Where We Are Now with Routine Pediatric Vaccination Coverage

Presented by:
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<tr>
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<th>List of Mitigated Disclosures</th>
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<tbody>
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</tbody>
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Pediatrician
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#TeamHalo
#PedsSquad
Objectives

Discuss current pediatric vaccination coverage

Understand strategies for the catch-up vaccination schedule

Address vaccine misinformation and hesitancy
Trends in Pediatric vaccination during COVID-19 pandemic
Introduction

• National state of emergency declared on March 13, 2020, which focused on physical distancing and quarantining
• Across the USA, in-person clinic visits plummeted
• Data* from CMS showed that for Medicaid and CHIP services from March-May 2020
  • 69% fewer (7.6 million) dental services rendered,
  • 44% fewer (3.2 million) child screening services that assess physical and cognitive development,
  • 44% (6.9 million) fewer outpatient mental health services and
  • 22% fewer (1.7 million) vaccinations up to age 2.

Unintended Consequences of COVID-19 Pandemic

• Significant decrease in routine immunization delivery to all pediatric age groups.

• Causes
  • Stay at home order: limited movement outside the home
  • Fear of going out in public
  • Medical offices, clinics or facilities closing or seeing specific patients in person
  • Disruption in Vaccine supply chain
  • Healthcare staffing shortages and redeployment
  • Decrease access to vaccines in pharmacies and other venues
US Wellness Visits

2021 US wellness visit cumulative change against 2017-2019 three year average for the same time period\textsuperscript{2, a, b}

\textsuperscript{a}The total number of wellness visit claims records captured by Optum's de-identified Clinformatics\textsuperscript{®} Data Mart Database from 2017-2019 was 20,711,248.\textsuperscript{2}

\textsuperscript{b}The total number of wellness visit claims records captured by HealthVerity COVID-19 Surveillance and Utilization Syndicated Weekly Offering from 2020 through August 8, 2021 was 13,537,033 and 8,984,000+ respectively.\textsuperscript{2}

HealthVerity COVID-19 Surveillance and Utilization Syndicated Weekly Offering, 2020-2021; Optum’s Insight Clinformatics Data Mart, 2017-2019.\textsuperscript{2}
Pediatric Vaccination During the COVID-19 Pandemic

Bradley K. Ackerson, MD, a Lina S. Sy, MPH, a Sungchong C. Glenn, MS, a Lei Qian, PhD, a Claire H. Park, MPH, a Robert J. Riewerts, MD, b Steven J. Jacobsen, MD, PhD a
Total vaccine doses given in KPSC
Total vaccine doses given in KPSC
Measles vaccine coverage in KPSC
Measles vaccine coverage in KPSC
Take-home points

• Total and measles-containing childhood vaccines declined rapidly shortly after March 2020 compared to 2019

• Vaccination coverage recovered in children ages 0-23 months

• For children ages 2-18 years, while measles vaccine coverage recovered, total vaccination uptake remained lower
Association of the COVID-19 Pandemic With Routine Childhood Vaccination Rates and Proportion Up to Date With Vaccinations Across 8 US Health Systems in the Vaccine Safety Datalink

Malini B. DeSilva, MD, MPH; Jacob Haapala, MPH; Gabriela Vazquez-Benitez, PhD; Matthew F. Daley, MD; James D. Nordin, MD, MPH; Nicola P. Klein, MD, PhD; Michelle L. Henninger, PhD; Joshua T. B. Williams, MD; Simon J. Hambidge, MD, PhD; Michael L. Jackson, PhD; James G. Donahue, PhD; Lei Qian, PhD; Megan C. Lindley, MPH; Julianne Gee, MPH; Eric S. Weintraub, MPH; Elyse O. Kharbanda, MD, MPH

• California, Oregon, Washington, Colorado, Minnesota and Wisconsin that are in the Vaccine Safety Datalink
Weekly Vaccine Administration Rates

Figure 1. Weekly Vaccine Administration Rates for Included Pediatric Populations

A. Age <24 mo

B. Age 4-6 y
Weekly Vaccine Administration Rates

Data are from 8 US health systems in the Vaccine Safety Datalink and are organized by age group (<24 months, 4-6 years, 11-13 years, and 16-18 years) and period, 2019 and 2020. These ranges include data from January 6 through October 5, 2019, and January 5, 2020, through October 3, 2020. Vaccines varied by age group. In those younger than 24 months: hepatitis B; rotavirus; diphtheria, tetanus, and acellular pertussis; *Haemophilus influenzae* type B conjugate; pneumococcal conjugate, 13-valent; inactivated polio; measles, mumps, rubella; and varicella-zoster vaccines were standard. In children aged 4 to 6 years, measles, mumps, and rubella; varicella-zoster; diphtheria, tetanus, and acellular pertussis; and inactivated polio vaccines were standard. In children aged 11 to 13 years, human papillomavirus; tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis; and quadrivalent meningococcal conjugate vaccines were standard. In those aged 16- to 18 years, human papillomavirus and quadrivalent meningococcal conjugate vaccines were standard.
Proportion of Individuals Up to Date for Routine Childhood Vaccines

Figure 2. Proportion of Individuals Up to Date for Routine Childhood Vaccines
Racial Disparities in Vaccination Coverage

Figure 3. Proportion of Individuals Up to Date for Routine Childhood Vaccines
Take-home Points

• As of September 2020 (compared to September 2019), weekly vaccination rates were significantly lower, especially for ages 7 months, 18 months and 13 years.

• 74% of infants turning 7 months old in September 2020 were UTD on their vaccinations, a drop from 81% in September 2019.

• 57% of infants who hit the 18-month mark in September 2020 were UTD, down from 61% the year before.

• Vaccination coverage varies by race/ethnicity.
Vaccination Coverage with Selected Vaccines and Exemption Rates Among Children in Kindergarten — United States, 2020–21 School Year

Ranee Seither, MPH¹; Jessica Laury, MPH¹,²; Agnes Mugerwa-Kasujja, MD¹,³; Cynthia L. Knighton¹; Carla L. Black, PhD¹
Disclaimer!

- Alaska, Illinois, and West Virginia did not report kindergarten vaccination coverage for the 2020–21 school year and are excluded from this analysis.
Most recent update

• In the 2020-2021 school year, vaccination coverage nationally was
  • 93.9% for 2 doses of MMR
  • 93.6% for the state-required number of doses of DTaP
  • 93.6% for the state-required doses of varicella vaccine.

• Compared with the 2019–20 school year, vaccination coverage decreased by approximately one percentage point for all vaccines.

• MMR coverage and exemptions for ≥1 vaccines decreased in approximately 75% of states
Vaccine exemptions

• Although 2.2% of kindergartners had an exemption from at least one vaccine, an additional 3.9% who did not have a vaccine exemption were not UTD for MMR
• 2.2% of kindergartners had an exemption for ≥1 required vaccines (not limited to MMR, DTaP, and varicella vaccines) in 2020–21 (range = 0.1% [Mississippi and New York] to 8.2% [Idaho])
• 2.5% had an exemption reported during the 2019–20 school year.
• Nationally, 0.2% of kindergartners had a medical exemption and 1.9% had a nonmedical exemption.
Where is Illinois currently?

SchoolVaxView

SchoolVaxView is your source for data, information, and news about school vaccination coverage from state reports of the estimated number of children in child care, kindergarten, and middle school who have received vaccinations recommended or required by their state. On this site, you can learn more about the number of schoolchildren who have received vaccinations and other school vaccination topics.
Illinois 2019-2020

• Vaccine coverage
  • DTP, DTaP, or DT - 96.5%
  • MMR – 96.6%
  • Polio – 96.5%
  • Varicella – 96.4%

• Exemption
  • Any – 2%
  • Medical – 0.3%
Catching up on pediatric vaccines
Physician Messaging

• Protecting communities from vaccine-preventable diseases is one of the most important things you can do to keep everyone healthy and prevent outbreaks.

• A strong recommendation from a trusted healthcare provider is the best predictor of vaccination.

• It is now more important than ever to assess vaccination status of all your patients, and potentially their family members, at every medical visit, whether the visit is in-person or remote.
Printable .pdf for catch-up schedule


- Remember, a vaccine series does not need to be restarted, regardless of the time that has elapsed between doses!
# CDC Catchup Schedule

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Minimum Age for Dose 1</th>
<th>Children age 4 months through 6 years</th>
<th>Minimum Interval Between Doses</th>
<th>Dose 3 to Dose 4</th>
<th>Dose 4 to Dose 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis B</td>
<td>Birth</td>
<td>Dose 1 to Dose 2</td>
<td>4 weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotavirus</td>
<td>6 weeks; Maximum age for first dose is 14 weeks, 6 days.</td>
<td>4 weeks</td>
<td>4 weeks minimum age for final dose is 8 months, 0 days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diphtheria, tetanus, and acellular pertussis</td>
<td>6 weeks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haemophilus influenza type b</td>
<td>6 weeks</td>
<td>No further doses needed</td>
<td>No further doses needed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumococcal conjugate</td>
<td>6 weeks</td>
<td>No further doses needed for healthy children if first dose was administered at age 24 months or older</td>
<td>No further doses needed for healthy children if previous dose was administered at age 24 months or older</td>
<td>8 weeks (as final dose) for children age 12 through 59 months who received 3 doses before the 1st birthday</td>
<td>8 weeks (as final dose) for children age 12 through 59 months who received 3 doses before the 1st birthday</td>
</tr>
<tr>
<td>Inactivated poliovirus</td>
<td>6 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measles, mumps, rubella</td>
<td>12 months</td>
<td>4 weeks</td>
<td>4 weeks if current age is &lt;4 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Varicella</td>
<td>12 months</td>
<td>3 months</td>
<td>6 months (as final dose) if current age is 4 years or older</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>12 months</td>
<td>6 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meningococcal ACWY</td>
<td>2 months MenACWY-CIM; 9 months MenACWY-OP; 2 years MenACWY-PR</td>
<td>4 weeks</td>
<td>6 months (minimum age 4 years for final dose)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*See Notes*
## CDC Catchup Schedule

### Children and adolescents age 7 through 18 years

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Minimum Age</th>
<th>Minimum Dose</th>
<th>Recommended Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meningococcal ACWY</td>
<td>N/A</td>
<td>N/A</td>
<td>8 weeks</td>
</tr>
<tr>
<td>Tetanus, diphtheria; tetanus, diphtheria, and acellular pertussis</td>
<td>7 years</td>
<td>4 weeks</td>
<td>4 weeks; if first dose of DTaP/DT was administered before the 1st birthday; 6 months (as final dose) if first dose of DTaP/DT or TdapTd was administered at or after the 1st birthday</td>
</tr>
<tr>
<td>Human papillomavirus</td>
<td>9 years</td>
<td>N/A</td>
<td>Routine dosing intervals are recommended.</td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>N/A</td>
<td>N/A</td>
<td>6 months</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>N/A</td>
<td>N/A</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Inactivated poliovirus</td>
<td>N/A</td>
<td>4 weeks</td>
<td>8 weeks and at least 16 weeks after first dose</td>
</tr>
<tr>
<td>Measles, mumps, rubella</td>
<td>N/A</td>
<td>4 weeks</td>
<td></td>
</tr>
<tr>
<td>Varicella</td>
<td>N/A</td>
<td>3 months</td>
<td>4 weeks if younger than age 13 years; 4 weeks if age 13 years or older</td>
</tr>
<tr>
<td>Dengue</td>
<td>9 years</td>
<td>6 months</td>
<td>6 months</td>
</tr>
</tbody>
</table>

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A fourth dose of IPV is indicated if all previous doses were administered at <4 years or if the third dose was administered <6 months after the second dose.
Meningococcal serogroup A,C,W,Y vaccination
(minimum age: 2 months [MenACWY-CRM, Menveo], 9 months [MenACWY-D, Menactra], 2 years [MenACWY-TT, MenQuadfi])

**Routine vaccination**
- 2-dose series at age 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
Detailed catchup vaccination guide

**Pneumococcal Conjugate Vaccine: PCV**

The table below provides guidance for children whose vaccinations have been delayed. Start with the child’s age and information on previous doses (previous doses must be documented and must meet minimum age requirements and minimum intervals between doses). Use this table in conjunction with table 2 of the Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, found at [www.cdc.gov/vaccines/schedules/hcp/child-adolescent.html](http://www.cdc.gov/vaccines/schedules/hcp/child-adolescent.html).

<table>
<thead>
<tr>
<th>IF current age is</th>
<th>AND # of previous doses is</th>
<th>AND</th>
<th>THEN</th>
<th>Next dose due</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 through 6 months</td>
<td>0 or unknown</td>
<td>➡️</td>
<td>➡️</td>
<td>Give Dose 1 today</td>
</tr>
<tr>
<td></td>
<td>➡️</td>
<td>It has been at least 4 weeks since Dose 1</td>
<td>Give Dose 2 today</td>
<td>Give Dose 3 at least 4 weeks after Dose 2</td>
</tr>
<tr>
<td></td>
<td>➡️</td>
<td>It has <strong>not</strong> been at least 4 weeks since Dose 1</td>
<td>No dose today</td>
<td>Give Dose 2 at least 4 weeks after Dose 1</td>
</tr>
<tr>
<td></td>
<td>➡️</td>
<td>It has been at least 4 weeks since Dose 2</td>
<td>Give Dose 3 today</td>
<td>Give Dose 4 (<strong>Final Dose</strong>) at 12 months of age or older</td>
</tr>
<tr>
<td></td>
<td>➡️</td>
<td>It has <strong>not</strong> been at least 4 weeks since Dose 2</td>
<td>No dose today</td>
<td>Give Dose 3 at least 4 weeks after Dose 2</td>
</tr>
</tbody>
</table>
Detailed links

There is an app for that...

Download “CDC Vaccine Schedules” free for iOS and Android devices.

**Product Specs**

**Version:** 9.0.1

**Requirements:** Requires iOS 11.0 or later and Android 5.1 or later; optimized for tablets and useful on smartphones.

**Updates:** Changes in the app are released through app updates.

Download app free for **iOS**

Download app free for **Android**
But the IDPH Minimum Requirements are different than the CDC recommendations!

• Hepatitis A, HPV, Men B are not required

• Vaccine doses given up to 4 days before minimum interval or age can be counted as valid. However, this does not apply to intervals between live vaccines.

• Live vaccines shall not be given fewer than 28 days after receipt of a prior live vaccine.

Minimum Vaccine Requirements for Child Care Facility or School in Illinois, Fall 2021

<table>
<thead>
<tr>
<th>Vaccine Requirement</th>
<th>Child Care Facility, Preschool, Early Childhood, Pre-Kindergarten Programs</th>
<th>Kindergarten through 12th Grade</th>
<th>Minimum Intervals Allowed Between Doses and Other Options for Proof of Immunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphtheria, Pertussis, Tetanus</td>
<td>Three doses of DTP or DTaP by 1 year of age. One additional booster dose by 2nd birthday.</td>
<td>Four or more doses of DTP/DTaP with the last dose being a booster and received on or after the 4th birthday.</td>
<td>Minimum interval between series doses: 4 weeks (28 days). Between series and booster: 6 months. No proof of immunity allowed.</td>
</tr>
<tr>
<td>Polio</td>
<td>Two doses by 1 year of age. One additional dose by 2nd birthday. Three doses for any child 24 months of age or older appropriately spaced.</td>
<td>Starting school year 2017-2018 any child entering Kindergarten shall show proof of 4 dose series with the last dose on or after the 4th birthday. This is a progressive requirement.</td>
<td>Minimum interval between series doses: 4 weeks (28 days). 4th dose at least 6 months after previous dose. No proof of immunity allowed.</td>
</tr>
<tr>
<td>Measles</td>
<td>One dose on or after the 1st birthday.</td>
<td>Two doses of measles vaccine, the first dose must have been received on or after the 1st birthday and the second dose no less than 4 weeks (28 days) later.</td>
<td>Proof of prior measles disease shall be verified with date of illness signed by a physician or laboratory evidence of measles immunization. A diagnosis of measles disease made by a physician on or after July 1, 2003 must be confirmed by laboratory evidence.</td>
</tr>
<tr>
<td>Rubella</td>
<td>One dose on or after the 1st birthday.</td>
<td>Two doses of rubella vaccine, the first dose must have been received on or after the 1st birthday and the second dose no less than 4 weeks (28 days) later.</td>
<td>Laboratory evidence of rubella immunity.</td>
</tr>
<tr>
<td>Mumps</td>
<td>One dose on or after the 1st birthday.</td>
<td>Two doses of mumps vaccine, the 1st dose must have been received on or after the first birthday and the second dose no less than 4 weeks (28 days) later.</td>
<td>Proof of prior mumps disease shall be verified with date of illness signed by a physician or laboratory evidence of mumps immunity.</td>
</tr>
<tr>
<td>Haemophilus influenzae type b (Hib)</td>
<td>Proof of immunization that complies with the ACIP recommendation for Hib vaccination. Children 24-59 months of age without series shall show proof of one dose of Hib vaccine at 15 months or older.</td>
<td>Any child five years of age (60 months of age) or older shall not be required to provide proof of immunization with Hib vaccine.</td>
<td>Refer to ACIP Hib series schedule. No proof of immunity allowed.</td>
</tr>
</tbody>
</table>

Per The Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, A dose of Tdap or DTaP administered at 10 years of age or later may now be counted as the adolescent Tdap booster.
Minimum Vaccine Requirements for Child Care Facility or School in Illinois, Fall 2021

<table>
<thead>
<tr>
<th>Vaccine Requirement</th>
<th>Child Care Facility, Preschool, Early Childhood, Pre-Kindergarten Programs</th>
<th>Kindergarten through 12th Grade</th>
<th>Minimum Intervals Allowed Between Doses and Other Options for Proof of Immunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invasive Pneumococcal Disease (PCV)</td>
<td>Proof of immunization that complies with ACP recommendations for PCV. Children 24 to 59 months of age without primary series of PCV, shall show proof of receiving one dose of PCV after 24 months of age.</td>
<td>Any child five years of age (60 months of age) or older shall not be required to provide proof of immunization with PCV vaccine.</td>
<td>Refer to ACP PCV series schedule. No proof of immunity allowed.</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>Three doses appropriately spaced (see doses in minimum interval column). Third dose must have been administered on or after 6 months of age (168 days).</td>
<td>Kindergarten through 5th grade not a requirement. Recommend reviewing these records and if necessary, have student be brought up to date with hepatitis B series.</td>
<td>Students entering 6th thru 12th grade, three doses of hepatitis B vaccine administered at appropriate intervals. Minimum intervals between doses: first and second-at least 4 weeks (28 days), second and third-at least 2 months (66 days), first and third-at least 4 months (112 days). Proof of prior or current infection, if verified by laboratory evidence, may be substituted for proof of vaccination.</td>
</tr>
<tr>
<td>Varicella</td>
<td>One dose on or after 1st Birthday.</td>
<td>Two doses of varicella; The first dose must have been on or after the 1st birthday and the 2nd dose no less than 4 weeks (28 days) later. Two doses of varicella for students entering all grades.</td>
<td>Proof of prior varicella disease shall be verified with: 1) date of illness signed by a physician; or 2) a health care provider's interpretation that a parent’s or legal guardian's description of varicella disease history is indicative of past infection; or 3) laboratory evidence of varicella immunity.</td>
</tr>
<tr>
<td>Meningococcal Disease (MCV4)</td>
<td>No Requirements.</td>
<td>No Requirements.</td>
<td>Applies to students entering 6th - 11th grades: one dose of meningococcal conjugate vaccine. Minimum intervals for administration: For 6th grade entry: the first dose received on or after the 11th birthday. For 12th grade entry: second dose on or after the 15th birthday and an interval of at least eight weeks after the first dose. Only one dose is required if the first dose was received at 16 years of age or older. No proof of immunity allowed.</td>
</tr>
</tbody>
</table>

If there is an indication for earlier vaccination (between ages 10-11) then the provider submits, a letter/statement stating the reasons and provides that with the vaccine records (Section 665.280). Letter/statement to be honored by School Health Authorities and NOT submitted to IDPH for Review.
Some food for thought

• Use your patient reminder-recall system and notifications to reach patients and parents with children who have fallen behind on their vaccinations.

• ICARE software can auto-populate a list of who is not UTD on vaccination

• Provide referrals to another place where vaccines are available, such as state or local health department immunization clinics.

• Partner with the health department or community groups to host a vaccination clinic or event.

• CDC provides guidance on planning satellite vaccination clinics.
Vaccine Misinformation and Hesitancy
VACCINE MISINFORMATION MANAGEMENT FIELD GUIDE

Guidance for addressing a global infodemic and fostering demand for immunization

LISTEN | UNDERSTAND | ENGAGE
Vaccine hesitancy

• Key driver in under-vaccination
• The nature of hesitancy changes over time
• In 2019, the WHO named “vaccine hesitancy” among the top 10 threats to global health
• Vaccine messaging has doubled compared to pre-COVID-19 levels, with 4.5 billion views of content spreading vaccine misinformation in the USA between March-July 2020
Vaccine hesitancy along a continuum

ACTIVE DEMAND
ACTIVELY SEEKING

PASSIVE ACCEPTANCE
ACCEPT ALL, MAYBE UNSURE

VACCINE HESITANCY
ACCEPT SOME, DELAY SOME, REFUSE SOME

REFUSE ALL VACCINES
“We're not just fighting an epidemic; we’re fighting an infodemic. Fake news spreads faster and more easily than this virus and is just as dangerous.”

Tedros, Director-General of the WHO
Infodemic terms

- **Misinformation** is false information shared by people who don’t realize it’s false and don’t mean any harm.

- **Disinformation** is deliberately engineered and disseminated false information with malicious intent or to serve an agenda.

- Active disinformation campaigns have been seen during the COVID-19 pandemic.
Examples of vaccine disinformation

Sherri Tenpenny, one of the right’s leading anti-vaccine “experts,” claims that COVID vaccines are creating “quantum entanglement” between those who take them and “the Google credit scores and the dematrix and all of those things.”

SOMEONE SAY CORONA VIRUS?

READY FOR VACCINES ANYONE?

1983
10 vaccines given to U.S. babies
autism rate 1 in 10,000

2008
36 vaccines given to U.S. babies
autism rate 1 in 150

2013
46 vaccines given to U.S. babies
autism rate 1 in 88
Talking with parents about vaccines

1. Assume parents will vaccinate
   - Parents not ready to vaccinate?

2. Give your strong recommendation
   - Parents have specific questions or concerns?

3. Listen to and respond to parent’s questions
   - Parents respond positively to your answers?

Administer recommended vaccine doses
How to have conversations with vaccine-hesitant families

• “May I ask why? What have you heard from your community?”

• Correct the misconceptions

• Do not repeat the myth
  • If repeated enough, a lie can be perceived as truth

• Address fears about side effects

• Tell families that their child needs to get the vaccine
Debunking Myths

Example 1. Debunking the “HPV vaccine causes injury” myth

FACT
Large scale studies find no link between the HPV vaccine and auto-immune symptoms. All the scientific evidence tells us HPV vaccines are safe and effective.

MYTH
One common vaccine myth is that they cause negative health impacts. The evidence cited is often specific examples where a child received a vaccination then suffered adverse health impacts afterwards.

FALLACY
Anecdotes like this mistake correlation for causation. Just because a vaccination and an injury happen close to each other doesn’t mean one causes the other. This logic is the same as thinking that wearing lucky colours at a sports game led to your team winning.

This argument also employs anecdotal thinking, relying on isolated examples rather than scientific evidence. While stories can be persuasive, they can also mislead if a single experience is not representative of the general populace.

FACT
This is why scientists look at large samples rather than single cases before coming to conclusions.
Debunking Myths

Example 2. Debunking the “MMR Causes Autism” Myth

FACT
A huge study of over 500,000 Danish children found that unvaccinated children were just as likely to develop autism as vaccinated children.

MYTH
One common vaccine myth is that vaccines can cause negative health impacts. The evidence cited is often specific examples where a child received a vaccination then suffered adverse health impacts just afterwards.

FALLACY
Some people believe that vaccines can cause unrelated diseases that usually appear around the same time that we give children vaccines. They mistake correlation for causation.

For example, if children who receive a teddy bear and children who receive a vaccine both have their teeth fall out, it doesn’t mean that either receiving a teddy bear or receiving a vaccine caused this to happen – it’s just a coincidence.

Also, this concern began with a study led by an English doctor which was retracted because he was found to have lied about the findings, creating an elaborate fraud. He subsequently lost his medical license for acting dishonestly, unethically, and with “callous regard” for the children, and was shown to have major undisclosed financial conflicts of interest.

FACT
We still don’t know exactly what causes autism, but over 10 high-quality studies show that it is not caused by vaccines. The observed rise in autism rates is mostly due to broadened diagnostic criteria and heightened awareness of the condition.
Conclusions

• There have been significant declines in pediatric vaccination rates in the United States during the COVID-19 pandemic

• Consult CDC guidance for vaccination catchup schedules in line with IDPH school guidance
THANKS!