Disclosure

• We talk about lots of medications, devices, and pharmaceuticals during this presentation, but we are not paid anything by any of the companies for doing so and don’t have a known financial interest in the companies.

Overview

• Sex is not discussed as in depth as could be.
• Limits of this lecture
  — You know the basics
  — We are focusing on what is NEW
• Birth Control
• STI’s and Testing
• HPV – Proof it works. Why to give it when and how.

Birth Control

• Female condom
• Pills
• Transdermal Patch
• Vaginal Ring
• Shots
• Implants (under the skin)
• Diaphragm
• IUD’s
• Emergency Contraception
Female Condom
- Female condom that has foam attached to tip of condom that dissolves and acts as spermicide. (brand – Reality Female Condom)

Pills
- Low dose pills – 20 mcg estrogen (10mcg soon)
  - Break through spotting, ?bone, ?effective if weight>200 pounds?
- Continuous contraception
  - Seasonique – 84 pills combined, 7 low estradiol
  - Continuous contraception without placebos
- OTC – Oregon, California, Washington, Colorado

Transdermal Patch
- Ortho Evra
- Xulane
- ?bones, ?effective if weight >200 pounds?
- Phase 3 trials with lower dose estradiol

Vaginal Ring
- Nuvaring (1 week)
- Soon – 1 year ring
  - Remove every 21 days for 1 week, then reinsert.
  - ?May be able to leave in long term?
Shots

• Depo Provera (every 3 months)

• Mesigyna or Cyclofem (soon) – monthly shot which also has combined estrogen/progestin
  – Less menstrual irregularity, less amenorrhea than Depo Provera.

Implants (under the skin)

• Nexplanon (replaced Implanon)
  – 3yr duration (probably longer)
  – Place within 5 days of menses

Diaphragm

• Caya (SILCS) – put spermacide jelly on it.
  – Don’t need to be fitted. (“one size fits most”)
  – No hormones

IUD’s

• Mirena – 5yr (?7yr), progestin
• Liletta – 3yr (?5yr), lower cost, progestin
• Paraguard – 10 yr, no hormone, copper irritant, can place within 5 days of sex
• LNG (soon) – lower progesterone dose
Emergency Contraception

- Ella (Ulipristol Acetate)
  - More effective. Equally effective at 24hrs as at 5 days. Delays egg release for 5 days.
  - No quick start OCP’s. Need to wait 5 days.
  - Prescription only.
- Paraguard

CDC Contraception App

- Has WHO guidelines built into it.
- Great for patient with risk factors

Infections

- Chlamydia/Gonorrhea
- Vaginitis
  - Bacterial Vaginosis
  - Trichomonas
  - Yeast vaginitis
  - Mycoplasma Genitalium
- HPV

Chlamydia/Gonorrhea

- Prefer Vaginal Swab over Urine
  - Vaginal – 96% cvx, 97% vaginal
  - Urine – 88-92%
- Self obtained specimen is as accurate as provider collected
- Ideal urine is at least 1hr after previous void, no cleaning, keep first 5-10 ml (rest in toilet)
- Screen all sexually active teens at least yearly.
Vaginitis

• Bacterial Vaginitis
  – OSOM BV Blue – 10min test, sens and spec
• Trichomonas
  – OSOM – 10min test
• Affirm – tests for BV, Trich, Yeast
  – Limited sensitivity for trich
  – 45min test
  – For labs with moderate complexity certification.

Vaginitis

• Mycoplasma Genitalium
  – Non-gonococcal urethritis and cervicitis
  – 10% of cases, think chlam/gon first
  – No practical testing presently
  – Treat: Zmax 1gm.

CDC STD Tx Guide 2015

• Gives all the various treatments for all the various scenarios.

HPV and the vaccine: Recent research in Maine and nationwide

• Latest data on vaccine effectiveness, safety and uptake rates from the CDC
• Latest findings on how to effectively recommend the HPV vaccine
  – Study of 80+ audio recordings of patient visits at 4 Southern Maine offices
  – MAAP role play intervention with standardized patients, presentation, and review of office vaccination rates in 8 offices across Maine
• Partners: Maine Health, Maine Quality Counts
**HPV Infection**

- 80% of people will be infected with at least one type of HPV at some point in their lives
  - 14 million new infections/year in the US
  - HPV infection is most common in people in their teens and early 20s
- Most people never know that they are infected
- Can cause warts and cervical, genital, anal, head and neck cancers
- Can be transmitted through any physically intimate contact even if condoms are used
- Routine screenings like pap smears reduce risk of cervical cancer, but we are unable to screen for other HPV-related cancers


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**How prevalent are cancers caused by HPV?**

![Graph showing average annual number of new HPV-related cancer cases in the US from 2006 to 2010, by sex]  
Data from Markowitz et al. Recommendations of the ACP 2014.

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**How effective is the HPV vaccine?**

- We have seen reductions in early and mid outcomes:
  - Early outcomes (years)
    - Genital warts: Australia, New Zealand, Denmark, Sweden, Germany, Quebec, US
    - HPV prevalence: Australia, Norway, Denmark, Sweden, UK, US
  - Mid outcomes (years to decades)
    - Cervical lesions: Australia, British Columbia, Denmark, Sweden, US
  - Life outcomes (decades)
    - HPV-related cancers: Too early to tell

CDC. “You are the key to cancer prevention.” June 25, 2015.

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**How effective is the HPV vaccine?**

- HPV vaccine was licensed only 10 years ago, but virus rates have already decreased

VAERS: HPV Vaccine Safety Monitoring

- 80M+ doses given in the US
- As of March 2014, ~25,000 adverse events were reported. Ongoing safety monitoring has shown 92% of reports are non-serious
- Among the 8% coded “serious,” most frequently cited are headache, nausea, vomiting, and fever
- Syncope (fainting) continues to be reported following all three adolescent vaccines
  - 15 minute observation period after vaccination is encouraged

CDC’s Healthy People 2020 goal

Maine girls (age 13-17)
US girls (age 13-17)
England girls (age 12-13)
AU girls (age 15)
Maine boys (age 13-17)
US boys (age 13-17)
AU boys (age 15)

Percentage of teens who have received all three HPV vaccine doses in 2014, by select countries, ages and sex

How long does the HPV vaccine provide immunity?

- Studies suggest that vaccine protection is long-lasting; no evidence of waning immunity
  - Available evidence indicates protection for at least 8-10 years
  - Multiple cohort studies are in progress to monitor the duration of immunity

Despite benefits, U.S. uptake has been slow compared to other countries...

...And compared to other adolescent vaccines

CDC. “You are the key to cancer prevention.” June 25, 2015.
Missed opportunities are problematic since vaccination opportunities decline as teens age

- Parents are more likely to delay than refuse the HPV vaccine, but delay increases the odds that teens contract HPV before they are vaccinated.
Doing the math: Why delay can lead to vaccinating after infection

**RISK OF CONTRACTING HPV BEFORE FINAL DOSE: 8.1-21.5%**

Sally receives her first dose at age 13 and her second dose at her next annual physical; when she’s 14. She’s scheduled to receive her final dose at her next physical at 15, but she’s has now aged into the risk group where she sees her PCP less often and doesn’t return until she’s 16 for her third dose.


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Talking about the HPV vaccine

NEW FINDINGS ON RAISING HPV VACCINATION RATES

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Providers still do not consistently recommend the HPV vaccine

Percentage of parents of teens age 13-17 who received a provider recommendation for the HPV vaccine 2008-2013

MMWR. 2014;63(29);620-4

2011: 1st year vaccine recommended for boys

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Providers Underestimate the Value Parents Place on HPV Vaccine

Adapted from Hsu et al. Vaccine. 2014;32(7):984.
Parents report not receiving a provider recommendation as a primary reason for not vaccinating

<table>
<thead>
<tr>
<th>Reason</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not needed or necessary</td>
<td>21.2</td>
</tr>
<tr>
<td>Not recommended</td>
<td>20.8</td>
</tr>
<tr>
<td>Lack of knowledge</td>
<td>16.1</td>
</tr>
<tr>
<td>Not sexually active</td>
<td>9.6</td>
</tr>
<tr>
<td>Safety concerns / side effects</td>
<td>8.4</td>
</tr>
</tbody>
</table>

But a recommendation is not always enough

- Why aren’t provider recommendations more effective?
- Parents are much more likely to say yes to other adolescent vaccines than to the HPV vaccine after a provider recommends a vaccine
- Remember, this is not a ‘no,’ it’s simply delay

Studies suggest providers talk about the HPV vaccine differently than other vaccines

- Providers often do not recommend the HPV vaccine as strongly as other vaccines
  - 70% of providers do not push the HPV vaccine as strongly as other vaccines at least some of the time
- Providers only actually recommend the HPV vaccine in 38% of visits
  - Providers either present the HPV vaccine as optional or they describe it in great detail but never actually recommend it
- Providers often wait to strongly recommend the HPV vaccine until at least age 13
  - Sometimes providers use the HPV vaccine as a bargaining chip

Ways to raise the HPV vaccination rate

1. Recommend the HPV vaccine (easy)
2. Recommend the HPV vaccine like you would any other vaccine (easy)
What does an effective recommendation look like?

- Use closed, presumptive statements
- Bundle all 3 vaccines together
- Recommend all 3 vaccines the same way

**Recommendation styles**

<table>
<thead>
<tr>
<th>Assumed</th>
<th>We are going to do the Meningococcal, HPV, and Tdap vaccines today.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Due for</td>
<td>[Child’s name] is due three vaccines today.</td>
</tr>
<tr>
<td>Strong recommendation</td>
<td>I strongly recommend that [child’s name] receive the Meningococcal, HPV, and Tdap vaccines today.</td>
</tr>
</tbody>
</table>

But what if a strong recommendation isn’t enough?

- What are the typical reasons you hear from parents who don’t want to vaccinate?

**Top 4 reasons parents cite for not vaccinating their child against HPV after their child’s provider recommends it**

<table>
<thead>
<tr>
<th>Reason</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety concern/Side effects</td>
<td>20.1</td>
</tr>
<tr>
<td>Not needed or necessary</td>
<td>19.5</td>
</tr>
<tr>
<td>Lack of knowledge</td>
<td>13.8</td>
</tr>
<tr>
<td>Not sexually active</td>
<td>11.3</td>
</tr>
</tbody>
</table>

But what if a strong recommendation isn’t enough?

- What are the typical reasons you hear from parents who don’t want to vaccinate?

**Studies indicate that parents want more information about the HPV vaccine**

- Parent concern: Why do you recommend these vaccines to our child?
  - Most people will get HPV at some point because it’s easily transmittable. It can be passed through any intimate contact or through sex with a condom. So, even if your child waits until they’re 40 to have sex, their partner may have it.
  - The vaccine produces a more robust immune response in preteens than in older teens, which is why I recommend starting the HPV vaccine today.
  - I gave it to my child (grandchild, etc) because I think preventing cancer is very important.
  - Vaccines, like any medication, can cause side effects. With the HPV vaccine, most effects are mild like pain or redness in the arm. This should go away quickly. The vaccine has not been linked with any serious or long-term side effects.
Is it just up to providers?

- Office staff can let parents know their child will be due for a vaccine at appointment reminders
  - About half of parents who say they are unlikely to vaccinate against HPV before their visit, report that they are more likely to vaccinate after medical staff simply mention the HPV vaccine
- RNs and MAs should recommend vaccines at intake
  - Nearly half of parents who decided to vaccinate against HPV made this decision with a RN or MA before seeing the doctor

Ways to raise the HPV vaccination rate

1. Recommend the HPV vaccine (easy)
2. Recommend the HPV vaccine like you would any other vaccine (easy)
3. Ask hesitant parents what their concerns are and address them confidently (easy)
4. Make sure RNs and MAs recommend the HPV vaccine at intake (easy)
5. Ask office staff to remind parents what vaccines they are due for at appointment reminder phone calls (medium difficulty)

Maine AAP Intervention

Adolescent Vaccines

1. MONTHLY WEBINARS WITH NIPN – 6 states
   • Vaccine topics (with HPV focus)

2. MONTHLY CHART AUDITS WITH PERFORMANCE IMPROVEMENT.

3. Maine AAP VISITED OFFICES WITH A STANDARDIZED PATIENT (focus on all adolescent vaccines)

Maine AAP Intervention

- VISITED OFFICES WITH STANDARDIZED PATIENT
  - 70-80% correctly recalled at least one best way to discuss vaccines.
  - 40% correctly recalled multiple ways to discuss vaccines.
  - 75% correctly identified all four HPV-related cancers
  - 70% believed the experience improved how they talk with patients about vaccines
  - 80% reported that they recommend vaccines more often than pre-intervention
Thank you!