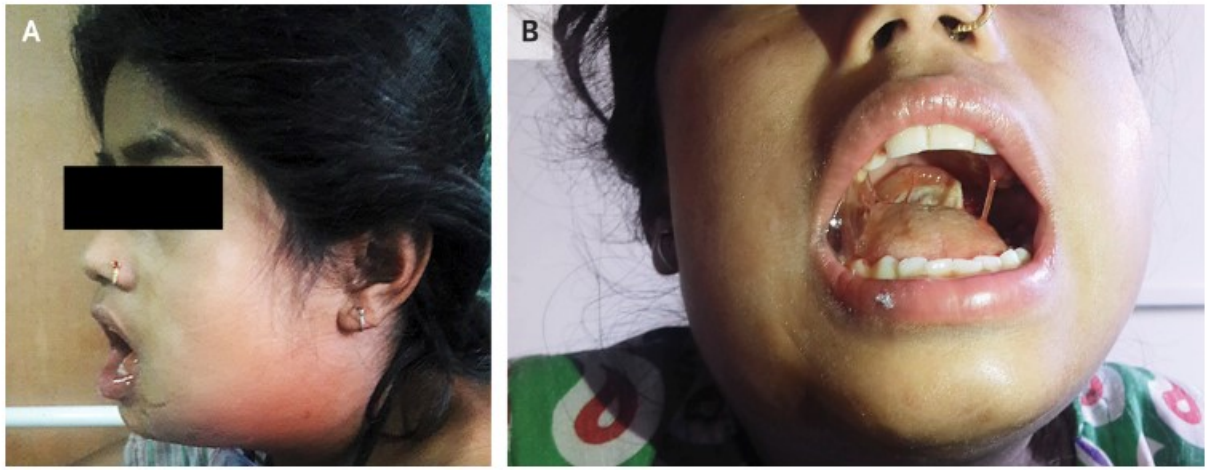
Background on QIV-HD Vaccine Development

- **TIV-HD is a high dose, inactivated trivalent influenza vaccine that has been available in the US since 2010.**
  - 115 million doses sold since licensure
  - 2 out of 3 vaccinated adults 65+ years of age in the US received Fluzone HD vaccine during the 2018-2019 season (~22 million doses)
- **Two distinct B influenza lineages (Victoria and Yamagata) have co-circulated for over a decade, making it difficult to predict which will predominate the next season.**
- **QIV-HD has been developed to address the frequent influenza B strain mismatches by incorporating a strain from each B lineage.**
- **QHD00013 is a pivotal Phase III study which evaluated the safety and immunogenicity of QIV-HD as compared to TIV-HD.**

IMAGES IN CLINICAL MEDICINE

Diphtheria

Ranjit Sah, M.B., B.S., M.D., and Samikshya Neupane, M.B., B.S., M.D.



A 14-year-old girl living in Nepal presented to the emergency department with a 3-day history of neck swelling, fever, throat pain, and difficulty swallowing. She appeared sick and had a swollen neck (Panel A), and examination of the oropharynx revealed a grayish-white membrane (Panel B). According to her mother, the patient had received three doses of the diphtheria–pertussis –tetanus vaccine during her first year of life, with no additional doses. Diphtheria was suspected, and treatment with penicillin G and antidiphtheria serum was initiated. A throat culture grew *Corynebacterium diphtheriae*. On the third day of hospitalization, chest discomfort, palpitations, and elevated troponin I levels developed, along with electrocardiographic abnormalities, including a prolonged PR interval, ectopic beats, and ST-segment depression; these signs and symptoms aroused concern about diphtheria-associated myocarditis. Wide complex tachycardia subsequently developed. The patient continued to have ventricular arrhythmias despite receiving treatment in the pediatric intensive care unit, and she died 2 days later. Isolates that had been sent to the Centers for Disease Control and Prevention in the United States were confirmed by culture to be *C. diphtheriae*, and polymerase chain reaction confirmed the presence of the toxin gene.

BCG Vaccination Tied To Lower Prevalence Of Latent TB In Adults, Study Indicates

Healio (9/25, Stulpin) reports researchers found that "Bacille Calmette-Guérin, or BCG, vaccination is associated with a lower prevalence of latent tuberculosis infection in adult TB contacts and could protect against Mycobacterium tuberculosis infection." The findings were published in the Journal of Infectious Diseases.

DISEASES & CONDITIONS

American Indian/Alaskan Native Adults Vaccinated Against TB In Youth Demonstrate Lower Lung Cancer Rates, Research Indicates

MedPage Today (9/25, Walker) reports an analysis found "American Indian/Alaskan Native adults who received the bacillus Calmette-Guerin (BCG) vaccine against tuberculosis (TB) as children had lower rates of lung cancer." The study published in JAMA Network Open showed "there was no significant difference in the rates of other types of cancers, with the authors specifically saying rates of leukemia and lymphoma were similar between groups."

Incidence of Herpes Zoster Among Children: 2003–2014

- The study included 6 372 067 children aged 0 through 17 years from 2003 through 2014. Overall HZ incidence declined by 72% in the 12-year period
  - Crude HZ incidence rate for all : 74 per 100 000 person years
  - Vaccinated HZ rate: 38 per 100 000 person years
  - Unvaccinated HZ rate 170 per 100 000 person years
- Vaccinated rate is 78% lower than that among children who were not vaccinated (P < .0001).. Annual rates in children who were vaccinated were consistently lower than in children who were unvaccinated

ACIP Update October 23-24

Pertussis:

- Current recs single Tdap lifetime boost starting age 11
- Tdap every pregnancy (Off label)

- ACIP considering Tdap anytime when Td is recommended, including catch up for children ≥7
- Evaluate spacing of boosters for continued protection against tetanus and diphtheria: is the 10-year interval adequate?

Work Group assessment: Safety of >1 dose of Tdap for catch-up immunization schedule

- Published studies reassuring
  - Data limited
  - Includes an RCT comparing safety and immunogenicity of Tdap v. Td for catch-up immunization schedule
- Available published and unpublished data on closely-spaced Tdap vaccines
  - No concerning safety signal, including in pregnant women
  - Data sparse on safety of multiple doses of Tdap during a single pregnancy
- Need for continued safety monitoring

Work Group consensus: Either Td or Tdap can be used for additional doses of the catch-up immunization schedule for persons ≥7 years, both in the general population and for pregnant women

Clarification of CDC guidance: Tdap in persons aged 7–10 years

- **Current guidance:** Children 7–10 years who receive Tdap inadvertently or for catch-up immunization **should** receive Tdap again at age 11–12 years
- Questions from health departments, immunization programs, and providers about 10 year-olds who receive Tdap for school entry requirements
- Both Tdap vaccines are now licensed to 10 years of age
- **Clarification of guidance** in children 7–10 years who receive a dose of Tdap:
  - **Children 7–9 years**: receive adolescent Tdap at 11–12 years
  - **Children aged ≥10 years**: Tdap does not need to be repeated
- Similar changes made to inadvertent DTaP administration guidance
- Plan to include changes as "CDC Guidance" in Policy Note

CDC panel OKs use of Tdap vaccine as sub for Td

Summary: Proposed policy change

- Recommendations should be changed to allow either Td or Tdap vaccine to be used in situations where only Td vaccine is currently recommended for:
  - Decennial booster
  - Tetanus prophylaxis for wound management
  - Catch-up immunization schedule, including in pregnant women

Tdap is more expensive than Td

CDC Vaccine price list[1]	CDC cost per dose[2]	Incremental cost of Tdap over Td
Td (TDVAX™)[3]	$13.96	
Tdap (Boostrix®)[4]	$24.65	**$10.68**
Tdap (Adacel®)[4]	$24.49	**$10.53**
Commercial claims[5]	**Median cost**	
Td (n=61,468)	$27.38	
Tdap (n=716,638)	$44.07	**$22.56**

1. Source: https://www.cdc.gov/vaccines/programs/vfc/awardees/vaccine-management/price-list/index.html, updated April 1, 2019
2. Indicates cost for 10 pack – 1 dose vial. 3. Vaccine cost includes $1.50 per dose Federal Excise Tax 4. Vaccine cost includes $2.25 per dose Federal Excise Tax 5. Source: Truven MarketScan databases, Outpatient Services Table, DY 2016

Notes

Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2020

For vaccine recommendations for persons 19 years of age and older, see the Recommended Adult Immunization Schedule.

Additional information

- Consult relevant ACIP statements for detailed recommendations at www.cdc.gov/vaccines/hcp/acip-recs/index.html.
- For information on contraindications and precautions for the use of a vaccine, consult the General Best Practice Guidelines for Immunization and relevant ACIP statements at www.cdc.gov/vaccines/hcp/acip-recs/index.html.
- For calculating intervals between doses, 4 weeks = 28 days. Intervals of ≥4 months are determined by calendar months.
- Within a number range (e.g., 12–18), a dash (–) should be read as "through."
- Vaccine doses administered ≤4 days before the minimum age or interval are considered valid. Doses of any vaccine administered ≥5 days earlier than the minimum age or minimum interval should not be counted as valid and should be repeated as age-appropriate. The repeat dose should be spaced after the invalid dose by the recommended minimum interval. For further details, see Table 3-1, Recommended and minimum ages and intervals between vaccine doses, in General Best Practice Guidelines for Immunization at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/timing.html.
- Information on travel vaccine requirements and recommendations is available at wwwnc.cdc.gov/travel/.
- For vaccination of persons with immunodeficiencies, see Table 8-1, Vaccination of persons with primary and secondary immunodeficiencies, in General Best Practice Guidelines for Immunization at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html, and Immunization in Special Clinical Circumstances (In: Kimberlin DW, Brady MT, Jackson MA, Long SS, eds. *Red Book: 2018 Report of the Committee on Infectious Diseases*. 31st ed. Itasca, IL: American Academy of Pediatrics; 2018:67–111).
- For information regarding vaccination in the setting of a vaccine-preventable disease outbreak, contact your state or local health department.
- The National Vaccine Injury Compensation Program (VICP) is a no-fault alternative to the traditional legal system for resolving vaccine injury claims. All routine child and adolescent vaccines are covered by VICP except for pneumococcal polysaccharide vaccine (PPSV23). For more information, see www.hrsa.gov/vaccinecompensation/index.html.

Diphtheria, tetanus, and pertussis (DTaP) vaccination (minimum age: 6 weeks [4 years for Kinrix or Quadracel])

Routine vaccination

- 5-dose s… 4, 6, 15–18 months, 4–6 years
  - **Prospec…** …may be given as early as age 12 month… …have elapsed since dose 3.
  - **Retrospecti…** …inadvertently given as early as 12 mo… …4 months have elapsed since d…

Catch-up vaccination

- Dose 5 is not necessary if dose 4 was administered at age 4 years or older and at least 6 months after dose 3.
- For other catch-up guidance, see Table 2.

later and dose 3 (final dose) at 12–15 months or 8 weeks after dose 2 (whichever is later).

- **Dose 1 at 12–14 months:** Administer dose 2 (final dose) at least 8 weeks after dose 1.
- **Dose 1 before 12 months and dose 2 before 15 months:** Administer dose 3 (final dose) 8 weeks after dose 2.
- **2 doses of PedvaxHIB before 12 months:** Administer dose 3 (final dose) at 12–59 months and at least 8 weeks after dose 2.
- **Unvaccinated at 15–59 months:** 1 dose
- For other catch-up guidance, see Table 2.

Special situations

- **Chemotherapy or radiation treatment:**
  12–59 months
  - Unvaccinated or only 1 dose before age 12 months: 2 doses, 8 weeks apart
  - 2 or more doses before age 12 months: 1 dose at least 8 weeks after previous dose

  Doses administered within 14 days of starting therapy or during therapy should be repeated at least 3 months after therapy completion.
- **Hematopoietic stem cell transplant (HSCT):**
  - 3-dose series 4 weeks apart starting 6 to 12 months after successful transplant regardless of Hib vaccination history
- **Anatomic or functional asplenia (including sickle cell disease):**
  12–59 months
  - Unvaccinated or only 1 dose before 12 months: 2 doses, 8 weeks apart
  - 2 or more doses before 12 months: 1 dose at least 8 weeks after previous dose

  Unvaccinated* persons age 5 years or older
  - 1 dose
- **Elective splenectomy:**
  Unvaccinated* persons age 15 months or older

8 weeks after previous dose

*Unvaccinated = Less than routine series (through 14 months) OR no doses (14 months or older)

Notes Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2020

For vaccine recommendations for persons 19 years of age and older, see the Recommended Adult Immunization Schedule.

Additional information

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Diphtheria, tetanus, and pertussis (DTaP) vaccination (minimum age: 6 weeks [4 years for Kinrix or Quadracel])

Routine vaccination

- 5-dose series at 2, 4, 6, 15–18 months, 4–6 years
  - **Prospectively:** Dose 4 may be given as early as age 12 months if at least 6 months have elapsed since dose 3.
  - **Retrospectively:** A 4th dose that was inadvertently given as early as 12 months may be counted if at least 4 months have elapsed since dose 3.

Catch-up vaccination

- Dose 5 is not necessary if dose 4 was administered at age 4 years or older.
- For other catch-up guidance, see Table 2.

Haemophilus influenzae type b vaccination (minimum age: 6 weeks)

Routine vaccination

- **ActHIB, Hiberix, or Pentacel:** 4-dose series at 2, 4, 6, 12–15 months
- **PedvaxHIB:** 3-dose series at 2, 4, 12–15 months

Catch-up vaccination

- **Dose 1 at 7–11 months:** Administer dose 2 at least 4 weeks later and dose 3 (final dose) at 12–15 months or 8 weeks after dose 2 (whichever is later).
- **Dose 1 at 12–14 months:** Administer dose 2 (final dose) at least 8 weeks after dose 1.
- **Dose 1 before 12 months and dose 2 before 15 months:** Administer dose 3 (final dose) 8 weeks after dose 2.
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Catch-up vaccination

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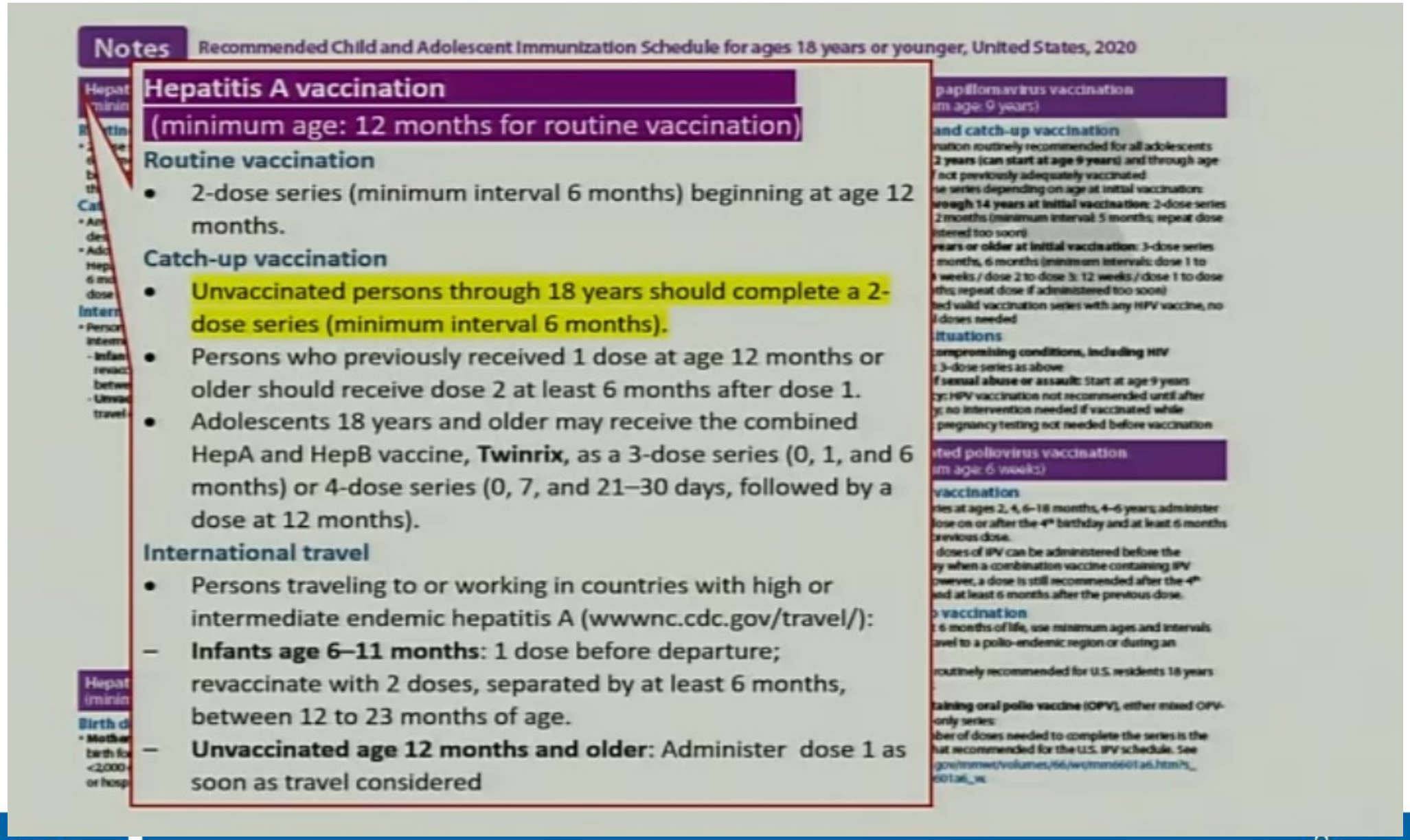
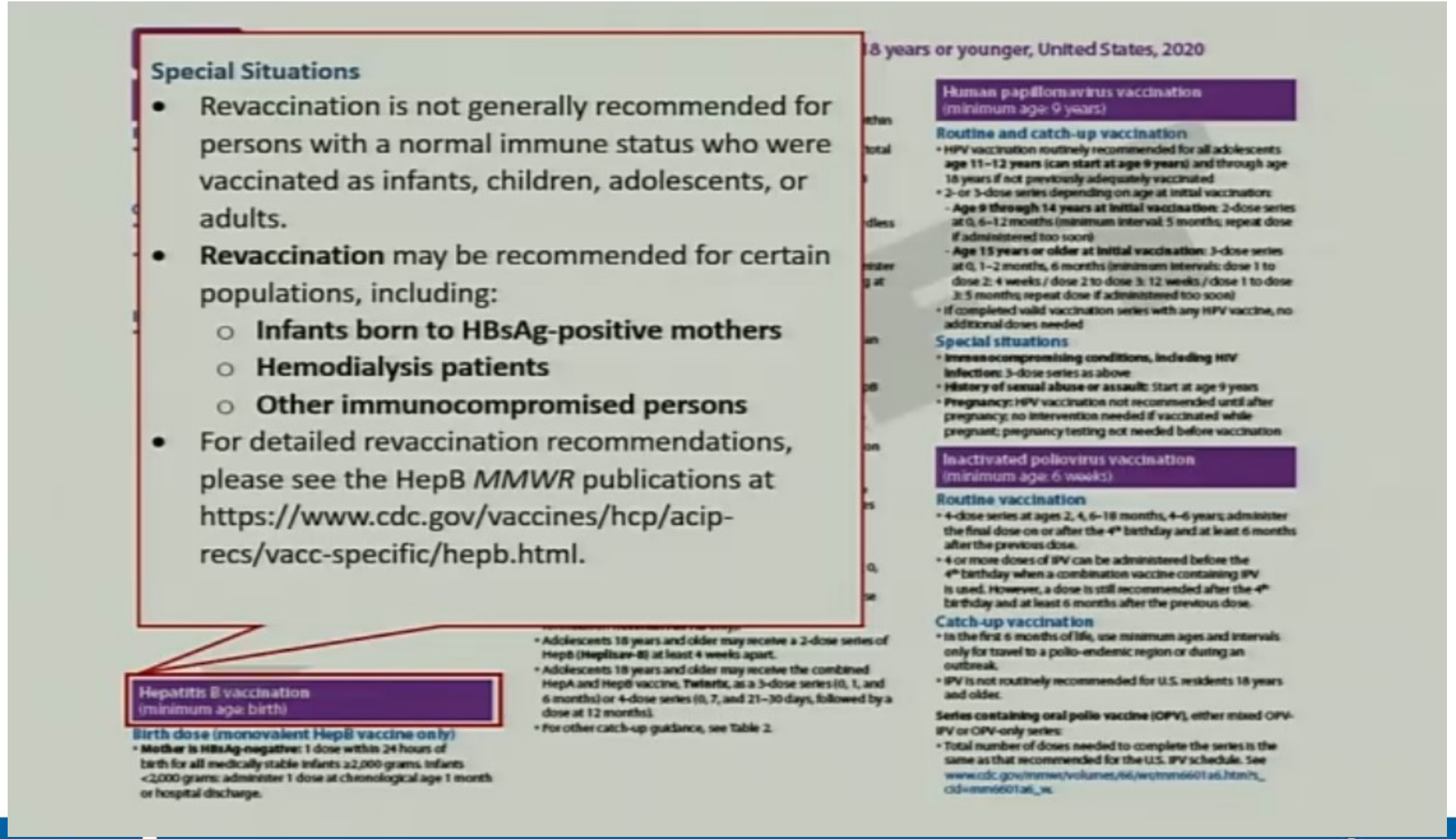
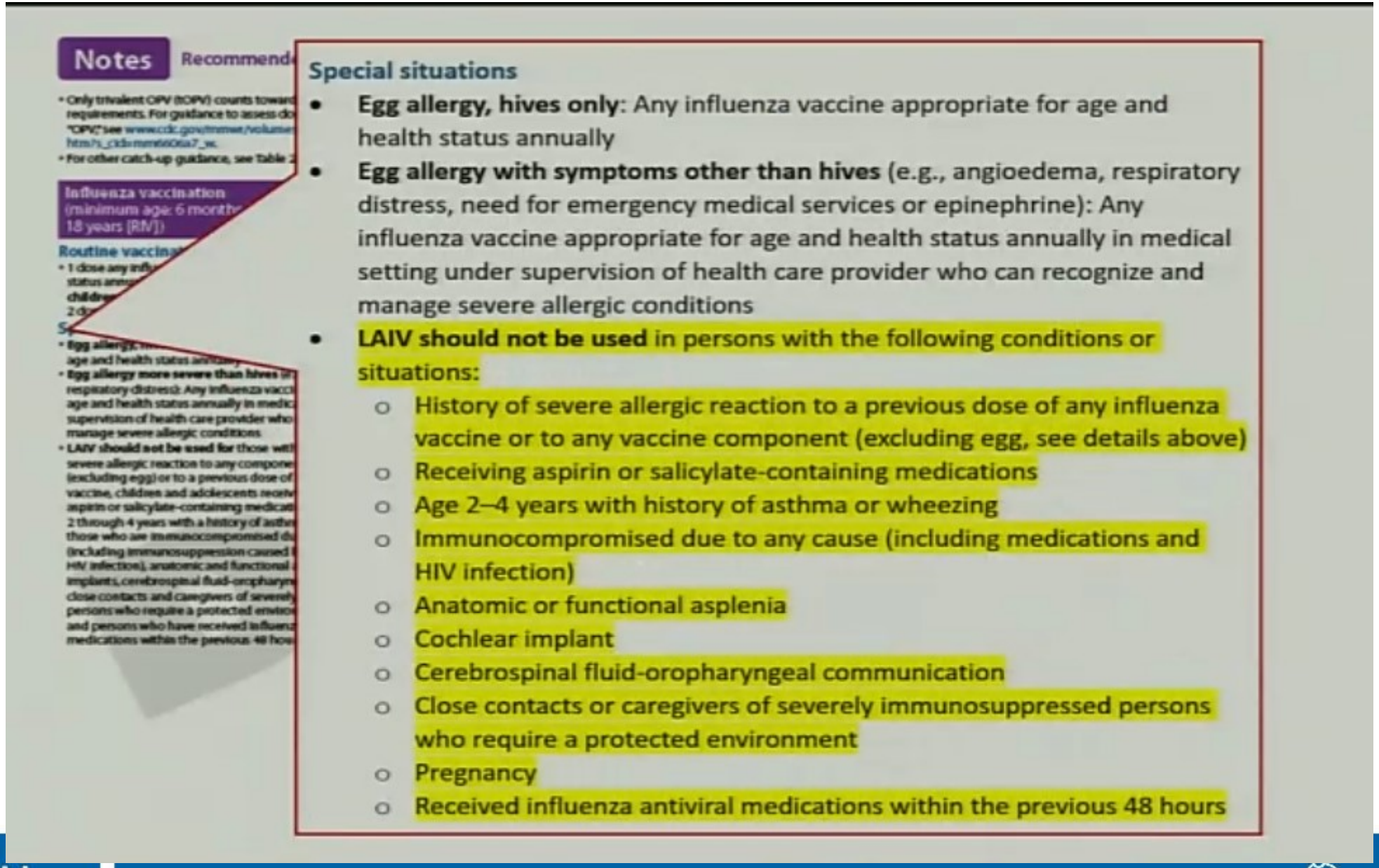
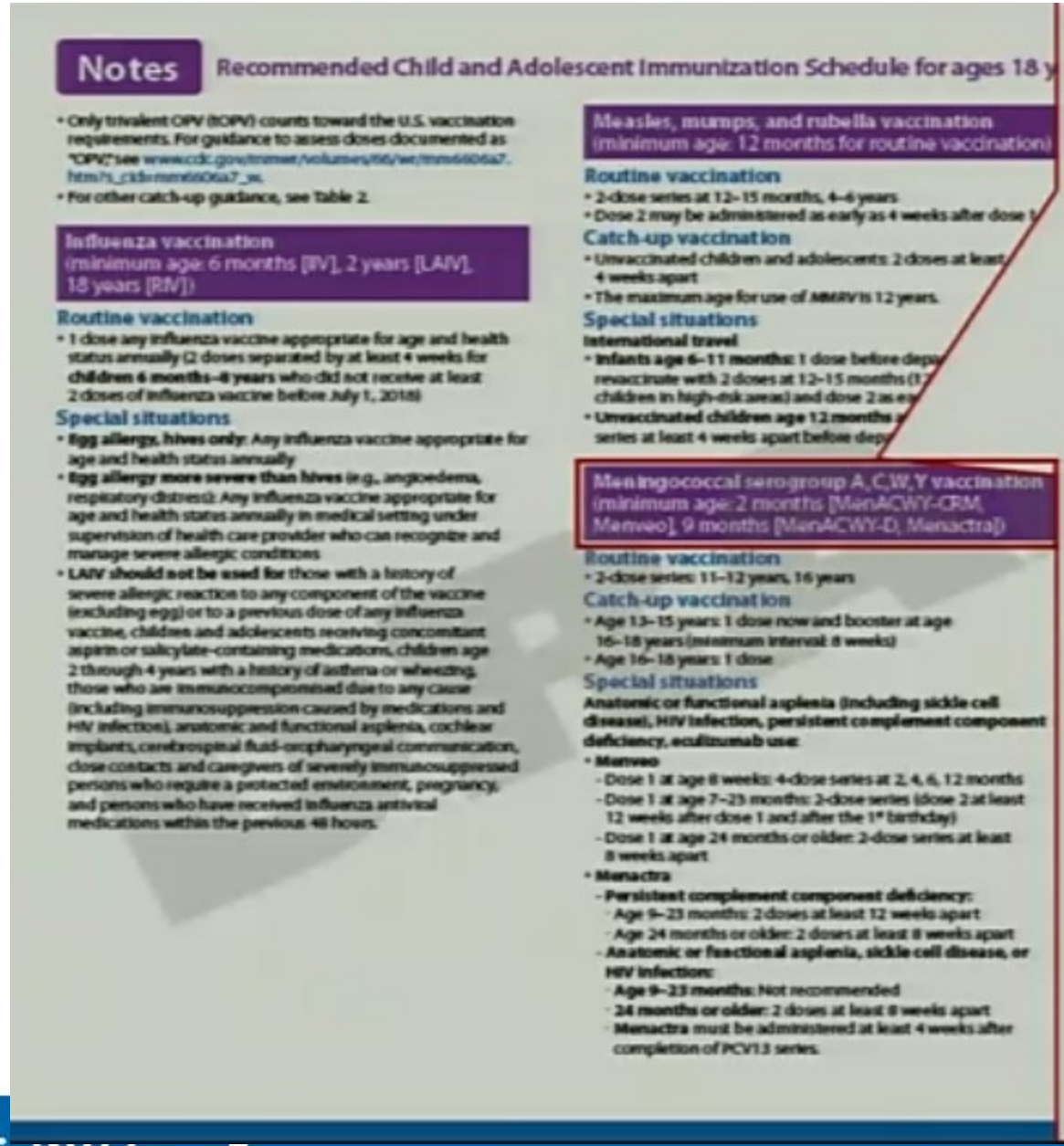
- **2 doses of PedvaxHIB before 12 months:** Administer dose 3 (final dose) at 12–59 months and at least 8 weeks after dose 2.
- **Unvaccinated at 15–59 months:** 1 dose
- **Previously unvaccinated children age 60 months or older** who are not considered high risk do not require catch-up vaccination.
- For other catch-up guidance, see Table 2.


Notes
Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2020
Hepatitis A vaccination
(minimum age: 12 months for routine vaccination)
Routine vaccination
• 2-dose series (minimum interval 6 months) beginning at age 12 months.
Catch-up vaccination
• Unvaccinated persons through 18 years should complete a 2-dose series (minimum interval 6 months).
• Persons who previously received 1 dose at age 12 months or older should receive dose 2 at least 6 months after dose 1.
• Adolescents 18 years and older may receive the combined HepA and HepB vaccine, Twinrix, as a 3-dose series (0, 1, and 6 months) or 4-dose series (0, 7, and 21–30 days, followed by a dose at 12 months).
International travel
• Persons traveling to or working in countries with high or intermediate endemic hepatitis A (wwwnc.cdc.gov/travel/):
– Infants age 6–11 months: 1 dose before departure; revaccinate with 2 doses, separated by at least 6 months, between 12 to 23 months of age.
– Unvaccinated age 12 months and older: Administer dose 1 as soon as travel considered


Special Situations
• Revaccination is not generally recommended for persons with a normal immune status who were vaccinated as infants, children, adolescents, or adults.
• Revaccination may be recommended for certain populations, including:
○ Infants born to HBsAg-positive mothers
○ Hemodialysis patients
○ Other immunocompromised persons
• For detailed revaccination recommendations, please see the HepB MMWR publications at https://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/hepb.html.
18 years or younger, United States, 2020
Hepatitis B vaccination (minimum age: birth)
Birth dose (monovalent HepB vaccine only)
• Mother is HBsAg-negative: 1 dose within 24 hours of birth for all medically stable infants ≥2,000 grams. Infants <2,000 grams: administer 1 dose at chronological age 1 month or hospital discharge.
• Adolescents 18 years and older may receive a 2-dose series of HepB (Heplisav-B) at least 4 weeks apart.
• Adolescents 18 years and older may receive the combined HepA and HepB vaccine, Twinrix, as a 3-dose series (0, 1, and 6 months) or 4-dose series (0, 7, and 21–30 days, followed by a dose at 12 months).
• For other catch-up guidance, see Table 2.
Human papillomavirus vaccination (minimum age: 9 years)
Routine and catch-up vaccination
• HPV vaccination routinely recommended for all adolescents age 11–12 years (can start at age 9 years) and through age 18 years if not previously adequately vaccinated
• 2- or 3-dose series depending on age at initial vaccination:
- Age 9 through 14 years at initial vaccination: 2-dose series at 0, 6–12 months (minimum interval: 5 months; repeat dose if administered too soon)
- Age 15 years or older at initial vaccination: 3-dose series at 0, 1–2 months, 6 months (minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 12 weeks / dose 1 to dose 3: 5 months; repeat dose if administered too soon)
• If completed valid vaccination series with any HPV vaccine, no additional doses needed
Special situations
• Immunocompromising conditions, including HIV infection: 3-dose series as above
• History of sexual abuse or assault: Start at age 9 years
• Pregnancy: HPV vaccination not recommended until after pregnancy; no intervention needed if vaccinated while pregnant; pregnancy testing not needed before vaccination
Inactivated poliovirus vaccination (minimum age: 6 weeks)
Routine vaccination
• 4-dose series at ages 2, 4, 6–18 months, 4–6 years; administer the final dose on or after the 4th birthday and at least 6 months after the previous dose.
• 4 or more doses of IPV can be administered before the 4th birthday when a combination vaccine containing IPV is used. However, a dose is still recommended after the 4th birthday and at least 6 months after the previous dose.
Catch-up vaccination
• In the first 6 months of life, use minimum ages and intervals only for travel to a polio-endemic region or during an outbreak.
• IPV is not routinely recommended for U.S. residents 18 years and older.
Series containing oral polio vaccine (OPV), either mixed OPV-IPV or OPV-only series:
• Total number of doses needed to complete the series is the same as that recommended for the U.S. IPV schedule. See www.cdc.gov/mmwr/volumes/66/wr/mm6601a6.htm?s_cid=mm6601a6_w.


Notes
Special situations
Egg allergy, hives only: Any influenza vaccine appropriate for age and health status annually
Egg allergy with symptoms other than hives (e.g., angioedema, respiratory distress, need for emergency medical services or epinephrine): Any influenza vaccine appropriate for age and health status annually in medical setting under supervision of health care provider who can recognize and manage severe allergic conditions
LAIV should not be used in persons with the following conditions or situations:
History of severe allergic reaction to a previous dose of any influenza vaccine or to any vaccine component (excluding egg, see details above)
Receiving aspirin or salicylate-containing medications
Age 2–4 years with history of asthma or wheezing
Immunocompromised due to any cause (including medications and HIV infection)
Anatomic or functional asplenia
Cochlear implant
Cerebrospinal fluid-oropharyngeal communication
Close contacts or caregivers of severely immunosuppressed persons who require a protected environment
Pregnancy
Received influenza antiviral medications within the previous 48 hours



Notes Recommended Child and Adolescent Immunization Schedule for ages 18 y

- Only trivalent OPV (tOPV) counts toward the U.S. vaccination requirements. For guidance to assess doses documented as "OPV," see www.cdc.gov/mmwr/volumes/66/wr/mm6606a7.htm?s_cid=mm6606a7_w.
- For other catch-up guidance, see Table 2.

Influenza vaccination (minimum age: 6 months [IIV], 2 years [LAIV], 18 years [RIV])

Routine vaccination
- 1 dose any influenza vaccine appropriate for age and health status annually (2 doses separated by at least 4 weeks for **children 6 months–8 years** who did not receive at least 2 doses of influenza vaccine before July 1, 2018)

Special situations
- **Egg allergy, hives only:** Any influenza vaccine appropriate for age and health status annually
- **Egg allergy more severe than hives** (e.g., angioedema, respiratory distress): Any influenza vaccine appropriate for age and health status annually in medical setting under supervision of health care provider who can recognize and manage severe allergic conditions
- **LAIV should not be used for** those with a history of severe allergic reaction to any component of the vaccine (excluding egg) or to a previous dose of any influenza vaccine, children and adolescents receiving concomitant aspirin or salicylate-containing medications, children age 2 through 4 years with a history of asthma or wheezing, those who are immunocompromised due to any cause (including immunosuppression caused by medications and HIV infection), anatomic and functional asplenia, cochlear implants, cerebrospinal fluid-oropharyngeal communication, close contacts and caregivers of severely immunosuppressed persons who require a protected environment, pregnancy, and persons who have received influenza antiviral medications within the previous 48 hours.

Measles, mumps, and rubella vaccination (minimum age: 12 months for routine vaccination)

Routine vaccination
- 2-dose series at 12–15 months, 4–6 years
- Dose 2 may be administered as early as 4 weeks after dose 1

Catch-up vaccination
- Unvaccinated children and adolescents: 2 doses at least 4 weeks apart
- The maximum age for use of MMRV is 12 years.

Special situations

International travel
- **Infants age 6–11 months:** 1 dose before depa… revaccinate with 2 doses at 12–15 months (1… children in high-risk areas) and dose 2 as e…
- **Unvaccinated children age 12 months a…** series at least 4 weeks apart before dep…

Meningococcal serogroup A,C,W,Y vaccination (minimum age: 2 months [MenACWY-CRM, Menveo], 9 months [MenACWY-D, Menactra])

Routine vaccination
- 2-dose series: 11–12 years, 16 years

Catch-up vaccination
- Age 13–15 years: 1 dose now and booster at age 16–18 years (minimum interval: 8 weeks)
- Age 16–18 years: 1 dose

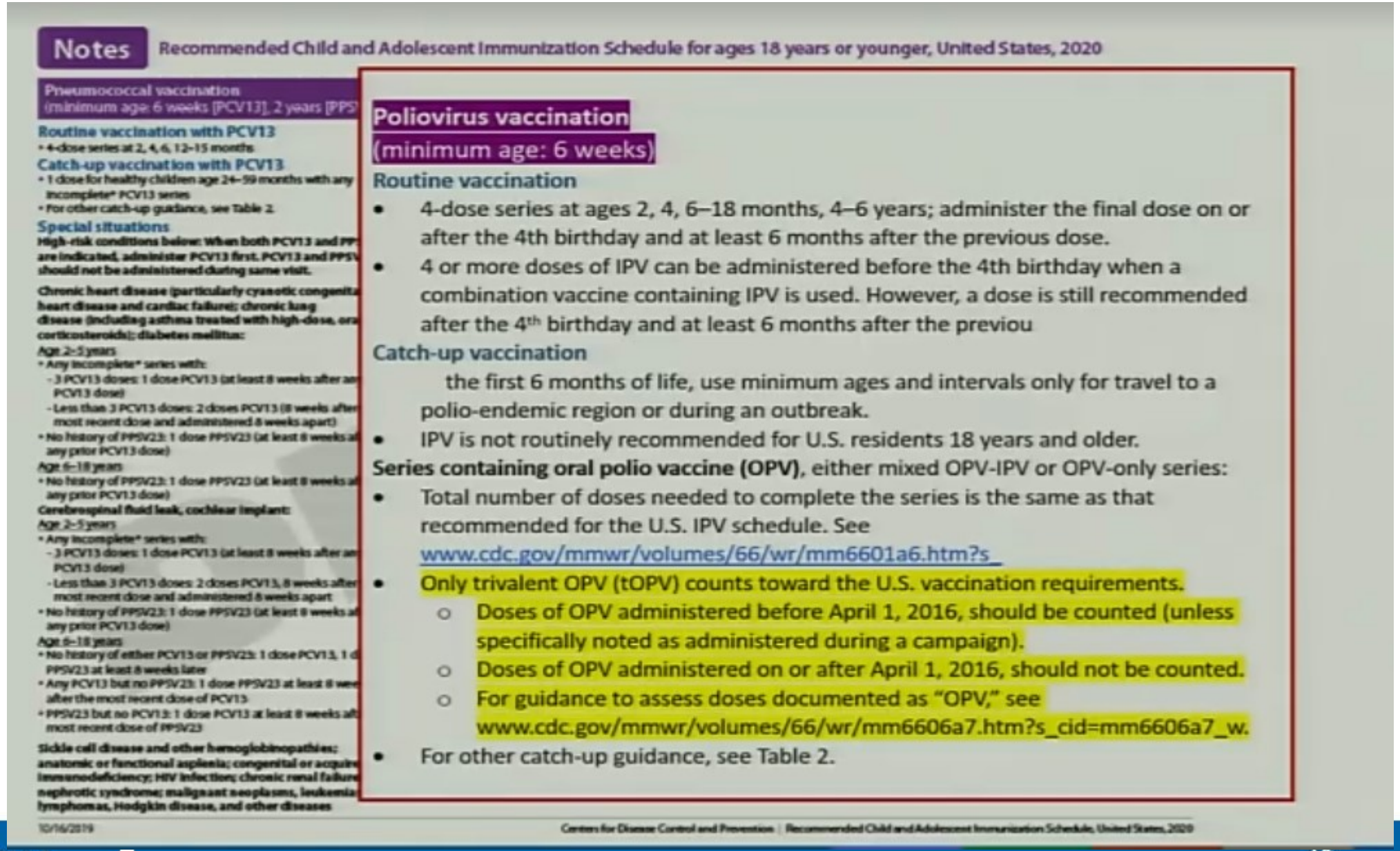
Special situations

Anatomic or functional asplenia (including sickle cell disease), HIV infection, persistent complement component deficiency, eculizumab use:
- **Menveo**
  - Dose 1 at age 8 weeks: 4-dose series at 2, 4, 6, 12 months
  - Dose 1 at age 7–23 months: 2-dose series (dose 2 at least 12 weeks after dose 1 and after the 1st birthday)
  - Dose 1 at age 24 months or older: 2-dose series at least 8 weeks apart
- **Menactra**
  - **Persistent complement component deficiency:**
    - Age 9–23 months: 2 doses at least 12 weeks apart
    - Age 24 months or older: 2 doses at least 8 weeks apart
  - **Anatomic or functional asplenia, sickle cell disease, or HIV infection:**
    - **Age 9–23 months:** Not recommended
    - **24 months or older:** 2 doses at least 8 weeks apart
  - **Menactra** must be administered at least 4 weeks after completion of PCV13 series.

Special situations

Anatomic or functional asplenia (including sickle cell disease), HIV infection, persistent complement component deficiency, complement inhibitor (e.g., eculizumab, ravulizumab) use:

- **Menveo**
  - Dose 1 at age 8 weeks: 4-dose series at 2, 4, 6, 12 months
  - Dose 1 at age 7–23 months: 2-dose series (dose 2 at least 12 weeks after dose 1 and after the 1st birthday)
  - Dose 1 at age 24 months or older: 2-dose series at least 8 weeks apart
- **Menactra**
  - **Persistent complement component deficiency or complement inhibitor use:**
    - Age 9–23 months: 2 doses at least 12 weeks apart
    - Age 24 months or older: 2 doses at least 8 weeks apart
  - **Anatomic or functional asplenia, sickle cell disease, or HIV infection:**
    - **Age 9–23 months**: Not recommended
    - **24 months or older**: 2 doses at least 8 weeks apart
    - **Menactra** must be administered at least 4 weeks after completion of PCV13 series.



Notes

Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2020

Pneumococcal vaccination (minimum age: 6 weeks [PCV13], 2 years [PPS

Routine vaccination with PCV13

- 4-dose series at 2, 4, 6, 12–15 months

Catch-up vaccination with PCV13

- 1 dose for healthy children age 24–59 months with any incomplete* PCV13 series
- For other catch-up guidance, see Table 2.

Special situations

High-risk conditions below: When both PCV13 and PP are indicated, administer PCV13 first. PCV13 and PPS should not be administered during same visit.

Chronic heart disease (particularly cyanotic congenita heart disease and cardiac failure); chronic lung disease (including asthma treated with high-dose, ora corticosteroids); diabetes mellitus:

Age 2–5 years

- Any incomplete* series with:
  - 3 PCV13 doses: 1 dose PCV13 (at least 8 weeks after an PCV13 dose)
  - Less than 3 PCV13 doses: 2 doses PCV13 (8 weeks after most recent dose and administered 8 weeks apart)
- No history of PPSV23: 1 dose PPSV23 (at least 8 weeks af any prior PCV13 dose)

Age 6–18 years

- No history of PPSV23: 1 dose PPSV23 (at least 8 weeks af any prior PCV13 dose)

Cerebrospinal fluid leak, cochlear implant:

Age 2–5 years

- Any incomplete* series with:
  - 3 PCV13 doses: 1 dose PCV13 (at least 8 weeks after an PCV13 dose)
  - Less than 3 PCV13 doses: 2 doses PCV13, 8 weeks after most recent dose and administered 8 weeks apart
- No history of PPSV23: 1 dose PPSV23 (at least 8 weeks af any prior PCV13 dose)

Age 6–18 years

- No history of either PCV13 or PPSV23: 1 dose PCV13, 1 d PPSV23 at least 8 weeks later
- Any PCV13 but no PPSV23: 1 dose PPSV23 at least 8 wee after the most recent dose of PCV13
- PPSV23 but no PCV13: 1 dose PCV13 at least 8 weeks af most recent dose of PPSV23

Sickle cell disease and other hemoglobinopathies; anatomic or functional asplenia; congenital or acquire Immunodeficiency; HIV infection; chronic renal failure nephrotic syndrome; malignant neoplasms, leukemia lymphomas, Hodgkin disease, and other diseases

Poliovirus vaccination
(minimum age: 6 weeks)

Routine vaccination

- 4-dose series at ages 2, 4, 6–18 months, 4–6 years; administer the final dose on or after the 4th birthday and at least 6 months after the previous dose.
- 4 or more doses of IPV can be administered before the 4th birthday when a combination vaccine containing IPV is used. However, a dose is still recommended after the 4th birthday and at least 6 months after the previou

Catch-up vaccination

the first 6 months of life, use minimum ages and intervals only for travel to a polio-endemic region or during an outbreak.

- IPV is not routinely recommended for U.S. residents 18 years and older.

Series containing oral polio vaccine (OPV), either mixed OPV-IPV or OPV-only series:

- Total number of doses needed to complete the series is the same as that recommended for the U.S. IPV schedule. See www.cdc.gov/mmwr/volumes/66/wr/mm6601a6.htm?s_
- Only trivalent OPV (tOPV) counts toward the U.S. vaccination requirements.
  - Doses of OPV administered before April 1, 2016, should be counted (unless specifically noted as administered during a campaign).
  - Doses of OPV administered on or after April 1, 2016, should not be counted.
  - For guidance to assess doses documented as "OPV," see www.cdc.gov/mmwr/volumes/66/wr/mm6606a7.htm?s_cid=mm6606a7_w.
- For other catch-up guidance, see Table 2.

10/16/2019

Centers for Disease Control and Prevention | Recommended Child and Adolescent Immunization Schedule, United States, 2020

Tetanus, diphtheria, and pertussis (Tdap) vaccination
(minimum age: 11 years for routine vaccination, 7 years for catch-up vaccination)

Routine vaccination

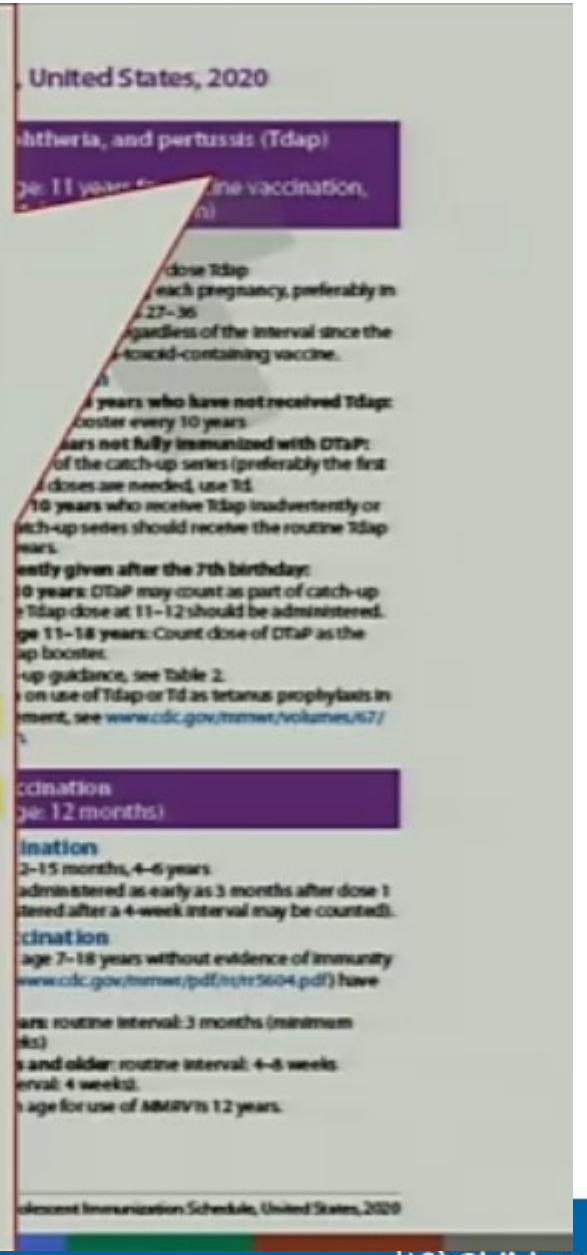
- **Adolescents age 11–12 years:** 1 dose Tdap
- **Pregnancy:** 1 dose Tdap during each pregnancy, preferably in early part of gestational weeks 27–36
- Tdap may be administered regardless of the interval since the last tetanus- and diphtheria-toxoid-containing vaccine.

Catch-up vaccination

- **Adolescents age 13–18 years who have not received Tdap:**
  1 dose Tdap, then Td or Tdap booster every 10 years
- **Persons age 7–18 years not fully vaccinated* with DTaP:**
  1 dose Tdap as part of the catch-up series (preferably the first dose); if additional doses are needed, use Td or Tdap.
- **Tdap administered at 7–10 years**
  - **Children age 7–9 years** who receive Tdap should receive the routine Tdap dose at age 11–12 years.
  - **Children age 10 years** who receive Tdap do not need to receive the routine Tdap dose at age 11–12 years.
- **DTaP inadvertently administered after the 7th birthday:**
  - **Children age 7–9 years**: DTaP may count as part of catch-up series. Administer routine Tdap dose at age 11–12 years.
  - **Children age 10–18 years**: Count dose of DTaP as the adolescent Tdap booster.

*Fully vaccinated = 5 valid doses of DTaP OR 4 valid doses of DTaP if dose 4 was administered at age 4 years or older.

- For other catch-up guidance, see Table 2.
- For information on use of Tdap or Td as tetanus prophylaxis in wound management, see www.cdc.gov/mmwr/volumes/67/rr/rr6702a1.htm


, United States, 2020

Rotavirus

CDC Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

A-Z Index

Search

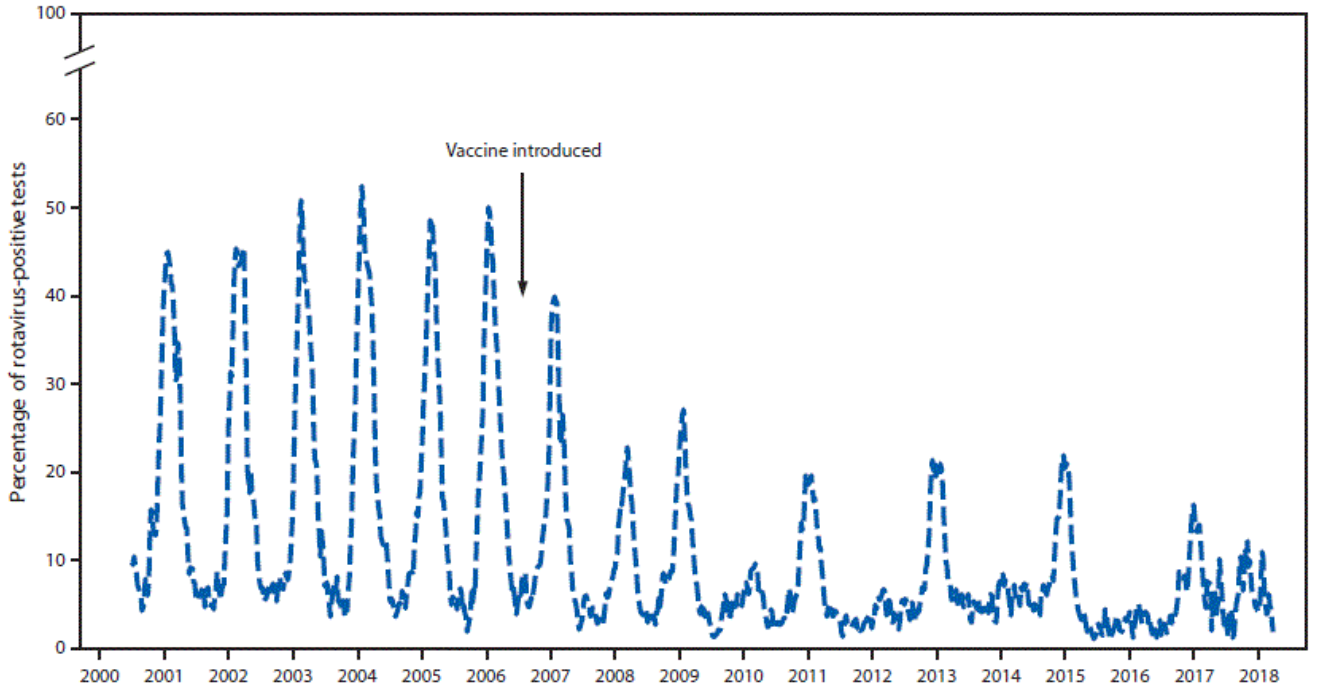
Morbidity and Mortality Weekly Report (*MMWR*)

CDC

Trends in the Laboratory Detection of Rotavirus Before and After Implementation of Routine Rotavirus Vaccination — United States, 2000–2018

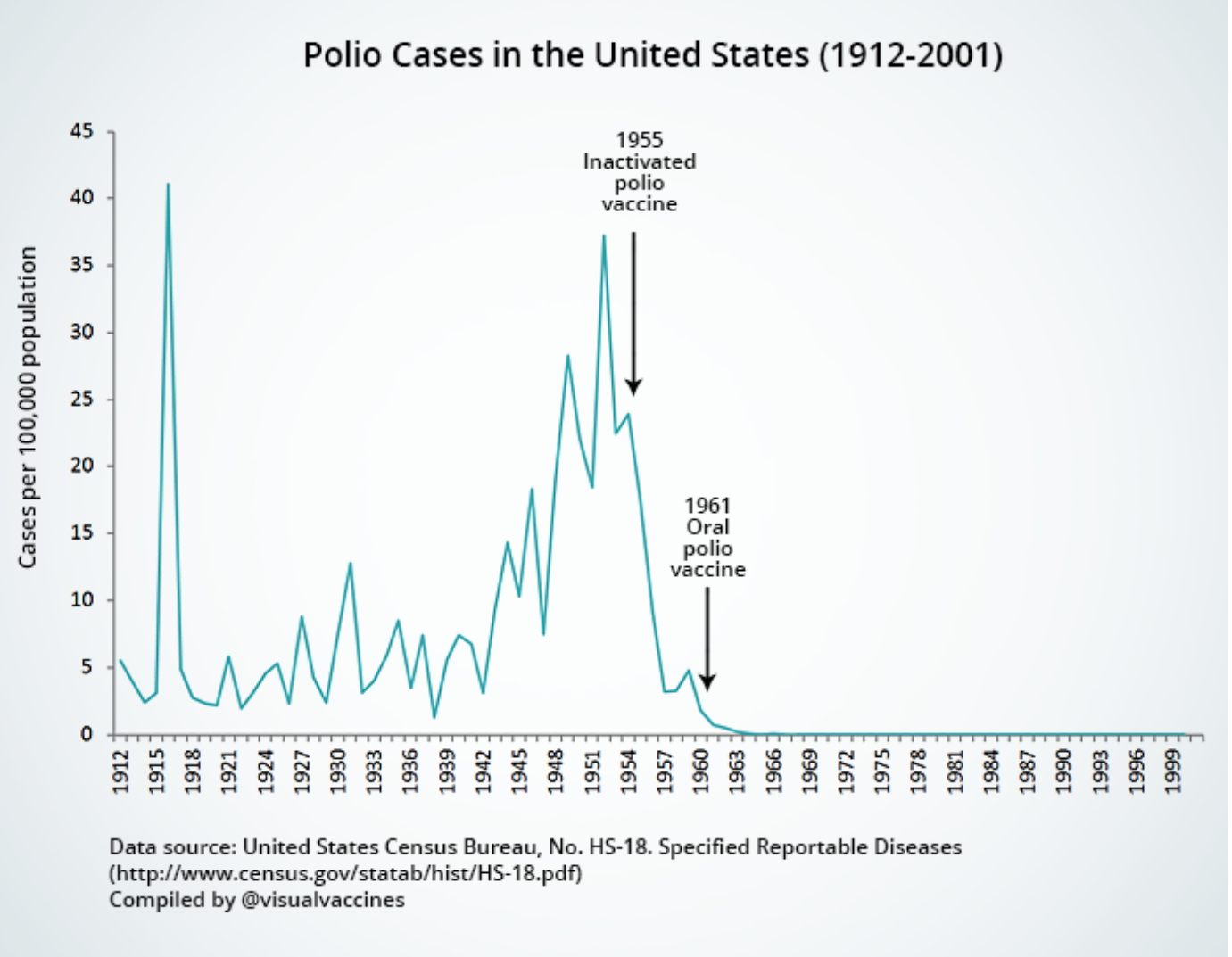
Weekly / June 21, 2019 / 68(24);539–543

Benjamin D. Hallowell, PhD[1,2]; Umesh D. Parashar, MD[1]; Aaron Curns, MPH[1]; Nicholas P. DeGroote, MPH[1]; Jacqueline E. Tate, PhD[1] (View author affiliations)



Children's Mercy

Polio



Children's Mercy

Polio

- 1998: 350,000 annual cases of WPV in 125 countries; WHO commits to end Polio
  - WPV2 declared eradicated 2015
  - WPV3 has not been seen since 2012…
  - 2016: trivalent OPV→bivalent OPV
  - 2018: 33 cases in 2 countries
- 2019:
  - Interrupt WPV1 in Afghanistan and Pakistan
  - Stop outbreaks of VDPVs (OPV mutated strains, mostly WPV2)

Good morning Barbara Pahud

October 22, 2019

IDSA, HIVMA & THE JOURNALS IN THE NEWS

Oral Oseltamivir May Not Improve Symptoms In Patients With Influenza, Study Indicates
Infectious Disease Advisor (10/21, Gupta) reports researchers found that "while oral oseltamivir decreased viral shedding in adults with influenza and without risk factors for complications of influenza compared with placebo, it did not significantly decrease the time to resolution of clinical symptoms." The findings were published in Clinical Infectious Diseases.

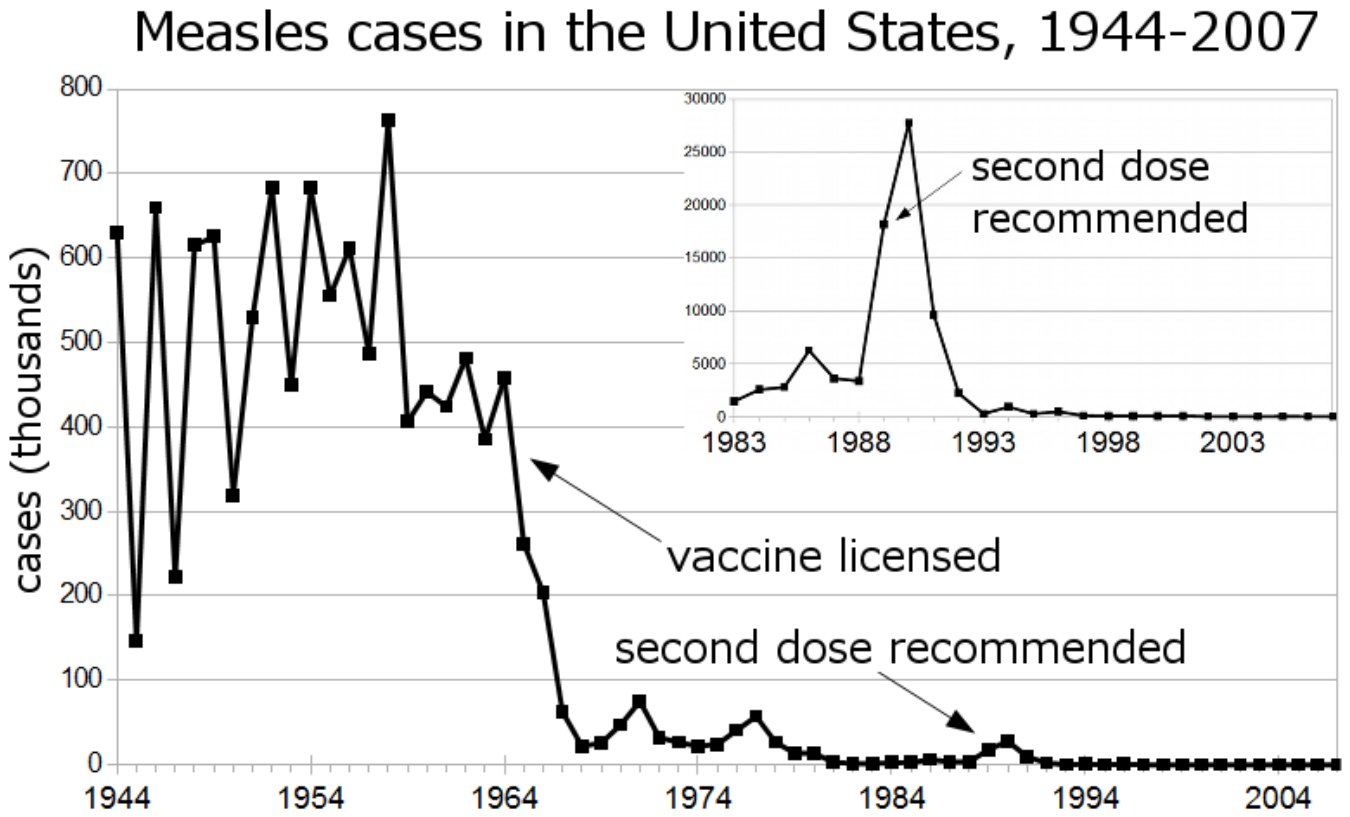
Writers Urge Integration Of Services To Provide For "Family Planning And HIV Needs Of Women"
IDSA's Science Speaks (10/21) blog carries a guest post by Jay Gribble of Health Policy Plus and Alyson Lipsky of RTI and Health Policy Plus, about "health service delivery integration" which, they say, "seems like a "no-brainer" from the perspectives of efficiency and client responsiveness," but, they add, "programs are put into silos without considering the context of the health system and the wide-ranging needs of the people it serves" because of "budgets, management structures, or health priorities," yet they may result in "long wait times, time lost traveling to different facilities for different needs, and higher out-of-pocket expenditures." They identify three approaches to integration: "Responding to specific populations"; "One-stop shop at point of service"; and "Integrated health service system" and in each focus on "the family planning and HIV needs of women."

DISEASES & CONDITIONS

World Polio Day Expected To Feature Announcement That Type 3 Polio Has Been Eliminated
STAT (10/21, Branswell) reports on World Polio Day it is expected to be announced that type 3 polio has been eliminated, leaving only type 1 polioviruses. Michel Zaffran, director of polio eradication for the World Health Organization, said, "It is important to have some good news to show the world that we are making progress, even though it is a challenging situation and we have huge hurdles." Carol Pandak, director of Rotary International's PolioPlus program, said, "From a Rotary perspective, we're pleased to see that this may happen. And it would mark an important milestone in our progress." It will have been seven years next month "since the last type 3 poliovirus was spotted." The process for declaring the eradication "is overseen by the Global Commission for the Certification of the Eradication of Poliomyelitis."

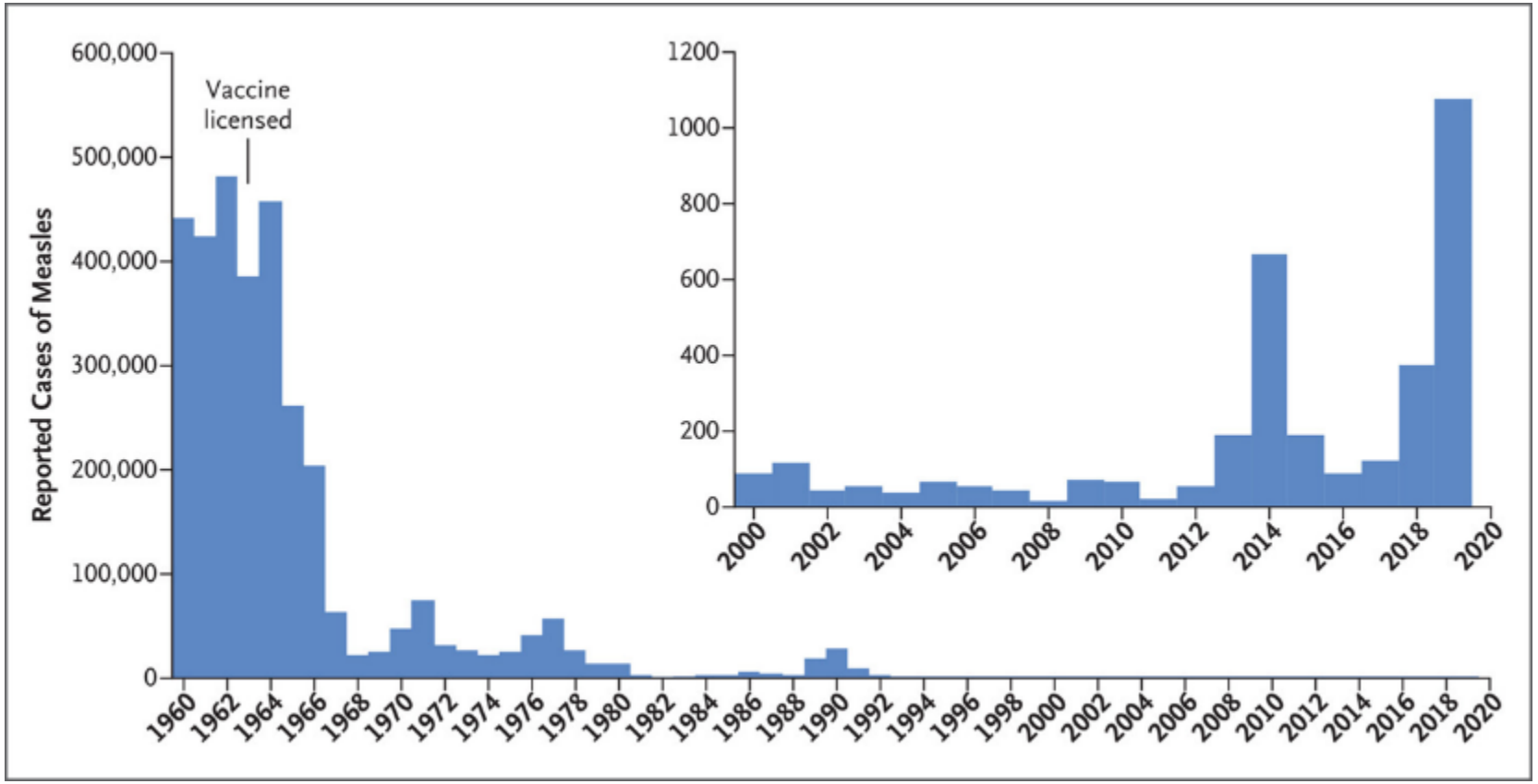
Children's Mercy

Measles



Children's Mercy

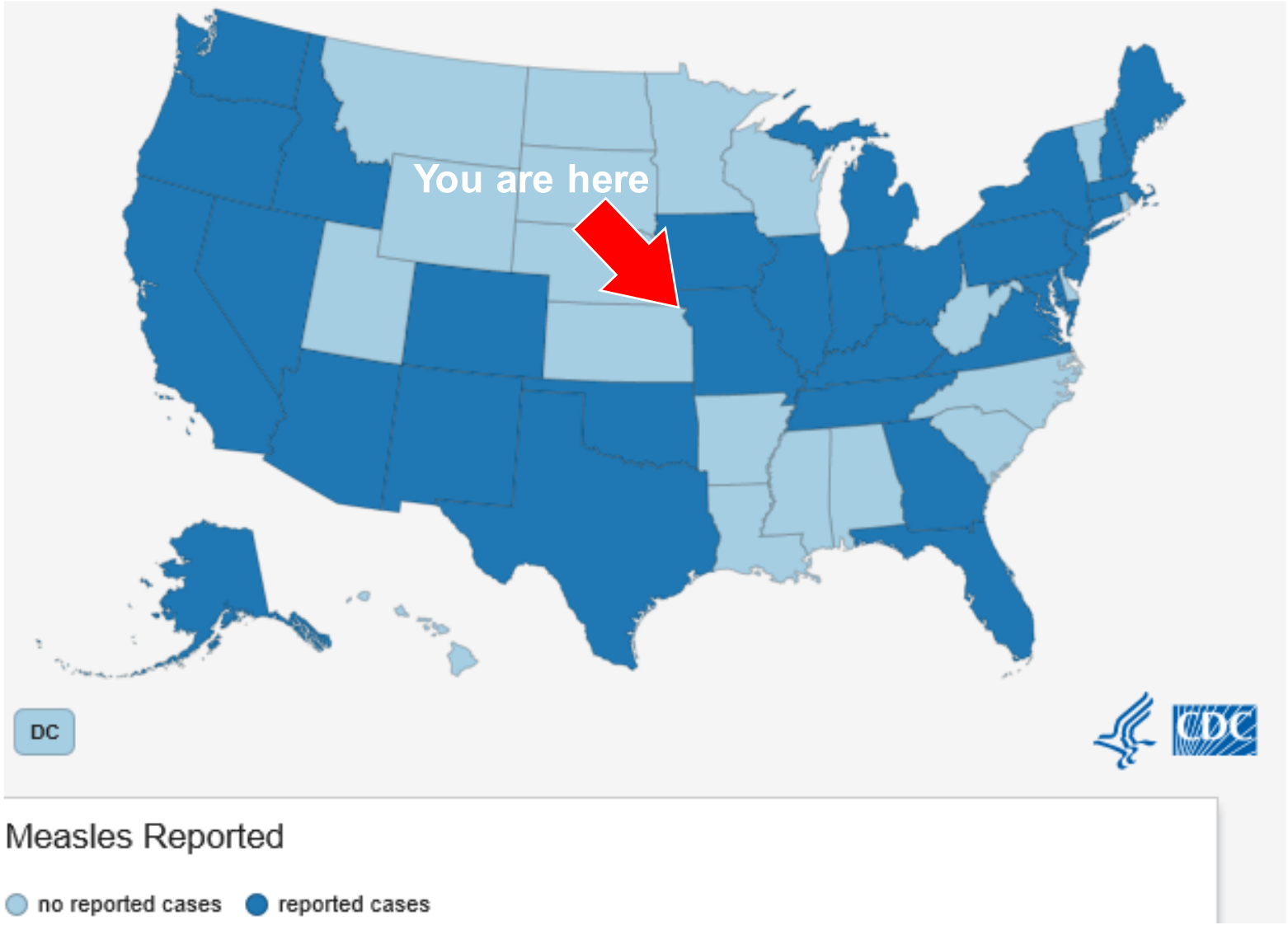
Vaccine Preventable Diseases *are coming…?*



Children's Mercy

Vaccine Preventable Diseases **ARE HERE**

- 1,182 individual cases of measles have been confirmed in 30 states (1/1-8/8 2019)
- This is the greatest number of cases reported in the U.S. since 1992
- Measles was declared eliminated in 2000… we may lose our elimination status



Children's Mercy

IDSA Infectious Diseases Society of America

Daily News Briefing

in affiliation with BulletinHealthcare

Good morning Barbara Pahud

October 10, 2019

IDSA, HIVMA & THE JOURNALS IN THE NEWS

PUBLIC HEALTH NEWS

More Than 4,000 People Have Died From Measles In DRC This Year, UNICEF Says

The AP (10/9, Petesch) reports UNICEF said more than 4,000 people have died from measles in the Democratic Republic of Congo (DRC) "this year in the world's largest" outbreak. The article adds that UNICEF also said that more than 200,000 cases have been reported since January.

CNN (10/9, Hunt) and TIME (10/9, Petesch) also cover the story.

Outbreak over? Maybe not…

HEALTH NEWS SEPTEMBER 30, 2019 / 10:27 AM / 3 DAYS AGO

U.S. recorded 2 new cases of measles last week

Measles Outbreak

- Every week we are breaking news with “the greatest number of cases reported in the U.S. since 1992 and since measles was declared eliminated in 2000”
- The majority of cases are among people who were not vaccinated against measles
- Measles is more likely to spread and cause outbreaks in U.S. communities where groups of people are unvaccinated

Children's Mercy

Measles- Current Situation

- In 2000, measles was declared eliminated from the United States.
- Travelers continue to bring measles into the United States, and it can sometimes spread and cause outbreaks among people who are not vaccinated
- Measles Vaccine is effective in preventing disease:
  - 1 dose 93%
  - 2 doses 97%
- The WHO warns that measles has had a historic advance due to low vaccine coverage
  - the increase in cases is worrisome and ongoing

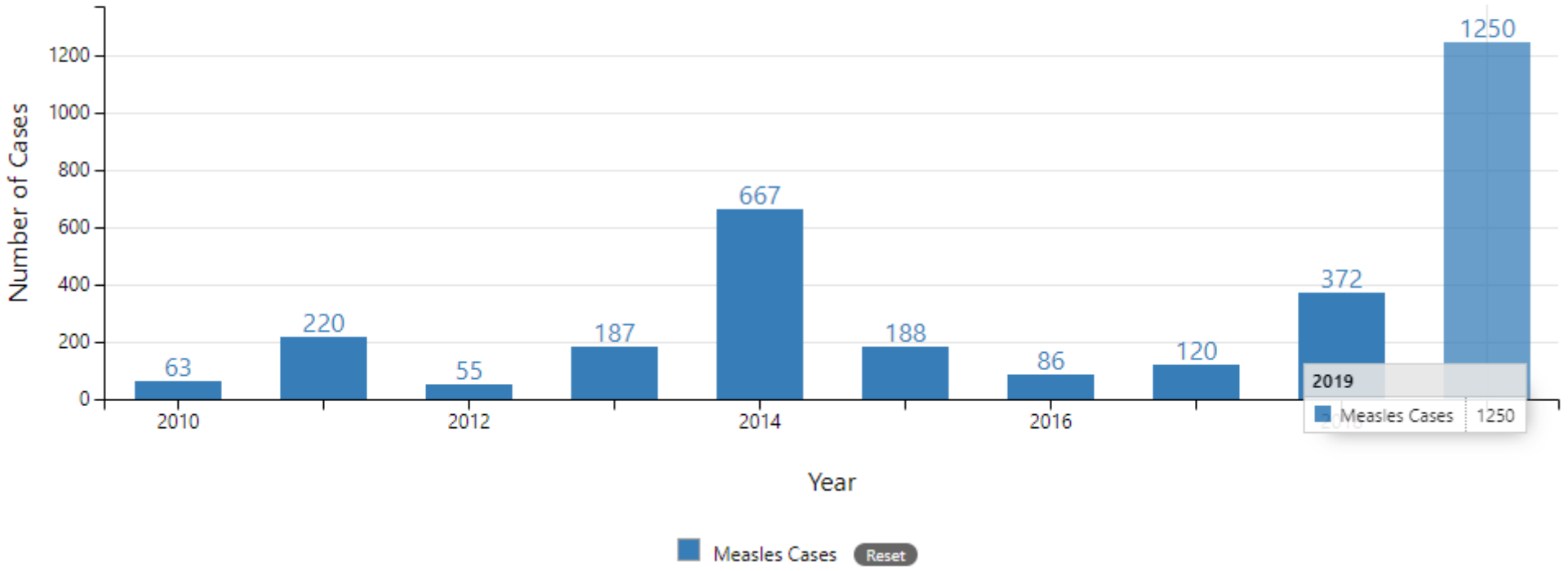
US Cases

- N-1255* individual cases in 31 states
  - N-119 hospitalized
  - N-61 had complications (pneumonia and encephalitis)
- Most cases were among people who were not vaccinated against measles
- Measles is more likely to spread and cause outbreaks in U.S. communities where groups of people are unvaccinated
- This is the greatest number of cases reported in the U.S. since 1992

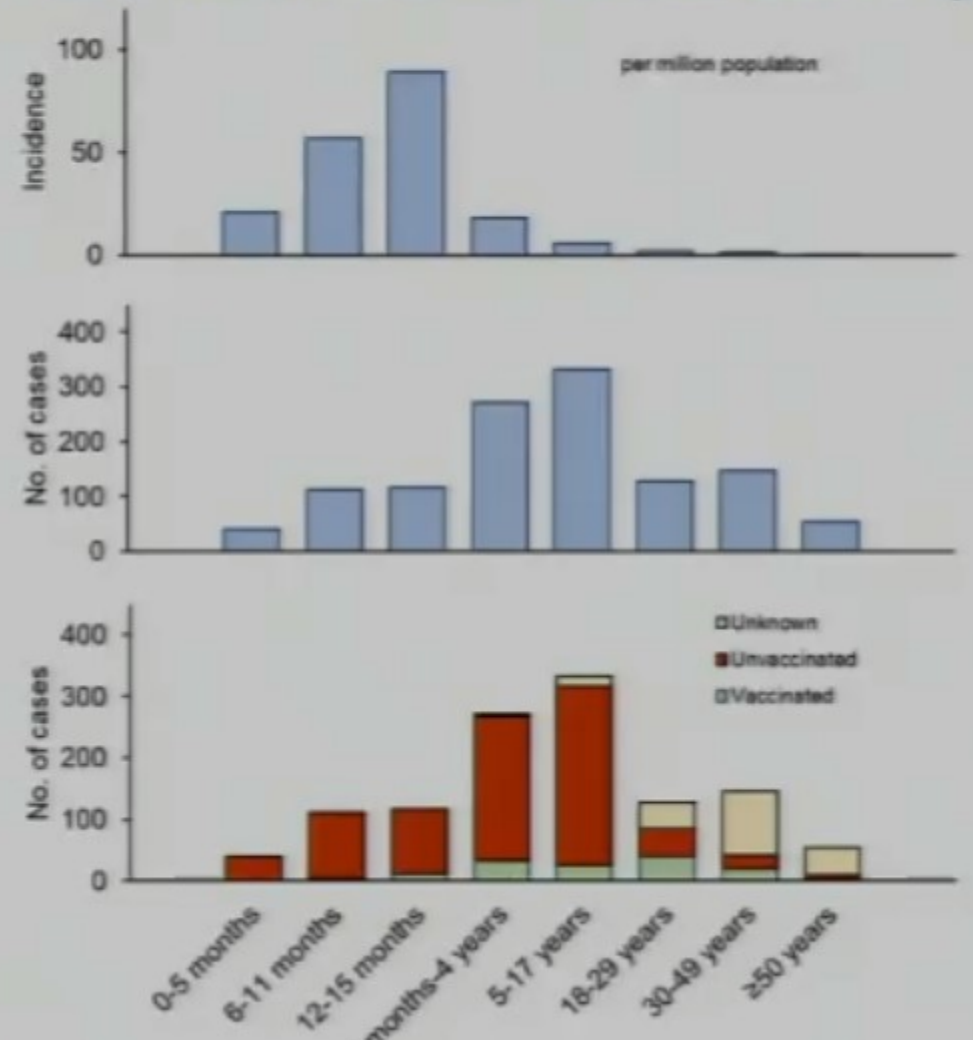
**Per last ACIP update October 24th, 2019

Number of Measles Cases Reported by Year

2010-2019**(as of October 3, 2019)



Measles age-specific incidence, burden, and vaccination status of measles cases, U.S., 2019



Why are there outbreaks in the US?

In a given year, more measles cases can occur for any of the following reasons:

- an **increase in the number of travelers who get measles abroad** and bring it into the U.S., and/or
- further spread of measles in U.S. **communities with pockets of unvaccinated people**.

Five largest measles outbreaks, U.S., 2001-2019

Year	State	Source (genotype)	Community	Cases	Duration (months)
2018/2019	NY + 4 states	Israel/Ukraine (D8)	Orthodox Jewish	1,114	10
2014	OH	Philippines (D9)	Amish	383	4
2014/2015	CA + 7 states	Unknown (B3)	Various	147	2.3
2018/2019	WA + 2 states	Ukraine (D8)	Ukrainian Russian	78	2.5
2017	MN	Unknown (B3)	Somali	75	3.8


LIVE Advisory Committee on Immunization Practices
Measles outbreaks in New York threatened elimination
Number of reported measles cases (N=1,487), by week of rash onset – United States, September 30, 2018—October 1, 2019
10.5 months
9.5 months
Last NYS outbreak rash onset: 8/19/19
Last NYC outbreak rash onset: 7/15/19
Elimination deadline
Cases associated with NYC and NYS outbreaks (n=1114)
Cases associated with other U.S. outbreaks (n=283)
Cases not associated with an outbreak (n=90)
Number of Cases
0
20
40
60
80
100
120
10/6
10/20
11/3
11/17
12/1
12/15
12/29
1/12
1/26
2/9
2/23
3/9
3/23
4/6
4/20
5/4
5/18
6/1
6/15
6/29
7/13
7/27
8/10
8/24
9/7
9/21
10/5
Week of Rash Onset

Measles Associated Complications

- There have been no deaths or documented cases of encephalitis
- 28 (7%) patients were diagnosed with pneumonia
- 28 (7%) patients were hospitalized
  - 20 (71%) of whom were children
    - Among these 20 hospitalized children, 6 (30%) were admitted to the intensive care unit (ICU), 7 years of age and less
- Two preterm infants were born at 34 and 25 weeks gestation to women who had measles while pregnant
  - Both infants were born with congenital measles infection confirmed by measles PCR testing

NEW YORK STATE | Department of Health

Measles Outbreak, NYC, 2018-19: Age and Vaccination History

Age Category	No MMR	1 Prior MMR	2 Prior MMR	MMR Not Known	Total (%)
< 6 months	26	0	0	0	26 (4%)
6 to <12 months	74	2	0	0	76 (12%)
1 to 4 years	244	32	1	0	277 (43%)
5 to 17 years	128	6	10	2	146 (22%)
≥18 years	5	7	20	92	124 (19%)
Total (%)	477 (74%)	47 (7%)	31 (5%)	94 (14%)	649 (100%)

Median Age: 3 years (range: 1 month to 79 years)

Previous Outberaks USA (2014-5)

The United States experienced a large (147 cases), multi-state measles outbreak linked to an amusement park in California.

The outbreak likely started from a traveler who became infected overseas with measles, then visited the amusement park while infectious; however, no source was identified. Analysis by CDC scientists showed that the measles virus type in this outbreak (B3) was identical to the virus type that caused the large measles outbreak in the Philippines in 2014.

Measles 2017

A 75-case outbreak was reported in Minnesota in a Somali-American community with poor vaccination coverage.

In a community with previously high vaccination coverage, concerns about autism, the perceived increased rates of autism in the Somali-American community, and the misunderstanding that autism was related to the measles-mumps-rubella (MMR) vaccine resulted in a decline in MMR vaccination coverage to a level low enough to sustain widespread measles transmission in the Somali-American community following introduction of the virus.

Morbidity and Mortality Weekly Report (*MMWR*)

CDC

Measles Outbreak — Minnesota April–May 2017

Weekly / July 14, 2017 / 66(27);713–717

Victoria Hall, DVM[1,2]; Emily Banerjee, MPH[2]; Cynthia Kenyon, MPH[2]; Anna Strain, PhD[2]; Jayne Griffith, MPH[2]; Kathryn Como-Sabetti, MPH[2]; Jennifer Heath, DNP[2]; Lynn Bahta[2]; Karen Martin, MPH[2]; Melissa McMahon, MPH[2]; Dave Johnson, MPH[3]; Margaret Roddy, MPH[2]; Denise Dunn, MPH[2]; Kristen Ehresmann, MPH[2] (View author affiliations)

Measles 2018

The U.S. experienced 17 outbreaks in 2018. Three outbreaks in New York State, New York City, and New Jersey, respectively, contributed to most of the cases. Cases in those states occurred primarily among unvaccinated people in Orthodox Jewish communities. These outbreaks were associated with travelers who brought measles back from Israel, where a large outbreak is occurring. Eighty-two people brought measles to the U.S. from other countries in 2018. This is the greatest number of imported cases since measles was eliminated from the U.S. in 2000.

Measles: 2019

These outbreaks are related to travelers that brought measles when returning from other countries such as Israel, Ukraine and the Philippines.

- Rockland County, Nueva York
  - Less than 1 year old: 12.2%
  - 1-3 years: 27.0%
  - 4-6 years: 13.9%
  - 7-18 years: 26.4%
  - 19+ years: 21.6%

Vaccination rates for confirmed measles cases in Rockland County as of August 15, 2019:

- 79% have had 0 MMRs
- 6% have had 1 MMR
- 3% have had 2 MMRs
- 12% have unknown status

- Butte County, California: 5 outbreaks , four linked to patients with international travel, one had an unknown source.
- NYC
- Washington State

Measles: 2019

- NYC:
  - On April 2019 there was a mandate to vaccinate Brooklyn residents living in affected areas such as Williamsburg and Borough Park, excluding people previously vaccinated, with proof of immunity or with valid medical contraindications.
  - If the Department of Public Health identifies a person exposed to measles in these areas that is unimmunized they will have to pay a $1000 fee
  - All children in New York City that are members of the Hasidic community not living in the affected areas must receive an early dose of MMR at ages 6 through 11 months of age that does not count towards her vaccination record

Measles: 2019

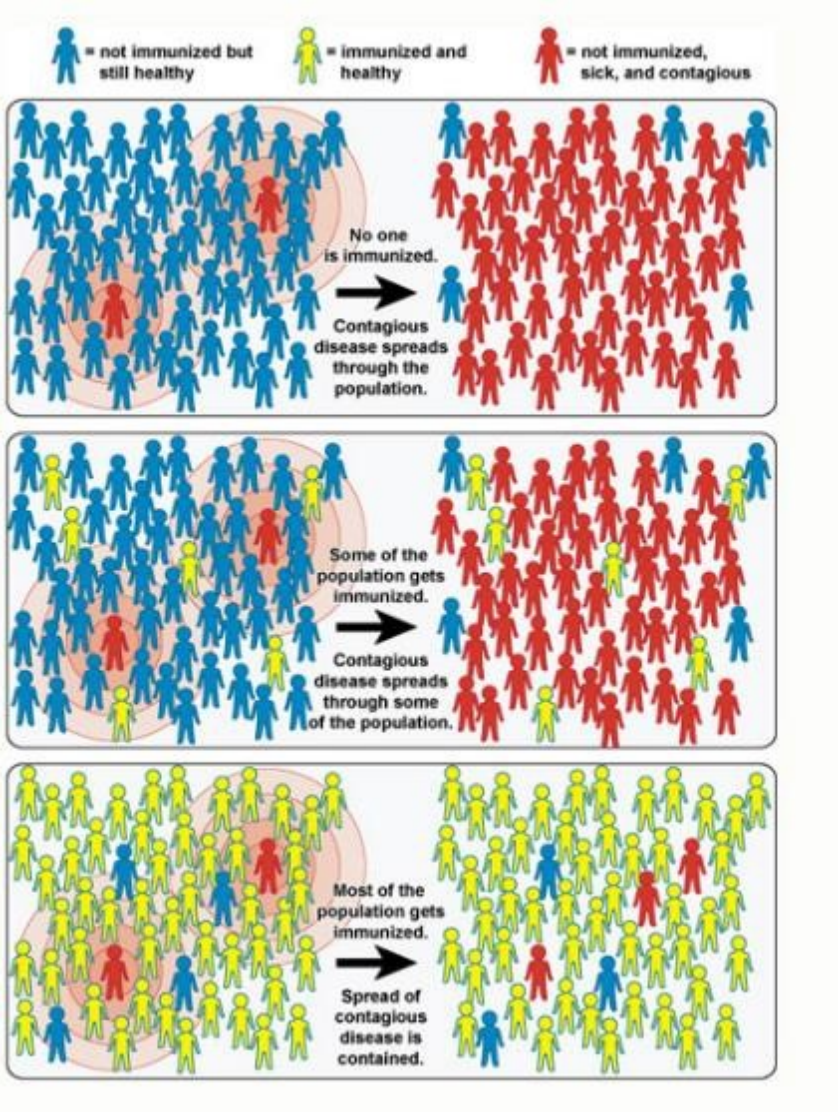
- Washington St: Seattle-Tacoma Int Airport, April 25.

Vaccination Status of Confirmed Measles Cases

Vaccination status (confirmed cases) *	Current Outbreak	Total 2019
0 doses	5	67
1 dose	2	4
2 or more doses	3	4
Unknown	3	12
Other documented evidence of immunity	0	0

Age range of confirmed measles cases

Ages	Current Outbreak	Total
Under 1 year old	2	2
1 to 10 years old	0	52
11 to 18 years old	2	16
19 to 29 years old	1	2
30 to 39 years old	1	5
40 to 49 years old	4	5
50 to 59 years old	2	2



Community Immunity

There is an effective vaccine to prevent measles but approximately 95% of the population must be immunized to achieve community immunity and prevent outbreaks.

Measles: >94%

Diphtheria: 85%

Mumps: 86%

Pertussis: 94%

October 21st, 2019

CDC released the 2016-2018 NIS-Child report and the 2018-19 kindergarten vaccination coverage report.

The US has already had 22 measles outbreaks in 2019, and most cases were among people who were not vaccinated.

Lack of access to vaccination services and hesitancy resulting from the spread of inaccurate information about vaccines, continue to increase the likelihood of outbreaks.

NIS-Child – Coverage by second birthday

While most U.S. parents are protecting their children from vaccine-preventable diseases by making sure they are getting recommended vaccines, there are areas where coverage is low.

- 20 states have MMR coverage less than 90 percent

CDC's data suggest that parents want to vaccinate their children, but they may face barriers to protecting their children.

- Coverage was lower for children without private health insurance, especially those with no insurance, as well as those living below the poverty line and in more rural areas.
- Only 1.3 percent of children received no vaccines by age 24 months

www.cdc.gov/vaccines/vaxview.

World Health Organization

Health Topics | Countries | Newsroom | Emergencies

Home / Emergencies / Ten threats to global health in 2019

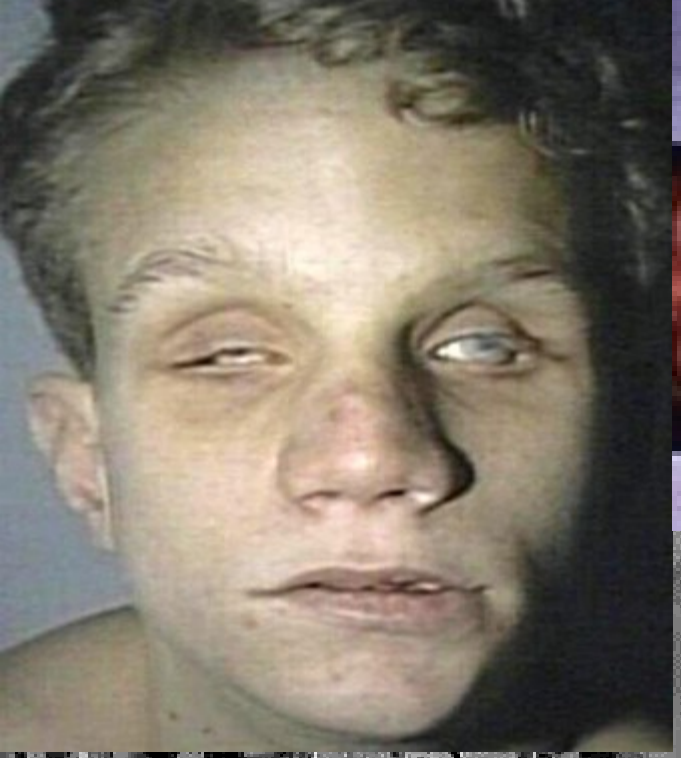
1. Air pollution and climate change
2. Non-communicable diseases
3. Global influenza pandemic
4. Fragile and vulnerable settings
5. Antimicrobial resistance
6. Ebola and other high-threat pathogens
7. Weak primary health care
8. Vaccine hesitancy
9. Dengue
10. HIV

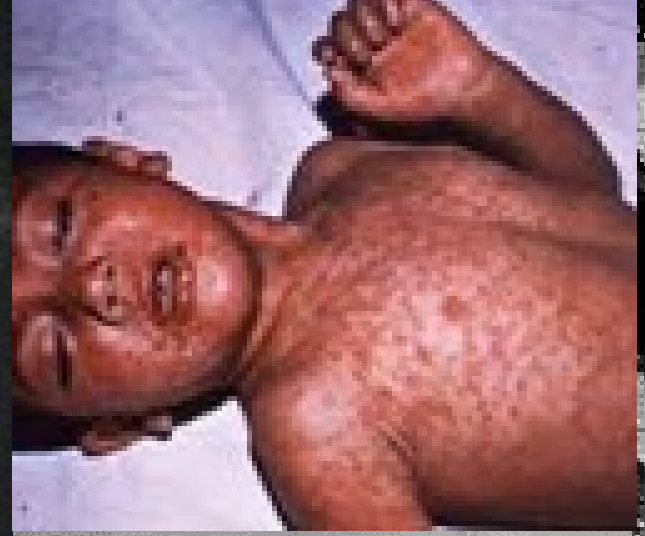
Children's Mercy

Why Vaccine Hesitancy Now?

Many don’t understand that their children are at risk from vaccine preventable diseases

- Loss of diseases’ visibility
- Loss of a sense of urgency
- Lack of fear
- Fear of pain > fear of disease





THEN


VACCINES ARE A HOLOCAUST
SAYS JFK NEPHEW


FLU VACCINES
ARE TOXIC

NOW


Diphtheria and Tetanus
Toxoids and Acellular
Pertussis Vaccine Adsorbed
HIDDEN DANGER
Adverse events reported during post-approval use of Tripedia vaccine include idiopathic thrombocytopenic purpura, SIDS, anaphylactic reaction, cellulitis, AUTISM, convulsion/grand mal convulsion, encephalopathy, hypotonia, neuropathy, somnolence and apnea.


Autism ADHD Asthma Allergies Eczema
THE GREATEST LIE EVER TOLD
...THAT VACCINES ARE
SAFE AND EFFECTIVE
Seizures Obesity Auto-Immune Diabetes

The Washington Post
Democracy Dies in Darkness

Health & Science

Meet the New York couple donating millions to the anti-vax movement

"They should be allowed to have the measles if they want the measles," Del Bigtree told reporters outside an anti-vaccine forum in Brooklyn earlier this month geared to the ultra-Orthodox Jewish community. (Yana Paskova/For The Washington Post)

By **Lena H. Sun** and **Amy Brittain**
June 19 at 6:00 AM

The Washington Post
Democracy Dies in Darkness

A wealthy Manhattan couple has emerged as significant financiers of the anti-vaccine movement, contributing more than $3 million in recent years to groups that stoke fears about immunizations online and at live events — including two forums this year at the epicenter of measles outbreaks in New York's ultra-Orthodox Jewish community.

How the Selzes came to support anti-vaccine ideas is unknown, but their financial impact has been enormous. Their money has gone to a handful of determined individuals who have played an outsize role in spreading doubt and misinformation about vaccines and the diseases they prevent. The groups' false claims linking vaccines to autism and other ailments, while downplaying the risks of measles, have led growing numbers of parents to shun the shots. As a result, health officials have said, the potentially deadly disease has surged to at least 1,044 cases this year, the highest number in nearly three decades.

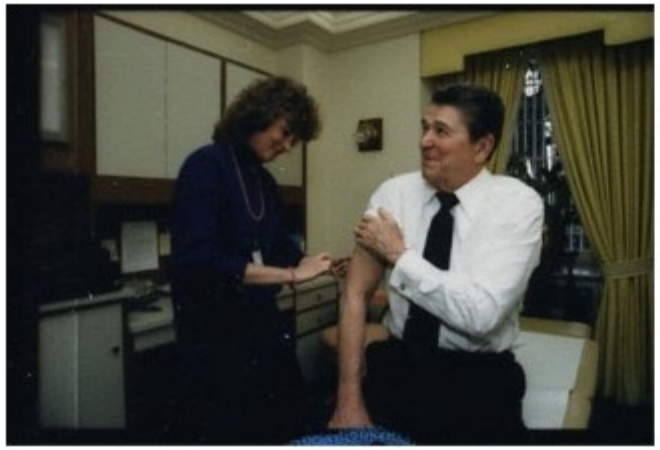
"They should be allowed to have the measles if they want the measles," Bigtree told reporters outside the Brooklyn meeting on June 4. "It's crazy that there's this level of intensity around a trivial childhood illness."

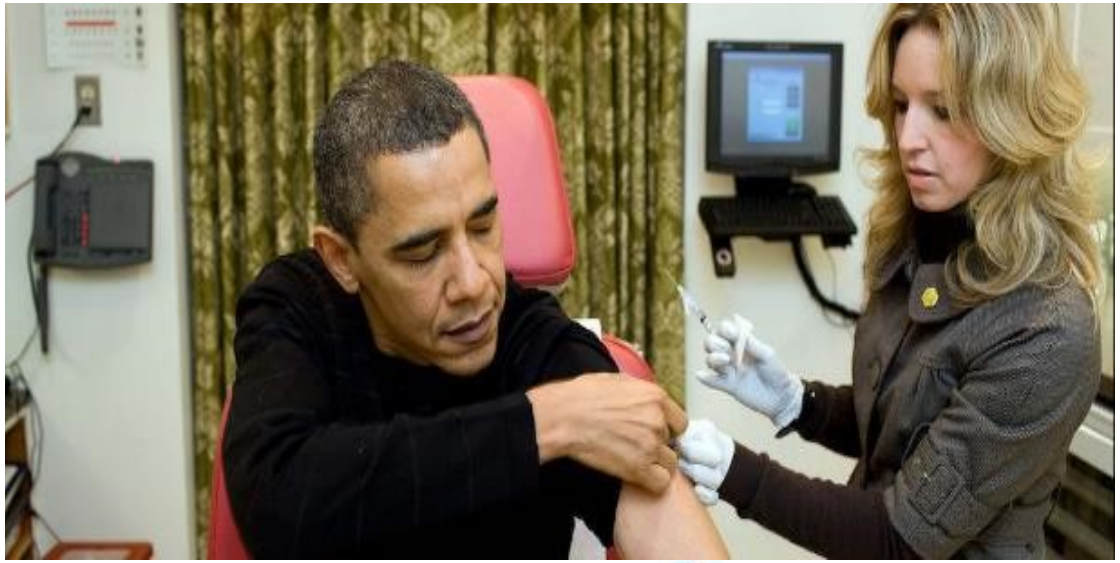
Bernard Selz and his wife, Lisa. (Bertrand Rindoff Petroff/Getty Images)

Thanks largely to the Selzes's donations, ICAN is now the best-funded among a trio of organizations that have amplified concerns about vaccines. ICAN brought in $1.4 million in revenue in 2017, with just over $1 million supplied by the Selz Foundation, according to tax filings.

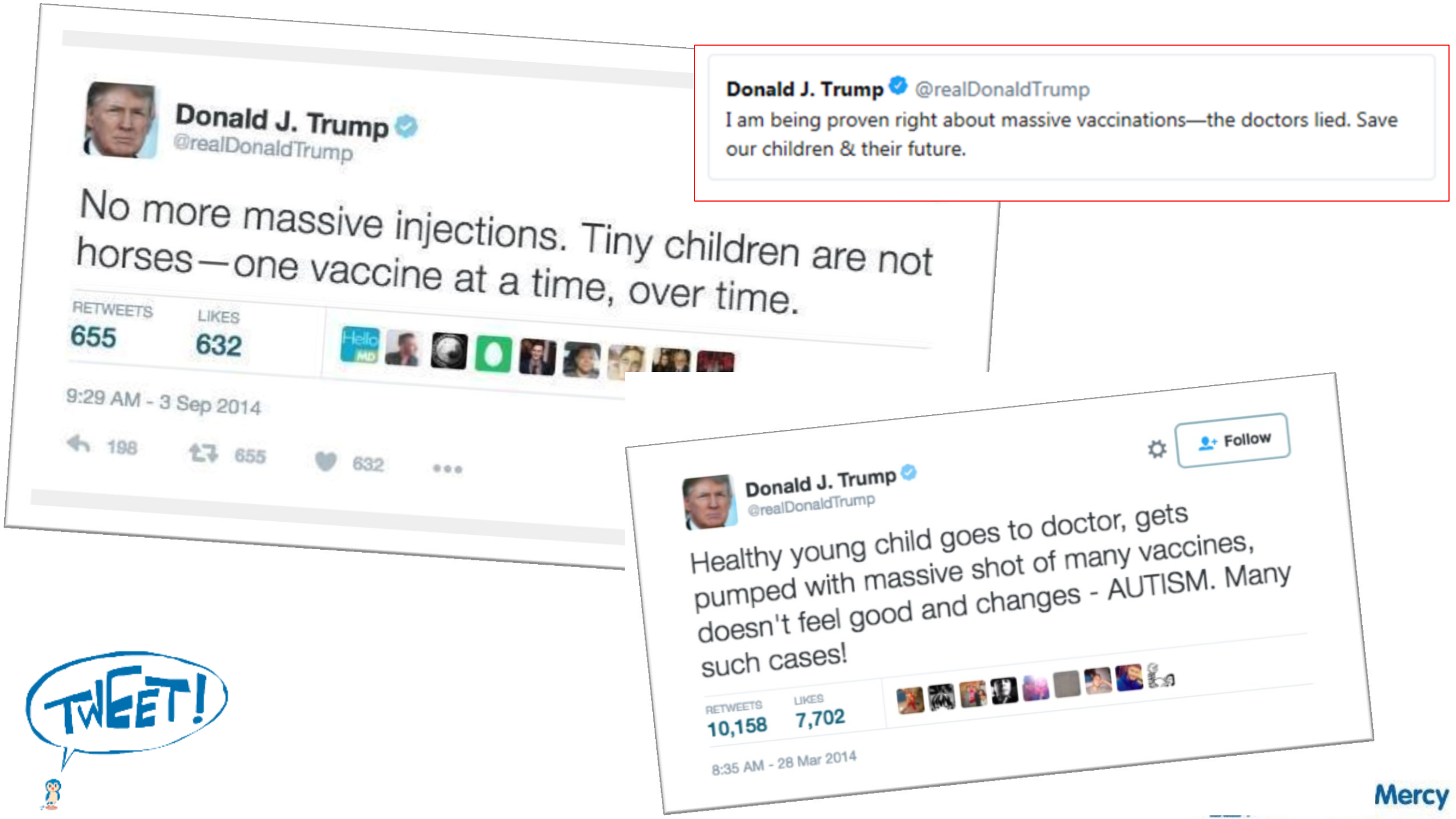
The Selzes and the groups they support are hardly the only purveyors of anti-vaccine ideas. Environmental attorney Robert F. Kennedy Jr., a nephew of the late president, runs the Children's Health Defense, a charity that promotes a similar agenda; it brought in $727,000 in 2017, according to tax filings. Barbara Loe Fisher, who says her son was injured by vaccines, runs a Virginia-based nonprofit that combats legislative efforts to tighten vaccine requirements. Her group, the National Vaccine Information Center, brings in about $1 million a year, according to its 2018 tax documents.

Communicating by Example- U.S. Presidents and Vaccines





Children's Mercy


Donald J. Trump
@realDonaldTrump
No more massive injections. Tiny children are not horses—one vaccine at a time, over time.
RETWEETS
655
LIKES
632
9:29 AM - 3 Sep 2014
198
655
632
Donald J. Trump @realDonaldTrump
I am being proven right about massive vaccinations—the doctors lied. Save our children & their future.
Follow
Donald J. Trump
@realDonaldTrump
Healthy young child goes to doctor, gets pumped with massive shot of many vaccines, doesn't feel good and changes - AUTISM. Many such cases!
RETWEETS
10,158
LIKES
7,702
8:35 AM - 28 Mar 2014

What is in the Horizon

Major milestone for WHO-supported Ebola vaccine

18 October 2019 | News release | Geneva

中文 Français Русский

- The world came a big step closer to having a fully licensed Ebola vaccine yesterday, with a panel of the European Medicines Agency recommending conditional marketing authorization for Merck's experimental Ebola vaccine.
- The vaccine called Ervebo (Ebola Zaire Vaccine (rVSVΔG-ZEBOV-GP, live)) - is the first vaccine for active immunization of individuals aged 18 years and older at risk of infection with the Ebola virus.
- There are 8 vaccines undergoing clinical evaluation.
- This announcement will not have an immediate effect on how the vaccine is accessed or administered in the Democratic Republic of the Congo, as licensing has not yet occurred, and licensed doses will only be available mid-2020.

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Dengue

Head To Head

Head to Head

Is Dengvaxia a useful vaccine for dengue endemic areas?

BMJ 2019 ; 367 doi: https://doi.org/10.1136/bmj.l5710 (Published 03 October 2019)
Cite this as: *BMJ* 2019;367:l5710

Article | Related content | Metrics | Responses

Duane J Gubler, cofounder, Pediatric Dengue Vaccine Initiative; chair, Global Dengue and Aedes-Transmitted Diseases Consortium (GDAC) [1], *Scott B Halstead, founder, Pediatric Dengue Vaccine Initiative* [2]

Author affiliations

Correspondence to: D J Gubler duane.gubler@duke-nus.edu.sg, S B Halstead halsteads@erols.com

An effective dengue vaccine that provides balanced protection is still elusive, and **Duane J Gubler** argues that some partially effective vaccines offer overall benefit—but **Scott B Halstead** says that this would need a completely new serotesting regimen to avert serious harm

Children's Mercy

POLICY QUESTION FOR ETR

Should 3-doses of CYD-TDV be administered routinely to persons 9-16 years of age with laboratory-confirmed previous dengue infection and living in *endemic areas* to prevent virologically confirmed dengue, hospitalizations and severe dengue?

Children's Mercy

Dengue

- Studies for vaccine efficacy include both RCTs and case cohort studies
- Vaccine only works on seropositives
  - For seropositive, there is high quality evidence of benefit for VCD, hospitalization and severe dengue with no harm
  - For seronegatives the evidence lever is lower and there is a signal for increased risk among those receiving the vaccine
- Silent infection
- Duration of seroprotection one-year assumption for the modeling, similar to natural infection
- Vaccine licensed for 9 yr old and above, but they must likely have already had 2 infections or more thus benefit goes away.

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CYD-TDV Cost Effectiveness Comments/Discussion

- **Presentation on validated model vaccinating 9 year-olds, dengue antibody prevalences of 50%/30%, vaccine coverage 80%**
  - Vaccination beneficial from a public health and individual perspective as long as sero-screening moderately Sp and Se
  - 6% of overall hospitalizations prevented
    - Vaccinating a wider age range increases proportion of hospitalizations prevented
  - Increasing test Se increases public health impact but higher Sp more important to maximize cost effectiveness
    - 2 hospitalizations in misclassified seronegatives for every 1000 vaccinated persons with Sp at 95% (prevalence 50%)
    - Higher seroprevalence increases cost effectiveness, decreases misclassifications

Rabies

Terms of Reference Abbreviated

- Determine the epidemiology and burden of rabies exposures and PreP and PEP administration in the United States
- Evaluate and revise recommendations as needed for vaccination schedules, route and site of PrEP and PEP, and cost-effectiveness
- Consider evidence generated to inform the rabies recommendations of other global organizations
- Review rabies exposure risk and risk assessment guidelines for the general population and by occupational and recreational groups

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Tentative Plan for Presentations

- October 2019 – Background and introduction to PrEP issues
- February 2020
  - Detailed PrEP data including GRADE table
  - Introduction to PEP issues
- June 2020
  - Vote for PrEP topics
  - More detailed presentations about PEP
- October 2020
  - More detailed presentations about PEP vs. vote on PEP issues

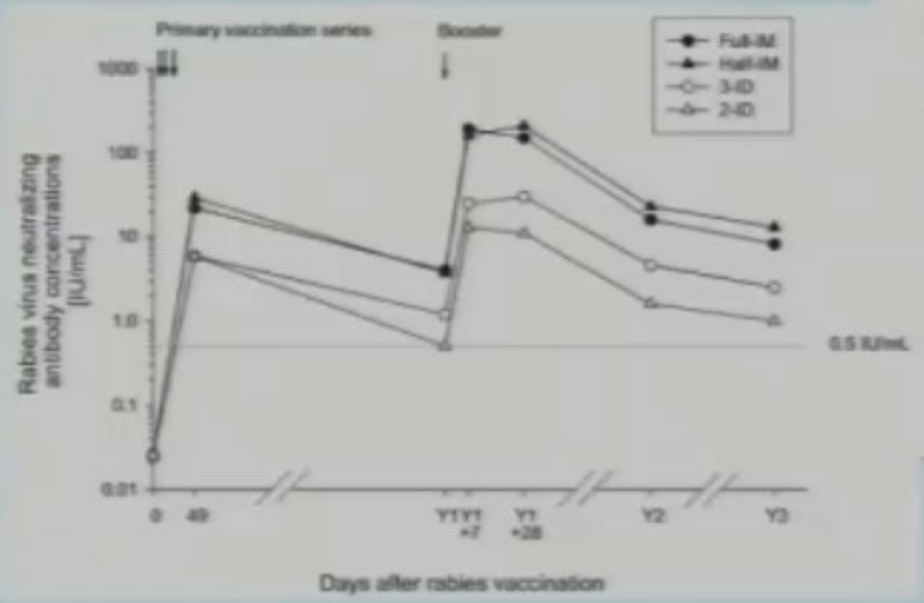
ACIP considerations for Rabies working group

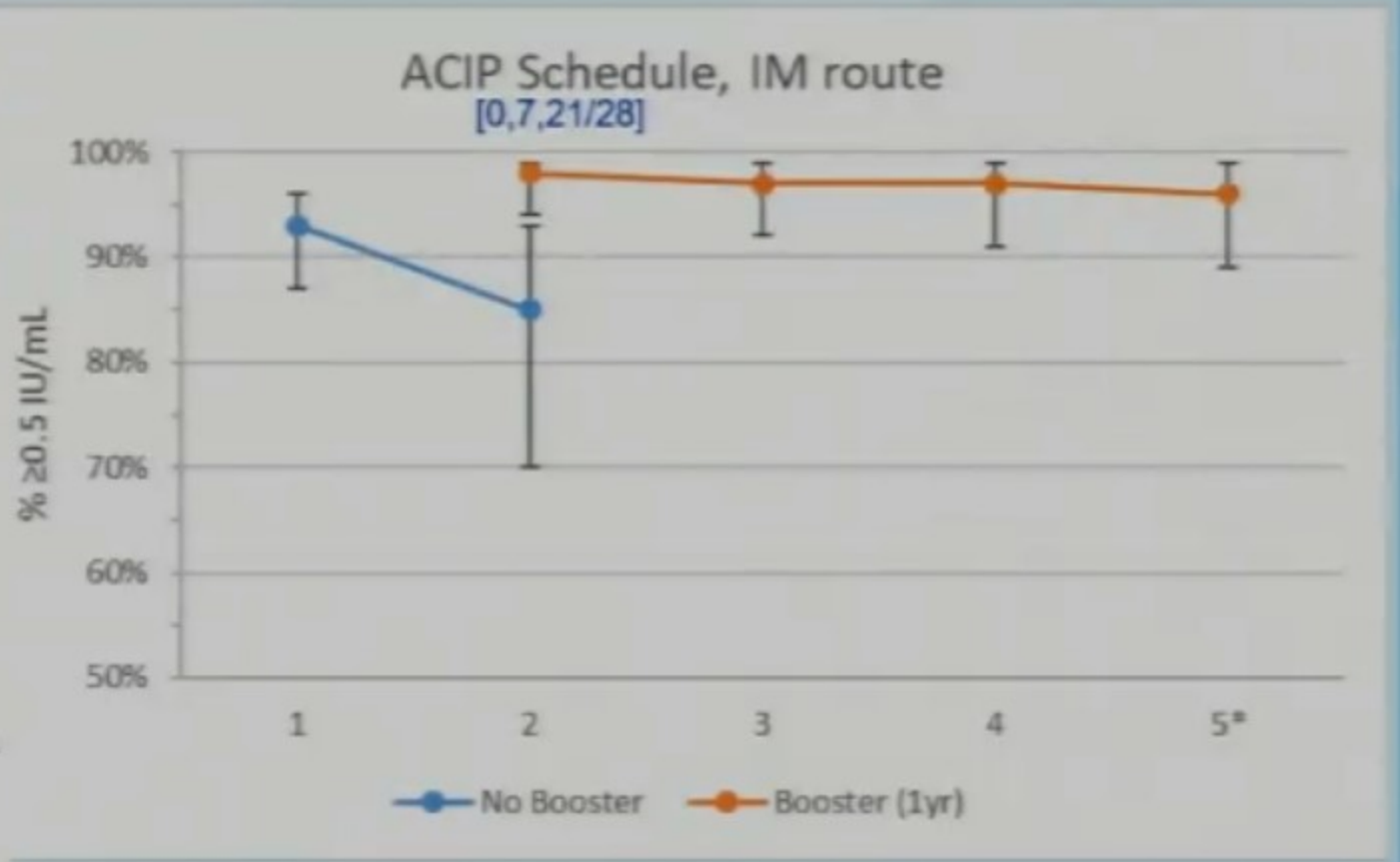
For your consideration…

- **Status quo**
  - 3-dose, 3-4 week schedule [0,7, 21 or 28]
  - Serological monitoring and boosters based on risk category
- **Should a 2-dose, 1-week schedule [0,7] for rabies PrEP be recommended?**
  - Recommended routes of administration
  - Special populations
    - High risk categories: booster/serological monitoring?
    - Immunocompromised: alternate schedules/serological monitoring?
  - All rabies vaccines are FDA approved as 3-dose series for PrEP

Booster

- Booster at 1 year associated with long term immunogenicity





Progress Toward Rubella and Congenital Rubella Syndrome Control and Elimination — Worldwide, 2000–2018

Weekly / October 4, 2019 / 68(39);855–859

Gavin B. Grant, MD[1]; Shalini Desai, MD[2]; Laure Dumolard, PhD[2]; Katrina Kretsinger, MD[2]; Susan E. Reef, MD[1] (View author affiliations)

View suggested citation

Summary

What is already known about this topic?

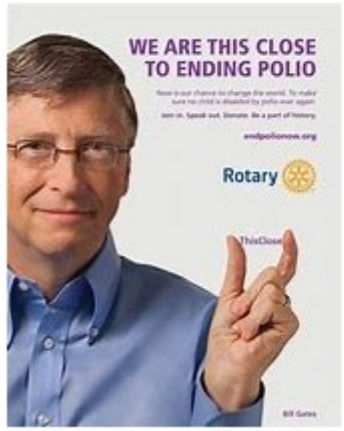
Congenital rubella syndrome is caused by rubella virus infection of pregnant women. Since 2011, there has been an acceleration in the efforts to introduce rubella-containing vaccine using a strategy that can result in elimination.

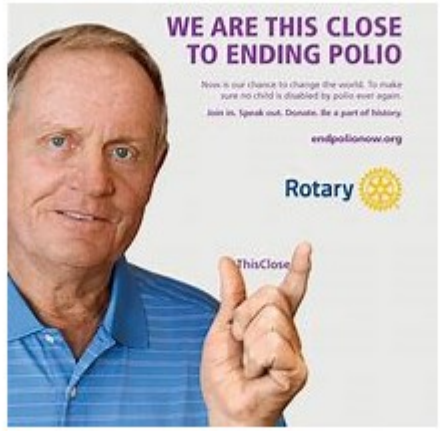
What is added by this report?

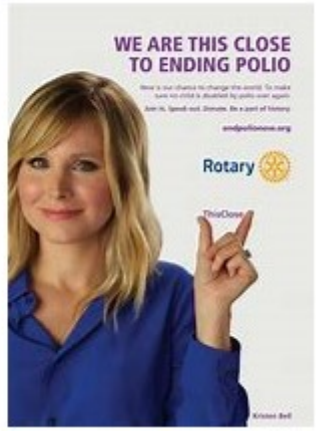
Progress toward rubella elimination has resulted in 168 (87%) of 194 countries protecting infants with RCV and 81 (42%) eliminating rubella transmission. Equity between countries using rubella-containing vaccine has increased as lower-income countries have introduced rubella-containing vaccine.

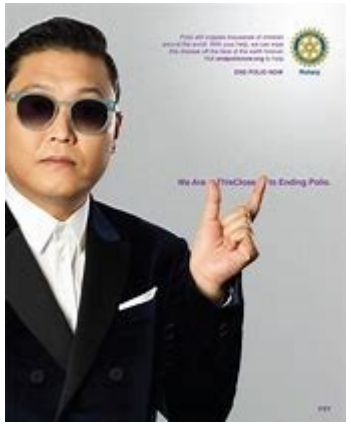
What are the implications for public health practice?

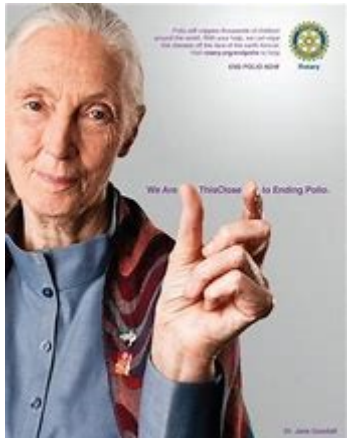
To make further progress, it is important that the 26 remaining countries introduce rubella vaccine and the countries that have already introduced the vaccine achieve and maintain elimination.











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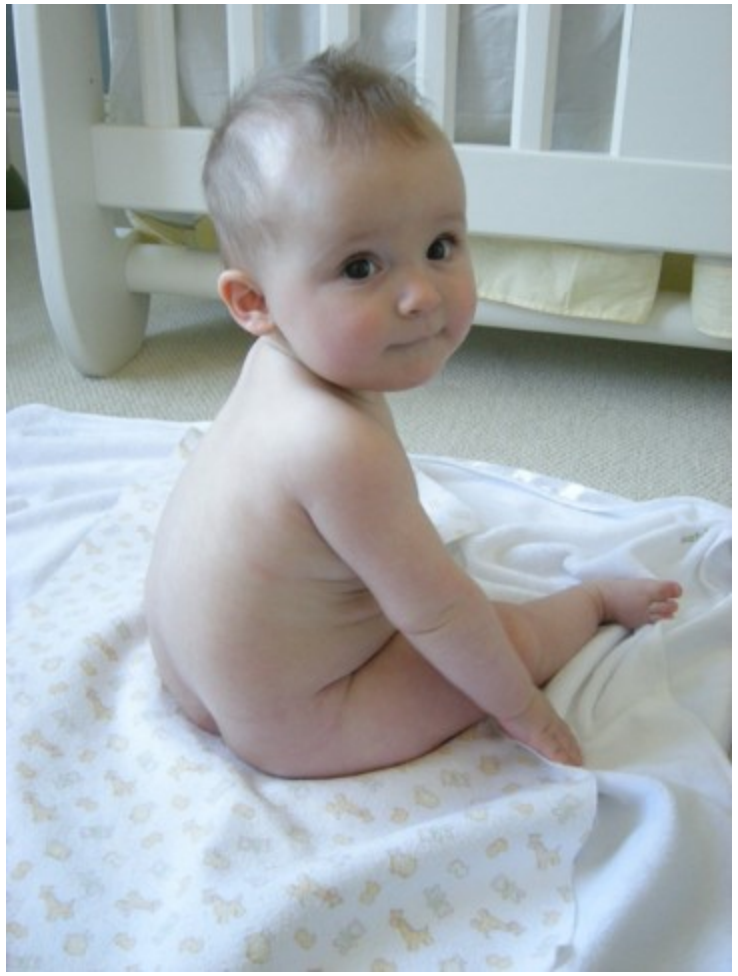

Questions?

Children's Mercy