Objectives

By the end of this lecture, participants will be able to:

- Identify the elements of a gynecological exam
- Discuss how to set up an exam room for a pelvic exam or colposcopy
- Describe the impact of interpersonal trauma on pelvic exam delivery
- Explain cervical cancer screening including:
  - Who and when to screen
  - How Pap results are reported
  - Appropriate steps for follow-up
- Interpret Pap results in lay terms for patients

Components of a Gynecologic Exam Vary by Age and lifestyle

- Focused history
- Physical exam
  - Pelvic exam
- Screening
  - Pap smear for cervical cancer
  - Sexually transmitted infections (STI) tests

For this lecture, we are only focusing on the pelvic exam and cervical cancer screening portions of a well woman exam.

Breast health and sexually transmitted infections are discussed in other lectures.
Focused History

- Menstruation (LMP, problems, pain)
- Obstetrics (past pregnancies, current pregnancy status)
- Sexuality (currently sexually active, problems)
- Contraception (past, current)
- Gyn infections (vaginal pain/bleeding/discharge/lesions, pelvic pain, prior STIs or pelvic inflammatory disease)
- Paps (date/result of last test; diagnosis/follow-up of abnormal Paps)
- Gyn problems (ovarian cysts, uterine fibroids, infertility, endometriosis)
- Fecal or urinary incontinence
- Hx of intimate partner violence, sexual abuse, military sexual trauma

Physical Exam

- Pelvic exam
  - Begin at age 21
  - Is not necessary to start a woman on hormonal contraception
- Rectovaginal exam
  - Not recommended as part of a normal gyn exam
  - Not sensitive for detecting masses and disease

Pelvic Exam Set-Up

- Exam table with foot rests, privacy curtain, lockable door
- Gown and cover sheet
- Gloves for provider and assistant
- Surgical lubricant
- Speculum appropriate for patient
  - Graves (small, medium, large) or Pederson
- Light source
- Cytology medium (labeled) with collection brush/broom/spatula
- Pad / panty liner / tissues for patient post-procedure
- A female chaperone is required regardless of provider gender; the assistant may be used in this role
- Supplies for STI screening or vaginitis assessment
**Pelvic Exam Set-up**

Slide preparation method

**ThinPrep liquid cytology medium**

[Photo courtesy of Michael Crawford / Bpac NZ]

**Conventional Pap smear slide vs. ThinPrep® slide**

With ThinPrep, cell samples are collected using a special brush that is immediately washed in a vial of fluid. Benefits of ThinPrep include:

1. Detects glandular abnormalities better
2. Allows reflex testing for HPV (an HPV test that is automatically performed on a sample of cervical cells following an inconclusive Pap test such as an ASC-US Pap)
3. Pap smears can be performed during menstruation

**Adapting Care When Necessary: Sexual Trauma Patients**

- **Interpersonal Trauma**
  - Interpersonal violence (IPV)
    - Physical, sexual, or psychological harm by a current or former partner or spouse
    - Can occur among heterosexual or same-sex couples and does not require sexual intimacy
  - Military sexual trauma (MST)
    - Sexual assault or repeated, threatening sexual harassment that occurred during military service
    - Can occur on or off base, while a Veteran is on or off duty
  - Acute Sexual Assault
    - Sexual contact with an alleged perpetrator within last 72 hours
Identifying Sexual Trauma Patients

- Although many providers do not ask women about their history of sexual trauma, most women indicate they would like to be asked.
- One in 5 women in the VA reply “yes” when asked about sexual trauma.
- Regarding MST, it is VA policy that all Veterans must be screened for MST using the one–time clinical reminder in CPRS.

Detailed information is available in the IPV, MST and acute sexual assault lecture.

Trauma Patients and the Pelvic Exam

- Interactions with healthcare providers may be complicated for Veterans who experienced sexual trauma. The patient–provider relationship can resemble some aspects of the victim–perpetrator relationship:
  - Power differential
  - Being in physical pain
  - Physical exposure and touching of intimate body parts
  - Feeling a lack of control over the situation.
- It may be appropriate to involve the patient’s mental health provider (if she has one) for guidance or to act as a chaperone.

To Reduce Distress for Trauma Patients

- Patients should be able to select the provider’s gender.
- Plan extra time. Schedule these women for slow days or late appointments.
- Be prepared and willing to reschedule the exam if necessary.
- Greet the patient while she is still fully dressed.
- Explain the exam and provide health education materials.
- Ask her to predict the most difficult part of the exam and what might reduce her stress.
- Tell her you will take a break during the exam if necessary.
- Explain everything you will do in advance and as you do it.

To Reduce Distress for Trauma Patients

- Listen carefully to any concerns as the exam progresses.
- Check her level of anxiety regularly throughout the exam. Position yourself so you can see her face.
- Remind her why you are performing this exam. Reinforce that she is in a safe place.
- Employ distractions (e.g., headphones with music, focused breathing, discussion of her job, family or a pleasant event)
- Know who your sexual trauma coordinator is.
- Vet Centers have staff trained in this area.
Cervical Cancer Screening

Cervical Cancer Facts

- 12,000 new cases and 4400 deaths per year in U.S.
- 11th most common cause of cancer death for U.S. women; 2nd most common cause of death for women worldwide
- Test is inexpensive, fairly specific and sensitive, easily performed, and has decreased deaths 85% in last 60 years
- 50% new cancers are in women who have never been screened
- 10% of new cancers are in women who have not been screened in the last 5 years

Risk Factors for Cervical Cancer

- Chronic HPV infection
- Risks for contracting HPV
  - History of multiple sexual partners
  - HIV/Immunosuppression
  - Early age of first intercourse (under 17)
  - Long-term oral contraceptives
  - Multiple pregnancies
- Risks for not clearing HPV
  - Mother/sister with cervical cancer
  - Smoking
- In utero exposure to diethylstilbestrol (DES)
- Screening issues
  - Low socioeconomic status
  - Immigration from a country where screening is not the norm

Human Papillomavirus (HPV) Facts

- 6.2 million new infections per year in U.S. (20.6 / 100,000)
- 20 million Americans are currently infected
  - 1/3 of US women are infected by age 24
  - 75% of sexually active women will be infected sometime
- HPV is responsible for 5% of all cancers worldwide
  - 100% of cervical cancers
  - 90% of anal cancers
  - 40% of penile, vaginal, and vulvar cancers
  - 25% of oral cavity cancers
  - 35% of oropharyngeal cancers
What is HPV?

• A group of more than 100 DNA viruses
• Two types (16 and 18) cause 70% of cervical cancers
• Persistent infection is necessary to develop cancer
• Low-risk subtypes (6 and 11) are associated with genital warts or mild cervical dysplastic changes that do not progress to invasive disease
• 70% of new HPV infections spontaneously clear within one year, and as many as 91% clear within two years; patient may remain immune to that subtype for up to 3 years

Goals for Cervical Cancer Screening

• Prevent morbidity and mortality
• Improve detection of those at risk for cancer and those not at risk
  – Pap screening has been very successful, but false positives are common and lead to additional testing, biopsies, and patient stress
• Avoid, detect, and treat transient HPV infections and associated benign lesions to avoid the harm of treating them (procedures, stress, biopsies, etc.)

When to Start Screening?

• Age 21
• Less than age 21 not indicated because...
  – high clearance rate of HPV and high incidence of dysplasia, but also highly likely to resolve
  – low cancer rate at this age
  – high incidence of preterm labor with excisional cervical procedures

How Frequently Should We Screen? Women Ages 21-29

• Screen at 3-year intervals with Pap alone
  – Women at high-risk (e.g., high grade cervical lesion, DES exposure in utero, immunocompromised) should be screened more frequently at provider’s discretion
  – No need to test for HPV because it is often present and most likely to resolve
How Frequently Should We Screen?

Women Ages 30-65

Two options:

• Co-testing with Pap and HPV at 5-year intervals
  - Improves cancer detection over Pap alone
  - Increases detection of high-grade lesions by 17%-31%
  - Decreases lifetime cancer deaths (0.2 / 1000)
  - Decreases lifetime cancer incidence (1 / 1000)
  - Decreases lifetime colposcopies (100-200 / 1000)

• Pap alone at 3-year intervals is an alternative if HPV co-testing with Pap is not available

When to Stop Screening?

• Discontinue at age 65 with adequate recent screenings and no history of high grade dysplasia or worse
  - Adequate recent screenings = 3 consecutive negative Paps or 2 consecutive negative Paps with negative HPV results in the 10 years prior to screening cessation, with the most recent test in the last 5 years
  - Do not resume screening once stopped
  - Women with a diagnosis of CIN2 or worse should be routinely screened for 20 years after, regardless of age

Paps After Hysterectomy?

No screening if the cervix was removed and if there were no previous high grade lesions or cancers.

If there is a cervix, the woman needs to be screened.
Bethesda System of Pap Reporting

1. Specimen Adequacy
   - Satisfactory or unsatisfactory
2. Descriptive diagnosis
3. General Categories
   - Negative for intraepithelial lesion or malignancy (“normal”)
   - Epithelial cell abnormality
     - Glandular or squamous
   - Other

Inadequate Specimen Reports

Unsatisfactory for interpretation
or
No endocervical cells identified or partially obscured by blood/mucus and may not be satisfactory for interpretation
- Repeat Pap in 12 months if normal exam and no risk factors
- Repeat in 6 months if...
  - Previous Pap abnormality
  - Positive for HPV high-risk subtype (16, 18) in last 12 months
  - Can’t see entire cervix or abnormal pelvic exam
  - Patient is immunosuppressed
  - Patient hasn’t been screened regularly

Pap reports may also mention...

- Organisms
  - Trichomonas (needs to be treated)
  - Candida
  - Actinomyces
  - Changes seen with herpes
- Reactive changes
  - Inflammation related to infection or irritation
  - IUD-related
  - Atrophy
  - Benign endometrial cells in women >40 (must be investigated for endometrial cancer)

<table>
<thead>
<tr>
<th>Abnormal Pap Terms</th>
<th>Biopsy Terms</th>
<th>Lay Terms</th>
</tr>
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<tbody>
<tr>
<td>ASC-US</td>
<td>Atypical squamous cells of uncertain significance</td>
<td>Atypia or metaplasia</td>
</tr>
<tr>
<td>ASC-H</td>
<td>Atypical squamous cells, cannot rule out high grade</td>
<td>Varies</td>
</tr>
<tr>
<td>LSI of LGSIL</td>
<td>Low grade squamous intraepithelial lesion</td>
<td>Cervical intraepithelial neoplasia CIN1=mild dysplasia*</td>
</tr>
<tr>
<td>MSI or HISIL</td>
<td>High grade squamous intraepithelial lesion</td>
<td>CIN2=moderate dysplasia CIN3=severe dysplasia</td>
</tr>
<tr>
<td>AGC</td>
<td>Atypical glandular cells</td>
<td>Glandular atypia mild or severe, Adenocarcinoma in situ</td>
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</tbody>
</table>

* Dysplasia = abnormal growth of precancerous cells on the surface of the cervix.

Photos by Danne Solomon, MD. Available in the public domain on the NCI Benchmark website.
Testing for HPV

- ASC-US is an inconclusive Pap result that requires further testing
  - Can triage by repeating the Pap, colposcopy, or HPV testing
  - If ThinPrep was used for the Pap, reflex HPV testing can be performed (uses residual cells from ThinPrep vial to test for presence or absence of high-risk HPV)
- HPV testing is not useful for
  - Females under 30
  - Prescreening for HPV vaccination
  - Women >21 years of age with ASC-H, LSIL, HSIL (refer to colposcopy regardless of HPV status)
  - STI screening

What if the exam of the cervix was abnormal, but the Pap report was normal?

Dear Dr. GYN:

HELP!

REFERRAL

Who Needs a Colposcopy?

- HPV positive two years in a row
- High-risk HPV subtypes 16 and 18
- ASC-US Pap results with positive HPV test
- Two ASC-US Pap results with no HPV testing done
- ASC-H
- LGSIL
- HGSIL
- AGC

American Society for Colposcopy and Cervical Pathology Guidelines
Patient Education for Colposcopy

• Does my patient understand why she has been asked to return for colposcopy?
• Does she have written information/educational materials regarding abnormal Pap results?
• Has she undergone informed consent for the procedure?
• Does the patient understand the post-procedure instructions and follow-up plan?

Colposcopy Set-Up

Same equipment as cervical cancer screening, plus:
• Documentation of LMP and pregnancy status
• Colposcope
• Cotton swabs/Q-tips
• Acetic acid solution (3-5%)
• Biopsy forceps/endocervical curette
• Ring, sponge forceps
• Pathology/specimen containers, properly labeled
• Lugol’s solution
• Monsel’s solution
• Silver nitrate sticks
• Patient ed follow-up instruction sheet and contact phone number

HPV Vaccines

Gardasil®
• Quadrivalent vaccine for 6/11/16/18
• FDA approved in 2006 for men and women ages 9–26
• Given intramuscularly at times 0, 2 mo, and 6 mo
• Indicated to prevent CIN2 and CIN3 cancer, warts, anal and vulvar cancers and precursors

Cervarix®
• Bivalent vaccine for 16/18 (less protection for warts)
• FDA approved for women ages 9-26
• Given at times 0, 1 mo, and 6 mo
• Indicated to prevent CIN2 and CIN3 cancer
**Why is the vaccine recommended only for younger women?**

Incidence of high-risk HPV subtypes
New infection is less likely with older age

<table>
<thead>
<tr>
<th>Age group</th>
<th>Incidence/100 person yrs</th>
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<tbody>
<tr>
<td>24-29</td>
<td>7.4 (5.9 – 9.2)</td>
</tr>
<tr>
<td>30-34</td>
<td>3.6 (2.4 – 5.1)</td>
</tr>
<tr>
<td>35-39</td>
<td>2.4 (1.5 – 3.6)</td>
</tr>
<tr>
<td>40-45</td>
<td>1.9 (1.2 – 3)</td>
</tr>
</tbody>
</table>

**HPV Vaccine Facts**

- More effective for those with no prior exposure to HPV (doesn’t clear infection)
- Duration of protection 10 yrs (unpublished)
  - Doesn’t replace regular screening
- Well tolerated
- No need to test for HPV infection before vaccination
- $125 per dose, $375 for full series
- Don’t need to restart series if dose is missed
- Only Gardasil is on the VA national formulary

**HPV Vaccine Contraindications and Risks**

- Not recommended for women with
  - Pregnancy
  - Moderate to severe acute illness
  - Yeast allergy
- Adverse events
  - Syncope in adolescents
  - Serious reported events not thought to be causally linked (voluntary reported data)
- May be efficacious in women older than 26, but unclear and not FDA-approved

**Preconception/Pregnancy Screening**

- Asking about LMP should be routine
- Pregnancy screening is more than a single visit
  - Essential part of every primary and preventive care visit
  - All key providers should take advantage of every health encounter to provide preconception care before and between conceptions
  1. Are you considering pregnancy in the next year?
  2. Are you currently attempting to conceive?
  3. Do you use contraception on a regular basis?
  4. When do you want your next (or first) pregnancy, if ever?
Women Veterans’ Prescriptions

- Of women veterans who received a prescription from a VA pharmacy...
  - 49% received a potential teratogen (can disturb the development of an embryo or fetus)
  - Majority of prescriptions were written by family doctors and general internists
- Receipt of family planning (counseling or contraception or pregnancy testing) was documented for only 55.7% of patients who received a teratogenic medication.

VHA Guidance on Clinical Preventive Services

- VHA develops Guidance Statements on Clinical Preventive Services (screenings, immunizations, brief health behavior counseling, preventive medications)
- Approved statements are posted here: http://vaww.prevention.va.gov/Guidance_on_Clinical_Preventive_Services.asp
- Statements on Cervical Cancer Screening and HPV Immunization are in development and will be posted in summer of 2012

More information on Cervical Cancer Screening and HPV

- CDC page on HPV immunization: http://www.cdc.gov/vaccines/vpd-hpv/default.htm

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