Teen Vaccines in 2013

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Objectives

- Review the indications for adolescent vaccination
- Compare the CHIPRA indicator with SC DHEC and AAP recommendations for adolescent vaccination
- Design a measurement strategy and PDSA cycle for your practice

Current Recommendations

- Tdap/Td
  - Administer a single dose at age 11-18 yo (preferable at 11 or 12)
- HPV vaccine
  - Females: Routine vaccination at 11 or 12yo or 13-26 if no previous vaccination
  - Males: Routine vaccination at 11 or 12yo or 13-26 if no previous vaccination (10/2011)
- Meningococcal vaccine
  - Administer at age 11 or 12yo with a booster dose at 16yo
  - If vaccinated at 16yo or older, need only one dose
  - Administer 2 doses at least 8 weeks apart, then 1 dose every 5 years after that
    - Persistent Complement deficiency
    - Anatomic/Functional Asplenia

Tdap/Td: Quick Facts

- Lockjaw: cannot open your mouth or swallow
- Tetanus kills about 1 in 5 people who are infected
- Diptheria can lead to breathing problems, paralysis, heart failure, and even death
- Pertussis can result in rib fractures, incontinence, pneumonia, and death
- Protect the little people!

HPV: Quick Facts

- 79 million currently infected
  - About 14 million new infections yearly
  - Nearly all sexually active men and women get at least 1 type of HPV in their lifetime
- Associated with significant cancer burden
  - 100% of cervical cancers
  - 90% of anal cancers
  - 40% of vaginal cancers
  - 20% of penile cancers
  - Potential link to 60% of OP cancers
- Gardasil protects against types 6, 11, 16, and 18
  - Cost is estimated at $120 per dose
  - FDA Approval: Women in 2006, Men in 2009
- Cervarix protects against types 16 and 18
  - FDA Approval 2009

Meningococcus: Quick Facts

- 800-1,200 cases of invasive disease occur annually
  - 21% in ages 14-24
- In the US, almost all cases caused by serogroups B, C, Y
  - ~75% caused by C, Y, or W-135
- No vaccine for serogroup B in the US
- Menactra covers groups A, C, Y, and W-135
  - Cost $100-$110 per dose
  - Available since 2005
- Menveo covers groups A, C, Y, and W-135
  - Available since 2011
SC DHEC

- 1 dose of Tdap administered on or after the 7th birthday required for all 7th graders
- Encourage the receipt of MCV4, HPV, VZV

CHIPRA Indicator

- % of adolescents that turned 13 during the measurement year and received one dose of meningococcal vaccine and one Tdap or oneTd by their 13th birthday
- Meningococcal vaccine on or between their 11th and 13th birthdays
- Tdap or Td between their 10th and 13th birthdays

How to Measure Baseline

- Sampling methodology
- Claims or registry data (include all paid, suspended, pending, reversed, and denied claims)
- # of eligibles who received the vaccine / # of eligibles (turned 13 during the reporting year)
- Calculate for meningococcal, then Tdap/Td, then combination rate

Audience Survey

- So you think you know all about these diseases

How high does cervical cancer rank in the list of common cancer diagnoses and cause of cancer related death in women (2011)?

A.) 1st
B.) 2nd
C.) 3rd
D.) 4th
E.) 5th

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T/F: A history of an abnormal pap smear or infection with HPV is a contraindication for HPV vaccination

- A.) True  
- B.) False

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T/F: Only 2 HPV types are known to be oncogenic.

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- B.) False

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- A.) True  
- B.) False
T/F: The morbidity and mortality of meningococcal disease has changed very little from the 1950's

- A.) True
- B.) False

Which of the following is the most accurate statement regarding meningococcal meningitis?

A.) Polysaccharide meningococcal vaccinations provide more effective long-term protection than conjugate vaccines
B.) Healthy adolescents should be revaccinated at age 16 if they received the primary meningococcal vaccine at age 11 or 12
C.) The most common serotype involved in infantile cases of meningococcus is type C
D.) Serogroups A, C, and Y are the most common serogroups to be seen in the US

PDSA Cycle #1

- Plan: Determine how you will gather data on administration rates of meningococcal vaccine, Tdap/Td, and HPV
- Do: Get the data
- Study: Analyze patterns of administration
- Act: Develop clinic goals for vaccination administration rates

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For sharing his slides and for allowing me to use his quiz and PDSA cycles from his QI project at the GHS Center for Pediatric Medicine
Study: The Data

PDSA Cycle 2:
- Plan: Develop clinic goals for vaccination administration rates
- Do: Look at national rates of vaccination
  - National Immunization Survey 2010
  - HPV vaccine: 62.2% (with provider rec.)
  - Meningococcal vaccine (MCV-4): 77.3% (with provider rec.)
- Study: Decide on and report actual goals
- Act: Develop a plan to reach these goals.

PDSA Cycle 3:
- Plan: Create an intervention to improve vaccination administration rates and reach personal clinic goals
- Do: Integrate a template into adolescent WCC (ages 11-18) as a reminder to practitioners
- Have you heard of/has your child received the HPV Vaccine?
  - Would you like the HPV Vaccine today?
- Have you heard of/has your child received the Meningococcal Vaccine?
  - Would you like the Meningococcal Vaccine today?
- If no, why do you decline these vaccines? (Free Text answer)
PDSA Cycle 3

- Study
  - Any change in rates after implementation of template reminder?
- Act: Plan for the next intervention

Steps for Getting Started

- Step 1: Choose and Issue to Tackle
  - Focus on one vaccine or all of them
- Step 2: Choose an Outcome Measurement
  - DHEC, CHIPRA, AAP recommendations
- Step 3: Measure Current Practice
- Step 4: Set Goals
  - Where do you want to be?
- Step 5: Develop an Intervention
- Step 6: Try it Out!

PDSA, PDSA, PDSA

References

- UpToDate: http://www.uptodate.com