PROMOTING HPV VACCINATION AMONG ADULT PATIENTS

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PRESENTER DISCLOSURE INFORMATION
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Major Stockholder  No relevant conflict of interests to declare
Other Financial or Material Interests  No relevant conflict of interests to declare
Off Label Use of Vaccines  May be discussed, but in accordance with current ACIP recommendations

LEARNING OBJECTIVES
1. Describe HPV vaccination recommendations
2. Review disparities in HPV vaccine uptake according to age, sexual orientation, gender identity, race and ethnicity
3. Identify effective communication strategies to increase HPV vaccine uptake
4. Analyze and provide solutions to address provider and systems barriers to HPV vaccination.
HUMAN PAPILLOMAVIRUS

- Double stranded DNA virus
- More than 150 types
  - ~ 40 types defined by genital/mucosal sites of infection
    - Low-risk (6, 11) associated with 90% of genital warts
    - High-risk (16, 18) associated with anogenital & oropharyngeal cancers


HPV EPIDEMIOLOGY

(PRE-VACCINE)

- HPV infection is prevalent
  - 79 million Americans are currently infected
  - 14 million people become newly infected annually
  - 75 to 80% of unvaccinated sexually active adults will acquire a genital tract HPV infection before the age of 50
- Usually acquired shortly after onset of sexual activity
- Cancer is a rare outcome


HPV TRANSMISSION
EPIDEMIOLOGY
SEXUAL MINORITY POPULATIONS (MSM)

- Prevalence of high-risk anal HPV (types 16,18) among MSM is high:
  - 37% among HIV-uninfected MSM
  - 74% among HIV-infected MSM
- Since HPV is spread via any sexual contact, everyone should be vaccinated


EPIDEMIOLOGY
SEXUAL MINORITY POPULATIONS (WSW)

- HPV is transmitted via all kinds of sex and sharing of sex toys
- Lesbians and other WSW are at risk for infection from both F and M sex partners
- Same prevalence of cervical HPV (13-30%) among exclusive WSW and WSM
- Increased cervical cancer risk factors (less likely to access screenings, more likely to smoke)

Kerker BD, Mostashari F, Thorpe L. Health care access and utilization among women who have sex with women: Sexual behavior and identity. J Urban Health. 2006;83(5):970-979

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>HPV9</th>
<th>HPV4 (Gardasil)</th>
<th>HPV2 (Cervarix)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Types</td>
<td>6, 11, 16, 18, 31, 33, 45, 52, 58</td>
<td>6, 11, 16, 18</td>
<td>16, 18</td>
</tr>
<tr>
<td>Contraindications</td>
<td>Hypersensitivity to yeast</td>
<td>Hypersensitivity to yeast</td>
<td>Hypersensitivity to latex (latex only contained in pre-filled syringes, not single-dose vials).</td>
</tr>
<tr>
<td>Schedule (IM)</td>
<td>3 dose series: 0, 2, 6 months</td>
<td>3 dose series: 0, 1, 6 months</td>
<td></td>
</tr>
</tbody>
</table>
ACIP HPV9 RECOMMENDATIONS

- Routine HPV vaccination recommended for males and females ages 11-12 years
- Catch-up recommended:

<table>
<thead>
<tr>
<th>Age</th>
<th>13-21</th>
<th>22-26*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td>3 Doses</td>
<td>3 doses**</td>
</tr>
<tr>
<td>Males</td>
<td>3 doses</td>
<td>3 doses**</td>
</tr>
</tbody>
</table>

* Until 27th birthday
** For men who have sex with men or immunocompromised individuals


SAFE, EFFECTIVE, LASTING PROTECTION

- HPV Vaccine is SAFE
  - Safety studies findings for HPV vaccine similar to safety reviews of MCV4 and Tdap vaccines
- HPV Vaccine WORKS
  - High grade cervical lesions decline in Australia (80% of school aged girls vaccinated)
  - Prevalence of vaccine types declines by more than half in United States (33% of teens fully vaccinated)
- HPV Vaccine LASTS
  - Studies suggest that vaccine protection is long-lasting; no evidence of waning immunity

VACCINE SCHEDULE

- Dose 1
- 1-2 months after first dose
- Dose 2
- 6 months after first dose
- Dose 3
- 6 months after first dose
HPV9 VACCINE

• FDA approved in December 2014
  • Females 9-25
  • Males 9-15
• 96.9% reduction in cervical, vulvar, vaginal intraepithelial hyperplasia and adenocarcoma caused by HPV types 31, 33, 45, 52, 58
• 78% effective in anal cancer prevention (same as Gardasil)

CONSIDERATIONS: HPV9

• HPV4 likely will continue to be available for 12-18 months post HPV9 licensure
• ACIP: HPV9 recommendations currently under discussion
  • Switch to HPV9 if mid-series with HPV4
  • Revaccination?
  • Clarify age eligibility for males
WHAT SHOULD PROVIDERS DO WITH HPV4 CURRENTLY AVAILABLE

- Keep vaccinating with HPV4
- Do not postpone vaccination until HPV9 available
- Avoiding missed opportunities is critical.

HPV VACCINE INITIATION, US ADOLESCENTS 13-17, 2014

<table>
<thead>
<tr>
<th></th>
<th>Females ≥1 dose</th>
<th>Males ≥1 dose</th>
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</thead>
<tbody>
<tr>
<td>Total</td>
<td>53.1</td>
<td>33.1</td>
</tr>
<tr>
<td>White</td>
<td>55.8</td>
<td>39.6</td>
</tr>
<tr>
<td>Black</td>
<td>48.8</td>
<td>38.7</td>
</tr>
<tr>
<td>Hispanic</td>
<td>67.5</td>
<td>49.6</td>
</tr>
<tr>
<td>American Indian</td>
<td>56.8</td>
<td>38.8</td>
</tr>
<tr>
<td>Asian</td>
<td>57.0</td>
<td>38.8</td>
</tr>
<tr>
<td>Multiracial</td>
<td>57.6</td>
<td>38.3</td>
</tr>
</tbody>
</table>

HPV VACCINE INITIATION, FEMALE ADULTS 19-26, US, 2013

<table>
<thead>
<tr>
<th></th>
<th>Females 19-21</th>
<th>Females 19-26</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>44.7</td>
<td>43.1</td>
</tr>
<tr>
<td>White</td>
<td>36.9</td>
<td>36.9</td>
</tr>
<tr>
<td>Black</td>
<td>41.7</td>
<td>41.7</td>
</tr>
<tr>
<td>Hispanic</td>
<td>30.6</td>
<td>30.3</td>
</tr>
<tr>
<td>Asian</td>
<td>30.3</td>
<td>19.8</td>
</tr>
<tr>
<td>Others</td>
<td>43.1</td>
<td>43.1</td>
</tr>
</tbody>
</table>
DISPARITIES IN COMPLETION BY RACE/ETHNICITY

- If they initiate, whites are twice as likely to complete the series than Black counterparts
- Common reasons for not completing series:
  - Unaware of need for subsequent doses, side effects, time, inconvenient clinic locations
  - These issues more common among low-income women who may have limited English proficiency, low health literacy, inflexible work hours, or limited child care options

Jeudin, Patricia et al. Race, Ethnicity, and Income Factors Impacting Human Papillomavirus Vaccination rates. Clinical Therapeutics, Volume 36, Issue 1, Jan 17 2014
Jeudin P, Liveright E, del Carmen MG, Perkins RB. Race, ethnicity and income as factors for HPV vaccine acceptance and use. Human Vaccines & Immunotherapeutics 2013; 9:1413 - 1420

DISPARITIES IN HPV KNOWLEDGE/INITIATION AMONG SEXUAL MINORITY WOMEN

- No significant difference in having heard of the HPV vaccine between lesbians and heterosexual women (92.1% vs. 84.8%)
- Lesbian-identified women were significantly less likely to receive at least one dose of the vaccine (5% vs. 28.5%)

Data: National Survey of Family Growth, 2006-2010

SYSTEMS-BASED APPROACH TO INCREASING VACCINATION

1. Increase client demand for vaccinations
   - Client-centered educational materials
   - Reminder systems
2. Enhance access to vaccines
   - Reduce out-of-pocket costs
   - Expanded access in health-care settings
3. Provider reminders and education

INCREASING VACCINE UPTAKE

The most important predictor of vaccination in the clinical setting is a strong recommendation from a health-care provider.


COUNSELING STRATEGIES

- Focus on HPV vaccination as a tool to prevent multiple cancers
- Emphasize the importance of vaccinating people of all genders
- Emphasize the importance of vaccinating the primary target age group (11- to 12-year-olds)
- Promote catch-up vaccination for older adolescents and young adults
- Reinforce HPV vaccine efficacy and safety


FRAMING THE HPV VACCINE CONVERSATION

Tips and Time-savers for Talking with Parents about HPV Vaccine

- The HPV vaccine is a tool to prevent several cancers
- It’s safe and effective
- It’s recommended for girls and boys
- It’s covered by insurance
- It’s recommended for all girls and boys
- Discussing the vaccine with parents can feel daunting
- Use simple language
- Be honest and direct
- Provide resources
- Offer support

Fenway Health
IDENTIFY AN IMMUNIZATION CHAMPION

A champion can:
• Be any staff member
• Generate support and cooperation from coworkers
• Spearhead QI activities to reduce barriers and increase vaccination
• Involve all office staff in the effort

EDUCATIONAL MATERIALS

Goal: Create resource containing key messages that:
• Explain HPV, risk factors, prevention, relationship between HPV and associated cancers
• Are gender-neutral and appropriate for people of all sexual orientations
• Address perceived barriers

FENWAY HPV BROCHURE

Shared widely:
Exam and waiting Rooms
Fenway Health Blog, Tumblr, and other social media accounts
6,640 notes on Tumblr
Outreach and education events
PROJECT PLANNING TOOLS

Framework: Plan-Do-Study-Act

Continuous Quality Improvement – PDSA Cycle

LOGIC MODELS

A summary of your project

- What you put in, do, and achieve
- Clarifies the strategy underlying your program
- Details the relationship between actions and results
- Communicates what your project activities include
- Forms a basis for evaluation
<table>
<thead>
<tr>
<th>ACTIVITY</th>
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Complete a logic model identifying existing resources, activities, and achievable goals for increasing vaccine uptake at your site.

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**FENWAY HEALTH**

fenwayhealth.org
### Activities

<table>
<thead>
<tr>
<th>What we do</th>
<th>Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Identification and Outreach</td>
<td>120 patients contacted by mail or phone</td>
</tr>
<tr>
<td>- Development of patient list for vaccine</td>
<td>- 40 Fenway providers trained</td>
</tr>
<tr>
<td>- Vaccine offered at every visit</td>
<td>- 120 community providers reached through community education workshops</td>
</tr>
<tr>
<td>Patient and Community Education</td>
<td>- 660 community members received educational materials at outreach/engagement events</td>
</tr>
<tr>
<td>- Developed population-specific education materials</td>
<td>- Evidence-based models for increasing vaccination rates</td>
</tr>
<tr>
<td>- Developed educational workshops in collaboration with Patient and Community Education</td>
<td>- Project Partners: Grant support from the Institute for Community Health Program Planning (ICHPP); college groups</td>
</tr>
<tr>
<td>- Distributed materials via e-mail, waiting room display, social media</td>
<td>- Technology</td>
</tr>
<tr>
<td>- Staff Training</td>
<td>- Time</td>
</tr>
<tr>
<td>- RNs received updated ADHD management materials, active participant in the vaccination effort, optimal vaccination strategy, insurance coverage</td>
<td>- Patient Identification and Outreach</td>
</tr>
<tr>
<td>- Ms. Staff training</td>
<td>- Identification of patients due for vaccine</td>
</tr>
<tr>
<td>- Addressing Systems Barriers</td>
<td>- Vaccine offered at every visit</td>
</tr>
<tr>
<td>- Developed or modified electronic health record</td>
<td>- Pilot outreach to 18-19 year olds</td>
</tr>
<tr>
<td>- Added HPV prompt to indicate whether prior doses received</td>
<td>- Patient and Community Education</td>
</tr>
<tr>
<td>- Improved access to outside records capture for all patients</td>
<td>- Disseminated materials via exam/waiting room display, social media, etc.</td>
</tr>
<tr>
<td>- Added EMR prompt to indicate that vaccine is due</td>
<td>- Staff Training</td>
</tr>
<tr>
<td>- Standing orders</td>
<td>- Grand Rounds covering updated ACIP recommendations, actual vs. target site vaccination rates, opt-out communication strategy, insurance coverage</td>
</tr>
<tr>
<td>- Implemented process to enable outside records capture for all patients</td>
<td>- MA staff training</td>
</tr>
<tr>
<td>- Standing orders</td>
<td>- Addressing Systems Barriers</td>
</tr>
<tr>
<td>- Implemented process to enable outside records capture for all patients</td>
<td>- 30 vaccinations administered through Patient Assistance Program</td>
</tr>
</tbody>
</table>

### Outcomes

**Short**

- Participants in community education workshops will:
  - Explain how HPV is transmitted
  - Name two prevention strategies
  - Describe who is eligible for the HPV vaccine and how many shots are needed to complete the series
  - Express the intention to make an appointment for vaccination

**Medium**

- Two immunization and HPV-specific flow sheets edited to track vaccines more efficiently
- 1,937 vaccines documented or administered (2/2013-6/2014)
- Partial or complete vaccination rates increased from 20% to 39% (2/2013-6/2014)
- 30 vaccines administered through Patient Assistance Program

**Long**

- [Reduced health disparities among LGBT populations]
- Reduced rates of HPV-associated perianal warts
- Reduced rates of HPV-associated cervical, anal and head/neck cancers

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**Fenway Health Strategies to Overcome Systems Barriers**

1. Used protocol prompts within electronic health records (EHRs) to avoid missed opportunities
2. Implemented nurse standing orders
3. Designed process to capture outside records for all new patients
4. Delivered patient and provider education

MEDICAL TEAM PROCESS

• Bundled vaccine efforts with other preventive services
  • Identified eligible patients during huddles
  • Requested outside records automatically for all new patients → Process confirms records received
  • Trained medical assistants to enter immunization records into EMR.

STANDING ORDERS

SYSTEMS PROMPTS AND PROTOCOLS
DATA CAPTURE SOLUTIONS

PRE & POST INTERVENTION DATA

HPV Vaccination among Patients Aged 18-26
PRE & POST INTERVENTION DATA

Percentage of Patients with Complete or Partial HPV Vaccination by Age

PRE & POST INTERVENTION DATA

Percentage of Patients with Complete or Partial HPV Vaccination by Gender

PRE & POST INTERVENTION DATA

Percentage of Patients with Complete or Partial HPV Vaccination Coverage by Sexual Orientation
PRE & POST INTERVENTION DATA
Percentage of Patients with Complete or Partial HPV Vaccination Coverage by Race

FURTHER OPPORTUNITIES TO INCREASE UPTAKE
1) Vaccine administration during walk-in hours or at pharmacy
2) Link to MIIS to better identify unvaccinated or partially vaccinated patients
   → Outreach to unvaccinated patients

About the MIIS
- Secure, confidential web-based system capable of electronic data exchange and direct data entry
- Consolidates immunization records over lifespan
- Assists providers with clinical decision support
  - Helps identify due or overdue immunizations
  - Prevents over/under immunization
- Patient immunization and vaccine usage reports
- Provides infrastructure for tracking essential information during public health emergencies
- Includes practice management tools
Input parameters

Visual Graphic of your coverage rates compared to MA overall & Healthy People 2020 goals

Your Practice Data
NOT REGISTERED WITH THE MIIS?
WHAT YOU CAN DO NOW:

1. Register for the MIIS (www.contactmiis.info)
2. Review Clinical Integration and training resources
3. Contact the MIIS Help Desk for more information on coming on board with the MIIS 617-983-4335
4. Contact Mass League Staff, Antonia Blinn for questions about process and quality improvement and MIIS implementation (ablinn@massleague.org or 617-988-2243)

Evidence-Based Strategies to Increase Immunization Rates

TASK FORCE ON COMMUNITY PREVENTIVE SERVICES RECOMMENDATIONS

www.thecommunityguide.org/vaccines/index.html
Team Maureen is a non-profit working to raise awareness about preventing cervical and other HPV-related cancers through education, prevention, and early diagnosis.

Visit the new TeamMaureen.org website to:

- Use the GET A REMINDER service—receive free text or email reminders for HPV vaccinations and/or cervical cancer screenings.
- Find user-friendly basic fact quizzes, current news, and reliable resources on HPV, vaccines, cervical and HPV-related cancers.
- Post, share, and view upcoming HPV/cervical cancer related events across Massachusetts.
- Join the new MA Coalition for HPV/Cervical Cancer & HPV-Related Cancer Awareness to increase awareness by amplifying our collective voices.

Email us: info@TeamMaureen.org
Continuing Education

Tools for your Practice

Immunization Schedules, Recommendations, and more

Patient and Parent Handouts

Resources for Patients

cdc.gov/vaccines/who/teens/products/print-materials.html

QUESTIONS?

Contact:
Catherine Basham, cbasham@fenwayhealth.org
Dr. Jennifer Potter, jpotter@bidmc.harvard.edu