

## Addressing Specific Adolescent Vaccine Concerns of the Parent, Teen, & Physician

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## Disclosures

- Potential conflicts
  - Safety Review Committee
    - Male HPV4 Gardasil® vaccine (Merck)
  - Data and Safety Monitoring Board
    - Adult and infant PCV15 (Merck)
- No off-label use discussion

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## Learning Objectives

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- Understand what teen vaccines are due
  - Relate an approach to the office visit
  - Address common teen vaccine concerns

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**First Objective**

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- What vaccines are recommended?
- When should we give them?

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**The Adolescent Platform**

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- ACIP, others envisioned a platform for vaccines
- The “11-12 Year Old Visit”
  - Tdap vaccine
  - HPV vaccine
  - MCV4 vaccine

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## More Complicated than That

- Flu vaccine yearly every fall
- 1 dose Tdap but repeated in each pregnancy
- HPV vaccine as a 3-dose series
- MCV4 due at 11-12 years and at 16 years
- Catch-up of childhood vaccines
- Special vaccines due

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## Flu

- Highest attack rates in community outbreaks
- Every year as soon as vaccine available
- Single dose
- No preference LAIV versus IIV
- No preference quadrivalent versus trivalent
- Catch up thru end of season

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## Tdap

- Pertussis component limited durability
- Would need to give every 3 years to maintain
- Current recommendations
  - 1 dose 11-12 years of age
  - Repeat doses only during pregnancy
    - Give during 27 to 36 weeks gestation
    - Goal is to achieve passive transfer immunity for infant
    - Infant needs 3 doses DTaP for active immunity

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## HPV

- Nearly ubiquitous infection, 33K US cancers/yr
- Recommended 11-12 years of age
  - Three doses 0, 1-2 months, 6 months
    - Minimal interval between 1<sup>st</sup> and 2<sup>nd</sup> 4 weeks
    - Minimal interval between 1<sup>st</sup> and 3<sup>rd</sup> 24 weeks
    - Minimal interval between 2<sup>nd</sup> and 3<sup>rd</sup> 12 weeks
  - Permission to begin as young as 9 years of age
  - Catch up varies by sex
    - Females: 13 to 26 years old
    - Males: 13 to 21 years old and considerations beyond

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## Considerations Beyond 21 Years

- Males
  - If not completed series and 21 or older, may complete series
  - If 22-26 and desire immunity, may begin series
  - If 22-26 and higher risk, may begin series
    - Males who have sex with males
    - Males who are immunocompromised
    - Males who have HIV, immunocompromised or not
- Both sexes
  - If now  $\geq 27$ , but only had 1 dose, may complete series

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## MCV4

- Risk doubles w/strains A,C,W, &Y 11-21 yrs of age
- Most carriers, few infected; close contact spreads
- Routinely recommended 11 thru 18 yrs of age
- 1<sup>st</sup> dose 11-12 yrs of age, 2<sup>nd</sup> dose 16 yrs of age
- Catch up rules
  - If 1<sup>st</sup> dose not given 11-12 years, give asap
  - If 1<sup>st</sup> dose 13-15 yrs of age, give 2<sup>nd</sup> dose 16- 18 yrs
  - If 1<sup>st</sup> dose 16-18 yrs of age, 2<sup>nd</sup> dose not necessary
    - But 2<sup>nd</sup> dose *permitted* 19-21 yrs of age

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## Catch-Up

- Tetanus-Diphtheria-Pertussis
- Hepatitis A dose 2
- Hepatitis B
- Inactivated polio
- Measles, mumps, rubella
- Varicella

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## Td; Tdap

Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses		
		Dose 1 to dose 2	Dose 2 to dose 3	Dose 3 to dose 4
Td; Tdap	7 years	4 weeks	4 weeks if 1st dose of DTaP/DT < 12 months  OR 6 months if 1st dose of DTaP/DT ≥ 12 months or older and then no further doses needed for catch-up	6 months if first dose of DTaP/DT < 12 months

- No minimal interval if Td given inadvertently when Tdap due

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## HepA and HepB

Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses	
		Dose 1 to dose 2	Dose 2 to dose 3
HepA	12 months	6 months	
HepB	Birth	4 weeks	8 weeks (and at least 16 weeks after first dose)

- HepA not routinely indicated
  - Give to complete 2 dose series
  - Give if immunity desired
  - Give 2-dose series to those in identified risk groups
- A licensed 2-dose HepB series exists
  - Give at least at least 4 months
  - Use adult formulation Recombivax HB
  - Licensed only for use in children aged 11 through 15 years

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## HepA Risk Groups

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- Live in areas where vaccination programs target older children
- Are otherwise at increased risk for infection
  - Traveling to or working in countries that have high or intermediate endemicity of infection
  - Males having sex with males
  - Users of injection and non-injection illicit drugs
  - Work with HepA-infected primates or with HepA in a research laboratory
  - ...

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## HepA Risk Groups

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- Are otherwise at increased risk for infection
  - ...
  - Have clotting-factor disorders
  - Have chronic liver disease
  - Anticipate close, personal contact (eg, household or regular babysitting) with an international adoptee during the first 60 days after arrival in the United States from a country with high or intermediate endemicity

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## IPV, MMR, and VAR

Vaccine		Minimum Interval Between Doses		
		Dose 1 to dose 2	Dose 2 to dose 3	Dose 3 to dose 4
IPV	6 weeks	4 weeks	4 weeks	6 months
MMR	12 months	4 weeks		
VAR	12 months	<ul style="list-style-type: none"> <li>• 3 months if person is younger than age 13 years</li> <li>• 4 weeks if person is aged 13 years or older</li> </ul>		

- 4<sup>th</sup> dose of IPV not needed if 3<sup>rd</sup> dose given after 4 years of age and at least 6 months after 2<sup>nd</sup> dose
- Two doses of VAR is recommended for all healthy teens and adults who lack evidence of immunity

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### Not On List; No Catch Up

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- PCV13
- Hib
- RV1 or RV5
- HepA series if 1<sup>st</sup> dose not already given

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### High Risk Vaccines

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- MCV4 already addressed
- HepA already addressed
- PCV13/PPSV23

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### PCV13/PPSV23 Indications

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- For teens thru 18 years of age (6-64 yrs old)
  - Cerebrospinal fluid leak
  - Cochlear implant

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### Dosing in These High Risk Teens

- If neither previous PCV13 or PPSV23
  - Give 1 dose PCV13
  - 8 weeks later give 1 dose of PPSV23
- If previous PCV13 but no PPSV23...
  - Wait 8 weeks and give 1 dose PPSV23
- If previous PPSV23 but no PCV13...
  - Wait 8 weeks and give 1 dose PCV13
- No 2<sup>nd</sup> PPSV23 5 years after 1<sup>st</sup> PPSV23

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### More PCV13/PPSV23 Indications

- For teens thru 18 years of age (6 to 64 yrs old)
  - Sickle cell disease and other hemoglobinopathies
  - Anatomic or functional asplenia
  - Congenital or acquired immunodeficiencies, HIV
  - Chronic renal failure
  - Nephrotic syndrome
  - Diseases associated with immunosuppressive Rx

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### Dosing in These High Risk Teens

- If neither previous PCV13 or PPSV23
  - Give 1 dose PCV13
  - 8 weeks later give 1 dose of PPSV23
- If previous PCV13 but no PPSV23...
  - Wait 8 weeks and give 1 dose PPSV23
- If previous PPSV23 but no PCV13...
  - Wait 8 weeks and give 1 dose PCV13
- If still at risk, 2<sup>nd</sup> PPSV23 5 years after 1<sup>st</sup> dose

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## For Other High Risk Conditions

- For teens thru 18 years of age (6 to 64 yrs old)
  - Chronic heart disease and particularly...
    - Cyanotic congenital heart disease
    - Cardiac failure
  - Chronic lung disease including...
    - Asthma if treated with high-dose oral corticosteroid rx
  - Diabetes mellitus
  - Alcoholism
  - Chronic liver disease

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## PPSV23 Dosing in High Risk Teens

- If no previous PCV13, 1 dose of PPSV23 now
- If previous PCV13...
  - Wait 8 weeks and give 1 dose PPSV23
- No repeat PPSV23 5 years after first PPSV23

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## For Those $\geq 19$ Years Old

- Two Additional Conditions (19-64 yrs of age)
  - Cigarette smoking
    - Studies were based on tobacco cigarettes only
    - Half of adults <65 with invasive pneumococcal disease
    - Risk drops 14% each year post cessation
    - Single dose PPSV23 now, no repeat in 5 years
    - Smoking cessation guidance
  - Asthma
    - Single dose PPSV23 now, no repeat in 5 years

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## Second Objective

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- Approach to the office visit
  - Use every visit to bring vaccines up to date
  - Make the most of each visit
  - Address vaccine hesitancy directly
  - Engage both the teen and the parent
  - Approach risk of fainting by vaccinating first

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## The Mandate, the Mantra

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“Every patient encounter represents an opportunity to review and, when needed, improve a patient's vaccination status through administration of recommended vaccines”

--From the **General Recommendations on Immunization: Recommendations of the Advisory Committee on Immunization Practices (ACIP)**

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## Teens and Office Visits

- But do teens make sufficient visits?
- Minnesota study published in 2010
  - Claims data from a large health plan
  - 300,866 teens 11 to 18 years of age
  - Required at least 1 year continuous enrollment
  - 15% of Minnesota teens
  - Counted preventive and non-preventive visits

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## Insurance Coverage

- Study participants
  - 93% covered by commercial insurance
  - 7% covered by government insurance programs
- State teens
  - 72% covered by commercial insurance
  - 21% covered by government insurance programs
  - 7% not covered at all
- Study results thought to be “best case scenario”

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## Preventive Care Visits

- Average number of preventive care visits
  - 12 years of age
    - 0.42 visits a year privately insured
    - 0.45 visits a year government insured
  - All other ages
    - 0.15 to 0.26 visits a year privately insured
    - 0.20 to 0.28 visits a year government insured

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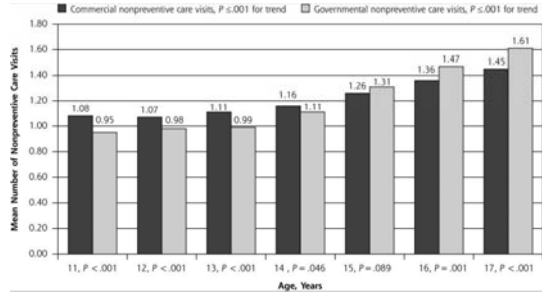
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## Non-Preventive Care Visits




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## Longitudinal Data

- Previous data are visits per year
- Study also examined those enrolled  $\geq 4$  years
  - No visits?
    - 30% had no preventive visits
    - 8 to 15% had no non-preventive visits
  - Only 1 visit?
    - 36 to 41% had only 1 preventive visit
    - 9 to 13% had only 1 non-preventive visit

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## Understand This

- In the best case scenario...
- ...with no copay or deductible for prev visits...
- ...30% had no visit in 4-5 years...
- ...and another 40% only had 1 visit

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## Dealing with Vaccine Hesitancy

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- Allison Singer's C.A.S.E. method for office visits
- Origins with MMR and autism scare
- Brief method based on principles of rhetoric
  - Logos (evidence and logic)
  - Ethos (reputation)
  - Pathos (empathy)

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## The C.A.S.E. Acronym

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- Corroborate
- About Me
- Science
- Explain/Advise

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## The C.A.S.E. Acronym

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- Corroborate (empathy)
- About Me (reputation)
- Science (evidence and logic)
- Explain/Advise (empathy)

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## The C.A.S.E. Approach

- **Corroborate:**
  - Acknowledge the person' concern
  - Find some point on which you can agree
  - Set the tone for a respectful, successful talk
- **About Me:**
  - Describe what you have done to build your knowledge base and expertise
- **Science:**
  - Relate what the science says
- **Explain/Advise:**
  - Personalize advice for this patient you care about

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## The Parent and the HPV Vaccine

We won't be doing *that* vaccine today. We're fine with the others.

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## Corroborate

Please tell me why you feel that way. Help me understand your thinking.

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My son's not sexually active and so he doesn't need a vaccine like this now.

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Corroborate

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**I'm glad** he's not sexually active, and I can understand why you are wondering why I want to give him the vaccine so early in his life.

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About Me

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**I've read** the recommendations and looked at the studies for why the vaccine needs to be given now for later in life.

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### Science

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The vaccine only prevents HPV infection. It doesn't treat it. It's designed to be long-lasting, and children at your son's age **respond better** than older teens.

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### Explain/Advise

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It takes 3 shots over at least six months to get full protection. That protection lasts for years and years. If we wait until he's sexually active, **it'll be too late.**

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### Engage both Teen and Parent

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- Have patient sit between you and parent
- Make eye contact with both
- Speak to the teen first
- Assume they have different views, questions
- Address each separate
- Keep teen 1st person even in answering parent

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## Have Parent Leave

- For those 13 to 17
  - Initially engage both in agenda setting
  - Make sure to acknowledge vaccinations intended
  - Direct parent to leave after first few minutes
    - Make this routine every time
    - Chance to acknowledge teen as individual
    - I routinely have parent return for exam
  - Once alone, review rules of confidentiality
    - Use time alone to assess teen's concerns privately
    - Also use time to assess teen's risk taking behavior

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## Third Objective

- Common concerns
  - Teen pregnancy
  - Sensitive questions
  - Stupid questions
  - Needle phobia

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## Teen Pregnancy

- Risk to fetus theoretical; no known cases
- Don't give *live* vaccines in known pregnancy
- No need to test for pregnancy if pt denies
  - This includes MMR, VAR, MMRV ( $\leq 12$  yrs), and LAIV
- Of course pregnancy calls for some vaccines
  - IIV (not LAIV) as risk of complication high for woman
  - Tdap 27-36 wks gest for passive tx of immunity

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## Sensitive Questions

- *Are you pregnant?*
- *Do you smoke?*
- *Have you had sexual contact with the same sex?*
  
- Respect teen's maturity
- From 13 yrs of age on, interview them separately
- Make it every visit, make it routine
- Always re-visit confidentiality once alone, first

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## Stupid Questions

- *Are you up to date on your vaccines?*
  
- Never ask
- Never ask the parent
- Never ask the teen
- Always make decisions on written records

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## Needle Phobia

- Often associated with fear of seeing blood
- First line treatment
  - Applied Tension
    - Combination of muscle tensing and exposure
    - Repeatedly tense body muscles to ↑ BP, prevent fainting
- Advanced approaches
  - Self-hypnosis
  - Psychotherapy

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## Applied Tension Instructions

- Tense the muscles in their arms, torso and legs
- Hold until a warm feeling in the head, 10-15'
- Release the tension
- Wait 20-30'
- Repeat above 4 steps until skilled in technique
- Once mastered, use at first signs of symptoms

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## Summary

- Know what vaccines are due for which teens
- Relate a working approach to the office visit
- Address common teen vaccine concerns

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