Women’s Health Update:

Contraception, STIs, New Cervical Cancer and Breast Cancer Screening

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Upton, Massachusetts

R. Mimi Secor, MS, M.Ed, FNP, BC, FAANP

- Nurse Practitioner for 33+ years
- Newton Wellesley ObGyn, Newton, MA
- National Radio Host - ReachMD
- Visiting Scholar, Boston College
- Fellow, American Academy of Nurse Practitioners
- Owned a private practice for 12 years in Massachusetts (1984-1996)
- Worked in Alaska for 7 years (1992-1999)

New Radio Host on ReachMD

with Co-host PA, Lisa Dandrea Lenell

Mimi Secor, MS, M.Ed, FNP-BC, FAANP Disclosure

- Speaker for:
  - Roche
  - Bayer
  - Boehringer-Ingelheim

Objectives

- Discuss new research and guidelines related to contraception. 20 minutes
- Describe changes in STI screening and treatment. 20 minutes
- Explain new cervical cancer and breast cancer screening guidelines. 20 minutes
6.3 Million U.S. pregnancies: Intended vs. Unintended

Henshaw, Family Planning Perspectives, 1998; 30

Family Planning Challenges

- High unplanned pregnancy rate continues
- Few easy, effective methods
- Low pt compliance & lack of knowledge
- Societal conflict about family planning
- Clinical challenge: little time, tight budgets
- Risk taking behaviors!

Contraceptive Options

- Combination Hormonal Contraceptives (CHC)
  - Oral pills
  - Transdermal Estradiol/EE Patch, (Ortho Evra)
  - Vaginal EE Ring, (NuvaRing)
- Progestin Only Contraceptives (POC)
  - Etonogestrel Implant, (Implanon) 3 year rod: upper inner arm
  - Depot Medroxyprogesterone, DMPA “Depo Provera”: 3 months
    - IM 150 mg, SC 104 mg
  - LNG-IUD, Levonorgestrel (Minirena): 5 years, lighter periods
  - Progestin only “Mini-pill”: Norgestrel (Ovrette)
    Norethindrone (Micronor, Nor-QD, Errin, Camilla)
- Other:
  - Sterilization, male/female (Essure)
  - CU-IUD (Paragard): 10 years,
  - Emergency Contraception OTC, Condoms, Caps, Natural (NFP)

New Contraceptive Approaches

- Quick start: In-office or same day
- First day start: 1st day of menses
- Extended regimens: “Seasonale, Seasonique Lo”
- Continuous: “Lybrel” 28 day packet
- Shorter “placebo” interval: “LoEstrin 24/4”, “Yaz”
- Low-dose placebo interval: “Seasonique” 10 mcg EE
**Emergency Contraception**

**Lack of Public Awareness**

- **Plan B: Progestin - 0.75 mg**
  - 2 pills po STAT - or 1 pill 12 hrs apart
  - Taken within 72 hours of unprotected sex
- 95% effective if taken within 24 hours
- 89% effective if taken within 72 hours
- SAFE, few side effects
- Over-The-Counter in most states > 17 yrs
  - In Mass, by script if < 18
- IUS may be inserted up to 5 days after !

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**NEW US CDC 2010 Update**

**Medical Eligibility Criteria for Contraceptive Use for Women with Various Medical Conditions**

**CDC**

**WHO**
- [http://www.who.int/reproductive-health/family_planning/updates.htm](http://www.who.int/reproductive-health/family_planning/updates.htm)

*CDC criteria adapted from WHO*

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**2010 CDC: Eligibility Criteria Classifications**

1. **No restrictions** for method use

2. **Advantages generally outweigh** theoretic or proven risks of using method

3. **Theoretic and proven risks may outweigh** the advantages of using method

4. **Unacceptable health risks** outweigh the advantages

*Adopted from WHO Criteria 09*

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**Combination Hormonal Contraceptives, CHC**

**NEW 2010 Medical Criteria**

- **Smokers:**
  - Age >35 years = 4 (> 15 cigs daily)
  - < 15 cigs daily = 3
- **Hypertension:**
  - Controlled = 3
  - BP 140-159/90-99 = 3
  - BP > 160/100 = 4
  - High BP in Pregnancy = 2
  - Vascular disease = 4

*CDC 2010*
CHC and NEW Medical Criteria

- DVT/PE history = 4
- Acute DVT/PE = 4
- Family history = 2 (1st degree relative)
- Known thrombogenic mutation = 4
  - Factor V Leiden, prothrombin, protein S, C
- Superficial thrombophlebitis = 2
- Varicose veins = 1
- History or current ischemic heart disease or stroke = 4

NEW: Headaches and Combination Hormonal Contraceptives

- Non-migraine = 1-2 OK
- Migraines Without aura
- Age < 35 = 2/3 MAYBE
- Age > 35 = ¾ NO
  - With aura, any age = 4/4 NO

WHO, CDC, ARHP, Planned Parenthood
International Headache Society 2009-2010

NEW: Ovarian Cancer and OCs Protection with 15 years of Use!

Massive reanalysis study; 45 studies, n = 23,257 women
- Longer duration associated w/ lower risk
- 50% lower risk if used for 15 years; even non-continuous!
- Protection up to 30 yrs after stopping OC
- Protects low AND high risk women
- 100,000 deaths prevented worldwide!
- Could prevent 30,000 cases annually in US

WHO, CDC, ARHP, Planned Parenthood
International Headache Society 2009-2010

Breast Cancer Family History and OC
NEW 2009

Systematic review 1966 – 2008 (US PSTF)
- 10 studies, 1 pooled analysis of 54 studies
- 4 studies suggest some women may be at increased risk esp. if took OCs prior to 1975

Conclusion:
- OCs did NOT significantly influence risk

NEW: No Incr. Risk of Nonfatal VTE in Users of Contraceptive Transdermal Patch: n 297,262

- Compared to users of OCS containing NGM/EE 35 mcg
  - Observational case-control study
- 56 cases of VTE, 212 matched controls; New users only!
  - PharMetrics US-based, ongoing longitudinal database on 55 million lives back to 1995
- Medical claims & diagnoses from managed care
  - OR 1.1 (95% CI 0.6-2.1)
- NO increased risk compared to NGM /EE containing OCS

Dore et al. Contraception 2010 May; 81(5):408-413
VTE OR 2.0 extension study, n 38, c 148 (297,262 women)
When new data pooled w previous data no increased risk
Jick, Kaye, Li and Jick. Contraception 2007;76: 4-7. (BU SOM Boston)
Same authors. Contraception 2006;73:223-228. 17 month study

Contraceptive Vaginal Ring: NuvaRing by Schering

- Very low steady dose
  - 120 µg/day etonogestrel
  - 15 µg/day ethinyl estradiol
- Flexible (54 mm)
- Easy to Insert
- One ring per cycle:
  - 3 weeks in, 1 week ring-free
  - Or change monthly
- Less BTB than with OC
  - With “Quick Start”

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“Implanon” Contraceptive Implant By Schering

- Single rod
- Progestin only
  - Etonogestrel
- 3 year contraceptive
- High efficacy > 99%
- No weight restriction
  - BUT
- Unpredictable bleeding
- Special training required

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Advantages DMPA: Medroxyprogesterone Acetate

- Effective, easy, convenient
- Shorter menses, no menses
- No backup needed 1st month
- No BMI weight restriction
- May be used in smokers esp. > 35 years old
- May be used if ESTROGEN contraindicated
- Injection schedule: 4 week grace period

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Effects of Long Term DMPA on BMD

- DMPA > 2 yrs had a significant adverse effect on BMD
  - 2.8% loss after 1 yr, 5.8% loss after 2 years

**BUT GOOD NEWS!**

- Large, cross sectional study of 3500 ethnically diverse pts
  - Used DMPA >10 years
- Reversibility of loss complete in 2 to 3 years (after stopped)


Intrauterine Systems: IUD, IUS

Effectiveness = Sterilization

- "Paragard" copper T 380 IUD
  - Approved for 10 years, off label for 12 years
  - Easier to insert if nulliparous

- "Mirena" levonorgestrel IUS
  - Approved for 5 years
  - Reduced menstrual bleeding

Copper T 380

Levonorgestrel Intrauterine System (LNG IUS) "Mirena"

- Steroid reservoir
- Levonorgestrel 20 mcg/day

Sterile reservoir

IUS Advantages vs. Disadvantages

- Highly effective
- Safe
- Convenient
- Mirena reduces bleeding
- Cost effective
- NEW: No lower age limit!
- Upfront cost
- Requires clinician to insert and remove
- Contraindications
- Myths still common
- Very low risk of ectopic pg but if pg- more likely ectopic

Contraception, May 2010;81 (5), 367-371
**PID with IUS: NEW Guidelines**

- May leave IUS in place
- Treat infection
- Close follow-up, 1-3 days
- If not improved, consider removing IUS
- Counseling & Condoms
- If history of PID, increased risk for STIs

CDC, WHO, ACOG 2009-2010

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**STD Statistics- New 2009 National Survey**

- 19 Million NEW STD infections each year
- ½ in young 15-24 years old
- 1 in 4 of ALL teens has at least 1 STD
- 50% of Black teens have at least 1 STD

www.cdc.gov/std/stats

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**2010 STD Statistics- New National Survey**

19 Million NEW STIs yearly!

- STIs increasing
- Chlamydia: esp. in females
- Gonorrhea: esp in MSM
- Trichomoniasis: esp. in teens 22/100
- Herpes
- HPV
- HSV, HPV; potentiate risk of HIV acquisition!
- Syphilis 15%: since 2003 (after 14 yr decline)
- HIV: esp. in MSM, (men having sex with men)

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**A Little Coitus Never “Hoitus”**

Teens “hooking up”
Friends with “benefits”

Married men, having sex with men
living on the “down low”

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**STI Trends in US**

- Underdiagnosed
- Often asymptomatic
- Racial disparities
  - 8-19 times higher rates among minorities
  - Especially high risk and Blacks
- STI synergy: HSV/HIV
- Opportunistic Screening
- Expedited Partner Therapy

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**Estimated Prevalence of STDs in the US**

19 Million New Infections a Year!

- Human Papillomavirus: 20 Million
- Chlamydia: 3 Million
- Hepatitis B: 1.2 Million
- HIV/AIDS: 1.2 Million
- Genital Herpes: 50 Million+

References:
Genital Herpes Simplex Virus (HSV)
Major Hidden Epidemic: 2010 per CDC

- 50+ million in US, 1.6 million new cases
- 1/6 Americans (16%)
- Per NHANES CDC Study, March 2010
  - 21% of women
  - 30% women > 30 yrs (increases with age)
  
  Hoff J. Genital Herpes in Older Women: A Silent Epidemic.
  JAAHP 20 (2008)291-294
  - 48% of black women, 40% African Americans!
  More common in women & more susceptible

Genital Herpes Simplex Virus: Key Points

- Most Transmission is Asymptomatic 70%
- Shedding can occur anytime
- Atypical symptoms most common
- Order “Herpes Select” serology IGG Type 2
- Still highly stigmatized so Counseling KEY
- Condoms help
- Offer Suppressive Therapy

Primary Genital Herpes in Women


“Tip of the Iceberg”

Atypical Symptoms Genital HSV
Common
- Yeast mimic, esp. premenstrual pattern
- Rash, diffuse irritation, folliculitis
- Fissures, “paper cuts” (very common)
- Distinct gray watery vaginal discharge
  WBCs on wet mount variable
- Urethritis - dysuria, urgency, frequency (OAB)
- Anal irritation, pruritus
- Associated fatigue, myalgias

HSV Serology Testing
“Herpes Select”
- “Herpes Select” serology for Type 1 or 2
- NEW “Herpes Select Express” In-Office test
- Type-specific IgG antibody assay
- Sensitivity & Specificity up to 98%
- Seroconversion (after infected)
  3 wks = 50%
  6 wks = 70%
  4 months = 99%
- IGM NOT type specific: DO NOT USE

New CDC Guidelines: Suppressive Therapy
for Recurrent Genital HSV
Valacyclovir 500 mg PO daily
50% reduction in transmission (Sx, Asymp) Corey 2004. NEJM
or
Valacyclovir 1.0 gram PO daily
If > 9 recurrences yearly
78% Reduction in Recurrences & Shedding in Newly Diagnosed
or
Acyclovir 400 mg PO BID or
Famciclovir 250 mg PO BID

This is NOT what I asked for.
Daryl mistakenly gives Janet an organism for her birthday.
Chlamydia: Another Hidden STD
1 million reported, estimates > 2.8 million!

- Most Asymptomatic, most Undiagnosed
  50% of males
  75% of females
  Only 42% screened!

- 10-40% untreated cases may result in PID
  Chronic pelvic pain
  Ectopic pregnancy
  Infertility

MMWR 2009 Apr 17;58:362

Chlamydia Screening Yearly
CDC Guidelines

- Screen ALL < 26 yrs old
  — Or if partner under 26, must ask age

- Anyone regardless of age “if risk factors”
  — if new partner (esp. if under 26)
  — Or multiple sex partners
  — “covert operations”

- Include other STIs, GC, HSV, etc.

2006 Chlamydia Treatment:
Equal Efficacy

Recommended regimens:

- Azithromycin 1 gram PO single dose
  OR

- Doxycycline 100 mg PO BID for 7 days

2009 Chlamydia Treatment:
Equal Efficacy

Recommended regimens:

- Azithromycin 1 gram PO single dose
  OR

- Doxycycline 100 mg PO BID for 7 days

Expedited Partner Therapy/ EPT:
Legal Status of EPT 2010

- Permissible in 15 states:
  — AZ, CA, CO, IA, LA, MN, MS, NV, NM, NY, PA, TN, UT, WA, WY

- Potentially allowable in 24 states:
  — AL, AK, CT, DE, GA, HI, IN, KS, ME, MD, MA, MO, MT, NB, NH

- Prohibited in 11 states:
  — AR, FL, IL, KY, MI, ND, OH, OK, SC, VT, WV

www.cdc.gov/std/epi/legal/default.htm

1st Online STD
Partner Notification System: inSPOT

- http://inSPOT.org
  Peer-to-peer, web-based, STD partner notification system

- Developed in San Francisco 2004 by SFDHP

**NEW:** Diagnosing PID per CDC

“Maintain low threshold for diagnosis”

…Due to difficulty of diagnosis & potential for damage even from mild PID

- Often unrecognized & untreated

- Mild or nonspecific symptoms
  - DUB, dyspareunia, vaginitis esp. BV
  - Menorrhagia

**PID: Criteria for Hospitalization**

- Can not exclude surgical emergency
- Pregnancy
- No clinical response (at 72 hours)
- Unable to follow-up
- Tubo-ovarian abscess
- Severe nausea, vomiting or high fever

**HUMAN PAPILLOMA VIRUS, HPV**
HPV Introduction

- Most common STI in the U.S.
- Cause of cervical cancer
- Associated with external genital warts, and cancer of the penis, vagina, vulva, anus & oropharynx

HPV 2010 Update: What’s New?

- Vaccine Update: New for Boys, Men
- Cervical Cancer Screening Guidelines:
  - External Genital Warts
  - Anal Cancer Screening: Controversial
  - Oral Cancer Association: The New STI

HPV Vaccine Update: Girls & Boys
Ages 9-26; Three Doses @ 0, 2, 6 months

Girls, Women
- Quadrivalent (Gardasil): FDA approved 2006
  HPV Vaccine 6, 11, 16, 18, by Merck
- Bivalent (Cervarix): FDA approved Fall 2009
  HPV Vaccine 16, 18, by Glaxo Smith Kline

Boys, Men
- Quadrivalent (Gardasil) for MEN; by Merck
  - FDA approved Oct 2009
  - For prevention of genital warts, ages 9-26 yrs

NEW ACOG Guidelines: Age to START Cervical Cancer Screening

Age 21

Mild Dysplasia LSIL in Young Women
NEW Guidelines, < 21 years old

- “Leave Teens Alone”... defer Colposcopy!
- Repeat Pap and HPV in 6 to 12 months
- Most will resolve
- If still abnormal then colposcopy
- Condoms DO help!
- Cigarette cessation
- Folic acid >1 mg daily
New Cervical Cancer Screening Guidelines

- Ages 21-29*
  - 1st Pap age 21 (NOT 3 years post-coitarche)
  - Then every 2 years*
- Age >30 years*
  - Pap and HPV = Primary screening
  - Repeat every 3 years
  - Pap only = every 2 years
- Paps Yearly if Positive history!

*If Low Risk – NO history of CIN 2, CIN 3, HIV+, immunocompromised, or DES


All Women Are at Risk for Breast Cancer

75% of women diagnosed with breast cancer have no identifiable risk factors

Woman's chance of being diagnosed with breast cancer

- age 30 - 39 . . . . 0.43 % (1 in 233)
- age 40 - 49 . . . . 1.44 % (1 in 69)
- age 50 - 59 . . . . 2.63 % (1 in 38)
- age 60 - 69 . . . . 3.65 % (1 in 27)
- Birth to death….. 12.03% (1 in 8)

Female Breast Cancer Incidence

2009 ACS estimates

- Invasive breast cancer 192,370
- DCIS 62,280

1999 - 2006 decreased by 2% / year
Female Breast Cancer Deaths
2009 ACS estimates

- Breast Cancer Deaths: 40,170
- 1990 – 2000: Decreased by 24%
- 1998-2006: Decreased 1.9%/year

ACS Screening Guidelines

- Mammography: 68% detected
  - Annual, starting at age 40
- Clinical breast exam: 5-12% detected
  - every 3 years, ages 20-39
  - Annual, starting at age 40
- Breast self exam optional: 20% detected
  - Monthly, starting at age 20

2009: Screening for Breast Cancer:
U.S. Preventive Services Task Force Recommendations

- Screening mammography
  - Under age 50: NONE (Very Controversial)
  - Age 50-74: every 2 years
  - Age 75 and older: none
- Clinical breast exam
  - Evidence insufficient to assess risks & benefits
- Breast self-exam
  - Not recommended!

Screening mammography saves lives

- Size, grade, node status all improved with screening
- 28 -65% (median 46%) of reduction in breast cancer death rate is due to screening*

*Berry et al. NEJM;10/27/05

Digital Mammography

- Images easily manipulated electronically
- Remote reading
- Easier processing, storage, retrieval
- Better for premenopausal women, dense breasts
- Less radiation
- Fewer callbacks
- 60% of facilities offer digital

To Save 1 Life:

- Need to screen 1339 women in their 50’s
- Need to screen 1904 women in their 40’s
Mammography Limitations
- Cancer not included in image
- Cancer obscured by normal tissue
- Some cancers less visible (lobular cancer)

Harms of Mammography (USPSTF)
- False positives
- Unnecessary biopsies
- Anxiety
- Cost
- Over diagnosis
- Radiation exposure

Harms With No Mammography
- Larger cancers
- More node involvement
- More mastectomies, chemotherapy
- More recurrence
- Lower QOL
- Lower survival

Harms of Not Screening Women in Their 40’s
- 18% of deaths per year are due to breast cancer occurring in women diagnosed in their 40’s

Opposed to USPSTF Guidelines
- American Cancer Society
- National Comprehensive Cancer Network
- Susan G Komen Foundation
- American College of Obstetrics and Gynecology
- American College of Radiology
- National Consortium of Breast Centers
- American Society of Breast Diseases
- American Society of Breast Surgeons

Before the Biopsy:
- Do a Clinical Breast Exam
  - Evaluate for mass or skin changes before trauma of biopsy
  - Assess for palpable finding not seen on imaging

Shapiro et al. Johns Hopkins Press;1988
SEER data 2000-2006
Do Not Schedule Biopsy without Clinical Exam

Mammogram report: right biopsy breast calc: left normal

Breast Cancer: Major Risk Factors

- Age
- Gender: female
- Atypical hyperplasia
- Lobular carcinoma in situ
- Family history

Family history

- Multiple relatives affected
- Young age at diagnosis
- Multiple primary cancers
  Also:
  - Male breast cancer
  - Ashkenazi Jewish

Will I Inherit My Mother’s Disease?

Redbook January 97

Models for Calculating Breast Cancer Risk for MRI Screening

- BRCAPRO
  - Family hx breast ca, ov ca, ages at dx, AJ ancestry
- Claus
  - Up to 2 First and second degree relatives with breast cancer and ages at dx
- Tyrer Cusick (IBIS)
  - family hx breast cancer, ages, reproductive risk factors, LCIS, AH
- Gail model not adequate

Risk Models Free Internet Access

- CangerGene
  - BRCAPRO, Claus, Gail
  - Utsouthwestern.edu/breasthealth/cagene
- Tyrer-Cusick
  - ibis@cancer.org
  - Tyrer-Cusick
- Hughes riskApps
  - BRCAPRO, Claus, Gail
  - Hughesriskapps.net
Nurses: The Most Trusted Professionals

Resources
NEW

• ARHP.org
“Contraception” Journal with membership
Many other resources
Contraceptive choices, online tool kit for patients

Katherine Secor

To my family
for their support
And love

Especially to my husband, Mike

Summary of Objectives
• Discuss new research and guidelines related to contraception. 20 minutes

• Describe changes in STI screening and treatment. 20 minutes

• Explain new cervical cancer and breast cancer screening guidelines. 20 minutes

Advanced Health Assessment of Women
Clinical Skills and Procedures, Second Edition
Helen A. Carcio, MS, MSN, ANP-C
Mimi Clarke Secor, MS, MSN, DNP, FNP-C, FAANP

This clinical reference presents the advanced skills needed to assess health and provide care to women of all ages, with a focus on assessment of all aspects of female development, physical, psychological, and sexual health. The book offers a comprehensive approach to women’s health assessment for a variety of health care providers, including physician’s assistants, nurse midwives, and nurse practitioners.

The chapters present assessment strategies that are at the leading edge of the expanded role of the advanced practice clinician, including performing endometrial biopsy and transvaginal ultrasounds. This important reference book includes in-depth discussions of each examination skill and technique as well as the rationale underlying each assessment. Unique content includes selection and insertion of the vaginal pessary, intrauterine contraceptive devices, and sperm washing.
Summary

Thank you and good luck!

Mimi Secor, MS, Med, FNP-C, FAANP

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www.reachmd.com (Radio)

Resources

• Journal Watch Women’s Health
  – 800.843.6356
  – www.jwatch.org

• Hatcher et al. 2008. Contraceptive Technology
  Update (2nd edition), Ardent Press
  800.688.2421
  customerservice@ahcpress.com

Resources and Bibliography

See addendum section

• ACOG Practice Bulletin No. 109: Cervical cytology
  screening. 2009 Dec;114:1409

www.ASCCP.org
www.acs.org
www.cdc.gov/STDs

Bibliography and Resources

• www.
cdc.gov/std/treatment (new 2006 guidelines)
cdc.gov/std/hpv (Gardasil pt education)
Herpesdiagnostics.com (Herpes-Select serology)
Asccp.org, ACS.org, Digene.com (Pap guidelines)
Asha.org (great patient education materials)

Bibliography

• http://depts.washington.edu/nnpct/online_training/index.html#clinicalslides
• www.cdc.gov/STDs/treatment
• Centers for Disease Control and Prevention (CDC). Sexually
  Department of Health and Human Services; Jan 2009.
  (http://www.cdc.gov/std/stats07/toc.htm)
• Centers for Disease Control and Prevention (CDC). Trends
  in reportable sexually transmitted diseases in the United
  States, 2007: National surveillance data for chlamydia,
  gonorrhea, and syphilis. Atlanta: U.S. Department of Health
  and Human Services; Jan 2009.
  (http://www.cdc.gov/std/stats07/trends.htm)