Welcome and Introduction

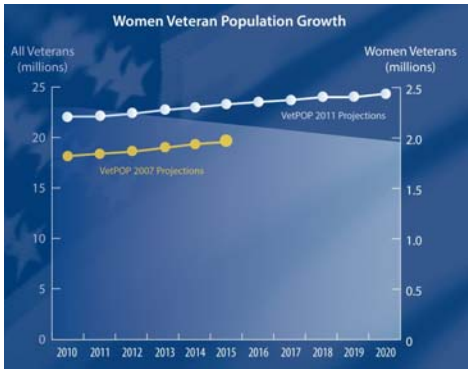
Laure Veet, MD
Director, Women's Health Education
Women's Health Services
Office of Patient Care Services
VHA Central Office

07/15/15

Video

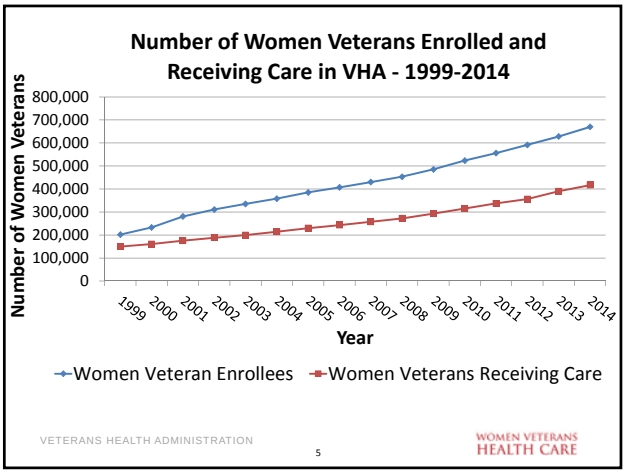
http://www.womenshealth.va.gov/WOMENSHEALTH/latestinformation/publications.asp#videos

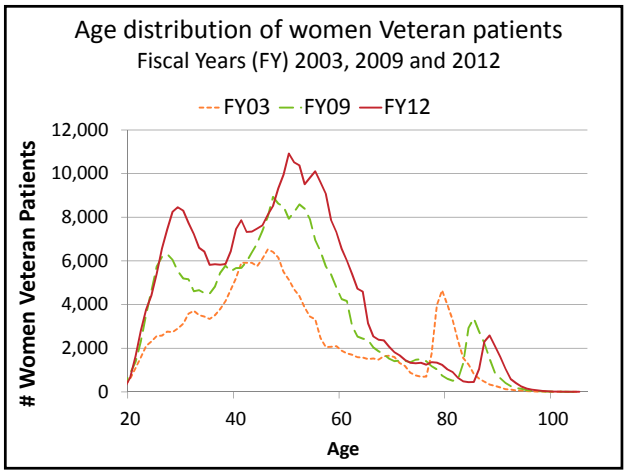
As women Veteran population increases…



total Vet population declines

Sources: VetPOP 2007 and VetPOP 2011 ADUSH for Policy and Planning





Younger Women Concerns

- Flexible appointments
- Childcare
- Reproductive health
- Military sexual trauma
- Acute & chronic illness

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Middle-Aged Women Concerns

- Preventive care
- Menopausal needs
- Acute & chronic illness
- Mental health needs

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Older Women Concerns

- Geriatric care
- Pain management
- Inpatient & extended care
- Grief counseling
- Acute & chronic illness

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The VHA is Changing

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The VHA is Changing

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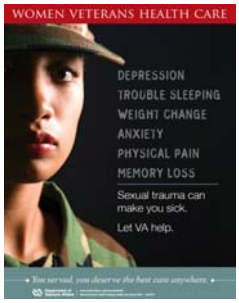
Some of VHA's Major Initiatives

Women Veterans Call Center	Medical center assessments and site visits	Privacy and Environment of Care changes	Policies (e.g. Maternity Care)
Closing gender disparity gaps	Telehealth, mobile apps	Barriers to Care Survey	Teratogenic drug alerts
Emergency services survey and grants	Research	Training	Culture change and outreach

Culture Change Initiative and Materials

Culture Change Initiative and Materials

Monthly Health Campaigns



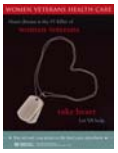
Resources on the Web

Social Media Messaging

WOMEN VETERANS HEALTH CARE EDUCATION & TRAINING

Information Videos (internal/external)

Women-Targeted Health Campaigns



http://www.womenshealth.va.gov/

Comprehensive Primary Care: one provider/team

Preventive Services	Acute and Chronic Illness	Coordination of Care	Gender-Specific Primary Care	Basic Mental Health Care

Mini-Residencies

PCP Mini-Residency

- Launched 2008
- >2100 trained
- Goal: Minimum one trained provider per site

Additional Mini-Residencies

- Primary Care Nurses
- Primary Care Providers and Nurses
- Emergency Care Providers and Nurses

Welcome

Contraception

VETERANS HEALTH ADMINISTRATION

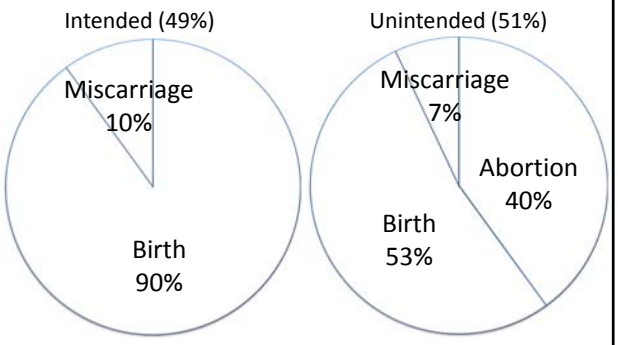
WOMEN VETERANS HEALTH CARE EDUCATION & TRAINING

Objectives

- Describe major contraceptive issues for women
- Explain the pharmacological effects of different types of contraceptives
- Identify appropriate candidates for different methods of contraception
- Educate patients about contraceptive methods, use, and side effects

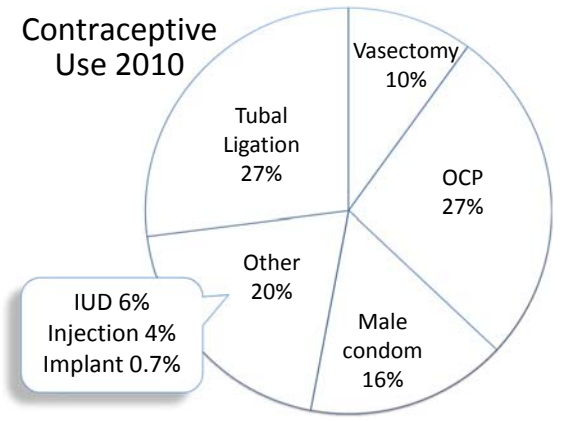
Contraceptive Utilization and Efficacy

6.6 Million U.S. Pregnancies, 2008



CDC 2010; Guttmacher Institute 2013.

Contraceptive Use 2010



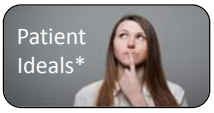
Guttmacher Institute, 2013.

Case 1: Becky

Becky is a 23-year old G0P0 female. She is in a new relationship and wants to start contraception. She has used condoms in the past, but wants to know about other methods.

Provider's Ideal Contraceptive

Effective
Able to continue method
Able to comply
Safe
Minimal counseling time

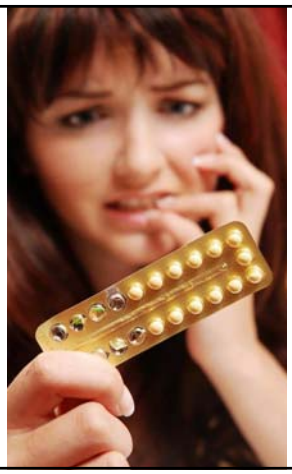


Patient Ideals*

Easy to use
Safe
Effective
Minimal side effects
"Natural" method
Non-hormonal
Immediately reversible

*Survey of 2,500 women from 5 countries

When considering pregnancy rates, differentiate typical use from ideal use



Perfect use is NOT real life!

Most effective

Pregnancies in First Year of Typical Use

	Reversible		*Permanent*
<1 per 100 women	Implant	IUDs	Sterilization
6-12 per 100 women	Injection, Pill, Patch, Ring, Diaphragm		
18+ per 100 women	Condoms, Sponge, Withdrawal, Fertility-awareness, Spermicide		

Least effective

CDC, 2013

Improving Success

Choose methods requiring less attention

Counsel on expected side effects and management strategies

Remove barriers to initiation
*No exam or Pap test
*Quick Start initiation
*No required f/u for refills

When to Start a Contraceptive?

Method	When to start?	Back-up method
Combined pills	Any time if reasonably certain women is not pregnant*	If >7 days into cycle, use back-up method or abstain for 7 days
Progestin pills		
Nexplanon®		
DepoProvera®		
Mirena®		
ParaGard®		Not needed

CDC, 2013.

Is She Pregnant?

- ☐ Given birth in past 4 weeks?
- ☐ <6 mo postpartum AND fully breastfeeding AND free from menstrual bleeding since giving birth?
- ☐ Last menstrual period started within past 7 days?
- ☐ Miscarriage or abortion in past 7 days?
- ☐ Abstinent since start of last menses?
- ☐ Using reliable contraceptive consistently/correctly?

Stanback et al. *Lancet*, 1999.

Case 1: Becky (cont'd)

Becky is in a stable, monogamous relationship. She works full-time and attends school at night.

She has no significant medical history and keeps a very regular schedule. She wants to talk about a hormonal agent.

Combined Hormonal Contraceptives

Typical efficacy for all = 91%

Combined Oral Pill
NuvaRing®
Ortho Evra® Patch

Ethinyl estradiol ≤ 35 mcg + Progesterone

Combined Hormonal Contraception

Side Effects (SE)	Risks
☐ Breakthrough bleeding	☐ Blood clots (1-3/10,000)
☐ Nausea	☐ HBP (1/200)
☐ Headaches	☐ MI (women with CAD sx)
☐ Breast tenderness	☐ Stroke
☐ Decreased libido	
☐ Vaginal discharge, irritation	

Combined Hormonal Contraceptives
Absolute Contraindications

Hx of breast cancer	Hx of clots, stroke, heart disease	Undiagnosed abnormal vaginal bleeding
Pregnancy	Acute liver disease	Migraine with aura
	Smoking and age ≥35	

Combined Hormonal Contraceptives
Relative Contraindications

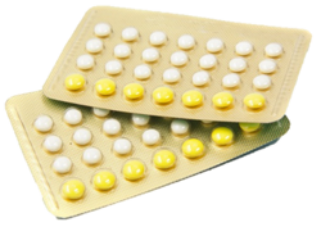
"Classic" migraine	Uncontrolled HTN	LDL cholesterol >160
Obesity	Post-partum <3 weeks or early breastfeeding	DM with secondary complications or duration >20 yr

Combined Hormonal Contraceptives

Non-Contraceptive Benefits

- Regulate cycle
- ↓ heavy bleeding
- ↓ ovulatory pain
- ↓ ovarian/uterine cancer
- ↓ acne, abnormal hair growth
- ↓ benign breast disease, ovarian cysts
- ↑ bone mass

Combined Oral Contraceptives (COCs)



Which COC to Choose?

Begin with a monophasic, 30-35 mcg.

FDA Drug Safety Warning
COCs with Drospirenone (DRSP)

May be associated with higher clot risk

- Additional risk beyond that associated with estrogen

Consider risks vs. benefits

- Can't tolerate other combined oral contraceptives
- Treat premenstrual dysphoric disorder (PMDD)

Not on VA formulary

A note on COCs for women over 35…

- Safe for healthy nonsmokers
- Perimenopausal benefits
  - Regular menses
  - Improved BMD
  - Fewer vasomotor symptoms
  - Reduced cancer risk
- Discontinue age 50-55; 85% will be menopausal

Patient Education all COCs

- Habit formation
- Side effects
- Backup x 7 days
- Meds that impact effectiveness
- No HIV/STI protection
- Missed pill protocol

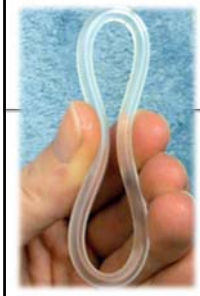
Extended Cycle Contraceptive

- Reduces menses frequency
- Thins endometrium
- Minimizes adverse experiences associated with menses
  - Heavy bleeding
  - Painful menses
  - Menstrual migraines
- Side effects: spotting

Patient Education extended cycle COC

- Active pill x 84 days, inert pill x 7 days
- Spotting will decrease over time
- Can adjust week of menses

NuvaRing®



- 2-inch vaginal ring
  - 15 mcg/day ethinyl estradiol
  - 120 mcg/day etonogestrel
- No fitting, special placement
- Wear 3 weeks out of 4
- Avoids OCP-associated nausea

Patient Education NuvaRing®

- Schedule
- Insertion
- Side effects discharge
- Backup x 7 days
- Storage
- Product use issues
- No HIV/STI protection

Ortho Evra Patch®

- Transdermal delivery
  - 20 mcg/day ethinyl estradiol
  - 150 mcg/day norelgestromin
- Worn 3 weeks out of 4
- Changed weekly
- Efficacy affected by wt >90 kg
- Possible increased clot risk

Not on VA formulary

Patient Education Ortho Evra Patch®

- Schedule
- Application sites
- Side effects, skin irritation
- Backup x 7 days
- Product use issues
- No HIV/STI protection

Unscheduled Bleeding

- Often caused by contraceptive non-adherence
- Ranges from amenorrhea to heavy bleeding
- Identify underlying cause
- Treatment: NSAIDs, extra estrogen, alternative agents

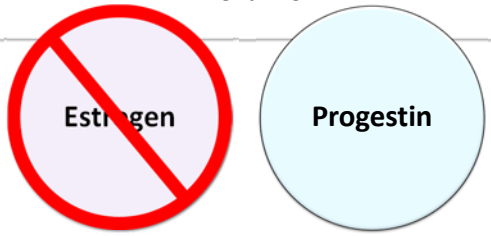
Progestin-Only Contraceptives

Oral Pill

Depo-Provera®

Nexplanon®

Mirena® IUD



Oral Progestin

- Efficacy 91% - lower?
- Inexpensive compared to injectable and implant
- Strict adherence to schedule
- Ok for breastfeeding moms
- Side effects - mild

Patient Education Oral Progestin

- Backup x 7 days at initiation
- **Backup x 5 days if pill missed by >3 hrs**
- No placebo week
- Irregular bleeding is common, may persist
- Potential amenorrhea
- No HIV/STI protection

Case 2: Melinda

Melinda is a 29-yo G2P2 female with a history of asthma. She keeps forgetting to take her pill. She doesn't want to have any more children, at least for the next few years.

What options does she have for hormonal long-acting reversible contraception (LARC)?

Long-Acting Reversible Contraception (LARC)

- Fewer unintended pregnancies
- Safe
- Economical
- No ongoing effort by patient
- Similar satisfaction
- Better continuation rates

Depo-Provera® (DMPA)

- 150 mg IM every 12-14 weeks
- Efficacy >94%
- R/O pregnancy before initiating and if >15 weeks elapse between injections
- Ok for immediate post-partum, after breastfeeding established
- No limit on duration; no need to monitor BMD
- Weight-bearing exercise and calcium

ADVANTAGES	DISADVANTAGES
• High efficacy • Dosing q 3 mo • Decreased flow • May reduce GYN cancers and PID	• Injection • Weight gain, hair loss, mood changes, headache • Initial irregular bleeding • May increase uncontrolled depression • Delayed fertility up to 1 yr • Temporary reduced BMD • ? thrombotic events

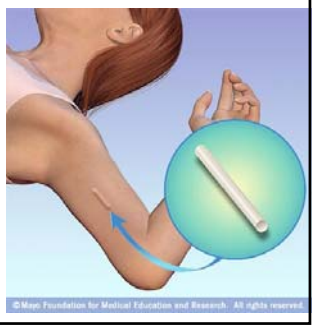
Depo-Provera®

Nexplanon® (etonogestrel)

- Implant in preloaded applicator
- Insert sub-dermally in arm
- Efficacy >99.5% for 3 years; no effect on BMD
- Ok for immediate postpartum contraception
- SE: irregular menses may not improve with time
- Insertion training through manufacturer

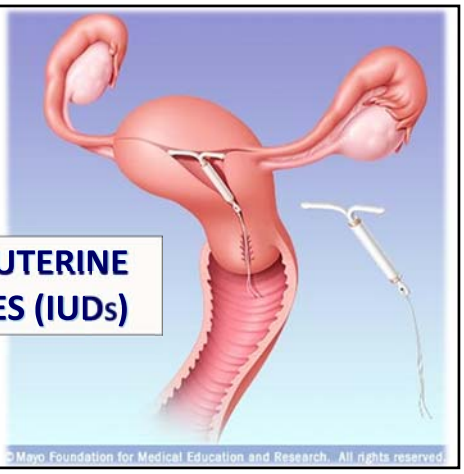
Nexplanon® Insertion/Removal

- Obtain from Prosthetics
- Trained provider
- R/O pregnancy
- Informed consent, written info
- Insertion/removal supplies
- Replace through same incision



Patient Education Nexplanon®

- Insertion 1 minute; removal 3 minutes
- Back-up x 7 days
- Side effects, irregular menses
- Remove no later than end of 3rd year. Record expiration date on user card; keep in safe place.
- Wound care
- No HIV/STI protection



IUD Contraindications

- Distorted uterine cavity, active infection, copper allergy for ParaGard
- **NOT** contraindicated for nulliparas or women with history of STIs

IUD Insertion

- Obtain from Prosthetics
- Trained provider
- R/O pregnancy
- 600-800mg ibuprofen 1hr before procedure
- Informed consent, written info
- Insertion/removal supplies
- STI screen if at risk

Patient Education IUDs

- Irregular bleeding, cramping for 3-6 months
- Regular string checks
- Keep expiration date in safe place
- When to contact provider
- No HIV/STI protection
- Back-up x 7 days (Mirena)

Mirena® IUD

- Levonorgestrel 20 mcg/day
- Efficacy 99.8% for 5 years
- SE: irregular bleeding and spotting; 20% amenorrhea by 1 year

Skyla® IUD

- Levonorgestrel 14 mcg/day after 24 days
- Efficacy 99.1% for 3 years
- Slightly smaller than Mirena (28 x 30mm vs. 32 x 32 mm); insertion tube is also smaller (3.8 vs. 4.75mm)
- SE: irregular bleeding and spotting; 6% amenorrhea by 1 year

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Non-Contraceptive Uses of Mirena® and Skyla®

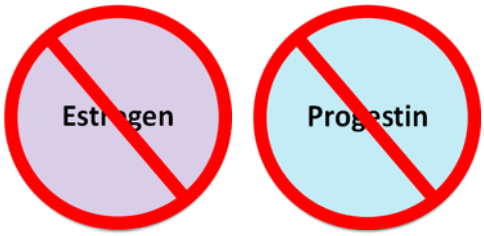
Decreases	Heavy menstrual bleeding
	Menstrual pain
	Bleeding and pain from fibroids
	Risk of uterine cancer

Case 2: Melinda (cont'd)

After reviewing her hormonal LARC options, Melinda wants to hear about non-hormonal options.

Non-Hormonal Contraceptive Methods

ParaGard® IUD
Condoms, Diaphragm, Cervical Cap
Spermicides, Sponge
Sterilization, Natural Family Planning



ParaGard® – Copper T 380A IUD

- 380 copper coils
- Efficacy 99.2% for 10 years
- SE: minimal, rarely heavier menses, increased cramps
- Useful for women who decline hormones

Male Condoms

- Popular with teens, 20-24 year olds, childless/never-married women
- Cheap, easily to get
- STI protection (except lambskin)
- Failure rate 18%
- Disadvantages: break/slip, latex allergy
- Can order male condoms for women

Female-Controlled Options


Female Condom

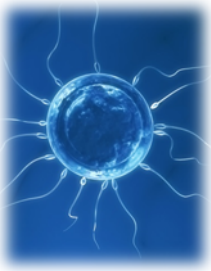

Diaphragm


Cervical Cap


Sponge

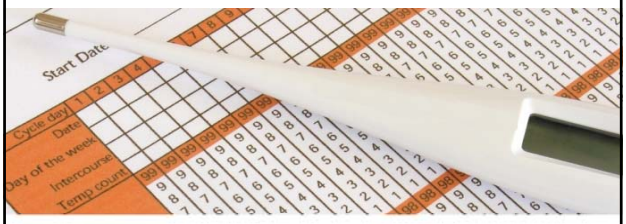
Cervical cap photo courtesy of FemCap. Today sponge photo courtesy of Mayer Labs.

Spermicides



- Cream, foam, gel, film, suppository
- On VA formulary
- Failure rate 28%
- No HIV/STI protection
- Nonoxyl-9 used alone can irritate vagina/rectum potentially increasing HIV acquisition

Natural Family Planning / Withdrawal



Natural family planning
- For motivated women with regular cycles who have received training
- Failure rate 24%

Withdrawal
- Failure rate 22%
- Not recommended

Sterilization

Males
Vasectomy

Females
Tubal ligation or Essure

- 99% effective, but failures occur
- Consider irreversible
- No partner consent needed

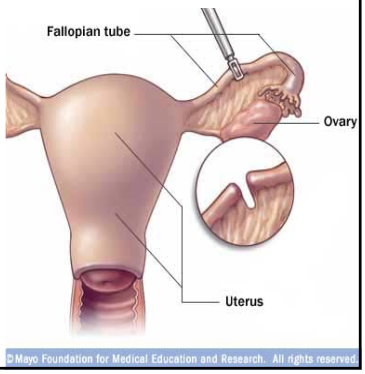
Risks for women:

- Surgery, ectopic pregnancy, regret in 20% under age 30

Tubal Ligation

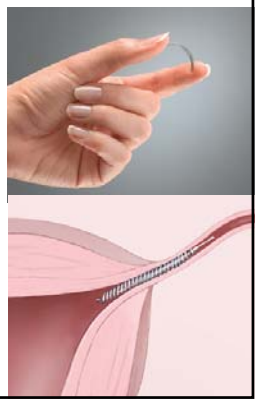
Patient Education

- Ectopic pregnancy risk
- Return to work, physical activity, sex
- No HIV/STI protection



Essure®

- Hysteroscopic placement of flexible micro-inserts causes scarring to block fallopian tubes
- Failure rate 0.5% - higher?
- 3-month wait for confirmatory testing
- No HIV/STI protection
- May interfere with IVF success



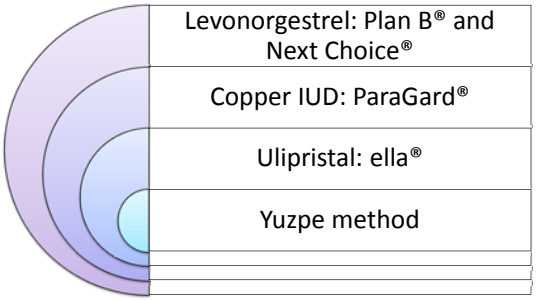
Photos courtesy of Conceptus.

Case 3: Jessica

Lisa is a 26-yo G0P0 female with history of hypothyroidism. She calls your clinic first thing in the morning in a panic. She was having sex last night when the condom broke. She wants to know what to do.

How can you help her?

Emergency Contraception (EC)



EC: Consider offering in advance

- Condoms break/slip/stay in the package
- Pills, patches, rings are forgotten
- Injection visits are missed
- Sex can happen when unexpected or uninvited
- Increases likelihood that EC is used
- Decreases time interval to use
- Does not increase risky behaviors or STI acquisition

Guidance on Rights of Conscience (ROC) and Emergency Contraception

- ☐ VHA obligated to offer and provide FDA-approved EC when medically indicated
- ☐ Individual clinicians may raise objections to providing EC based on ROC
- ☐ Clinician's claim to ROC cannot supersede patient's right to information about and access to EC when it is clinically indicated
- ☐ VHA's official 2012 Information Letter providing guidance is expired with revisions pending

Plan B One-Step®, Next Choice One Dose™

Levonorgestrel: 150 mcg or 1.5 mg
Take within 3 days; less effective but still useful day 4-5
Affects ovulation, fertilization, implantation
1.1% failure or 89% reduction
No risk to fetus if pregnant
Advanced provision: on VA formulary; refills ok
SE: heavier bleeding, nausea, abdominal pain, fatigue, headache

ella® (Ulipristal)

- Selective progesterone receptor modulator
- Rx only
- Blocks ovulation, suppresses endometrial bleeding, induces endometrial changes that may detach products of conception
- May inhibit ovulation for up to 5 days
- Reduced efficacy as BMI increases to obese range (176 pounds)

Other EC

ParaGard®

- Place within 5 days (sooner the better)
- Failure rate 0.1 - 0.7%
- Retain for contraception
- Effective for obese women

Yuzpe Regimen

- High dose of COC already on hand. More nausea/vomiting, less effective than Plan B®

In summary, effective contraceptive counseling involves three steps…

1. Elicit patient's contraceptive goals
2. Identify health risks for any options
3. Determine patient's ability to consistently and correctly use preferred method

Authors

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Pharmacy Benefits Management Services

Pharmacy and Women's Health in VA

Myth

Pharmacy?

VA National Formulary Process

- One VA National Formulary
  - *NO VISN or local formularies*
  - Goal: to provide a uniform drug benefit
- Non-formulary ≠ Not Available
- Formulary is meant to meet the needs of the majority of patients
- Some non-formulary use is expected
- Use non-formulary request process if needed

VA National Formulary Process

- Formulary Addition:
  - All New Molecular Entities reviewed
  - Requests from VISN P&T or Chief Consultants
  - Voting body:
    - Medical Advisory Panel
    - VISN Pharmacist Executives
- Ex: Contraceptives drug class review
  - Seasonale (and equiv) ADDED to VANF
  - Drosperinone-containing agents NOT added
    - Likely increased risk of TE events
    - Several alternatives on VANF
    - NF status prompts thoughtful consideration

FAQs

- How do I get a med added to CPRS ordering screen?
  - ADPAC, Pharmacy, Women's Health partnership
- Where can I find out about teratogenic meds?
  - CPRS Interim Order Check
  - CPRS TDrugs Permanent Solution (In production)
  - Reprotox: http://va.reprotox.us/

FAQs

- Are condoms available?
  - Yes, both male and female condoms are available to all Veterans
- What contraceptives are on VA National Formulary?
  - Several pills, DMPA injection, vaginal ring
  - IUDs, implants available from Prosthetics
  - Levonorgestrel emergency contraception
  - https://vaww.cmopnational.va.gov/cmop/PBM/Clinical%20Guidance/Clinical%20Recommendations/Contraceptive%20Agents,%20Hormonal%20on%20VANF%20Jan%202013.doc

WH-Rx Collaboration

- Teratogenic meds alert
- Emergency contraception
- Women of childbearing age on warfarin
- Pharmacy Women's Health bootcamps
- Safety alerts (e.g., valproate)
- Local and VISN efforts
  - VISN 12 PharmD Lead for Women's Health
  - VISN 5 Direct Pharmacist Dispensing of EC

Links and Contact Information

- PBM Website: https://vaww.cmopnational.va.gov/cmop/PBM/default.aspx/

- Laura Esposito: laura.esposito@va.gov
- Chasitie Levesque: chasitie.levesque@va.gov
- Lisa Longo: lisa.longo@va.gov

Abnormal Uterine Bleeding (AUB)

VETERANS HEALTH ADMINISTRATION

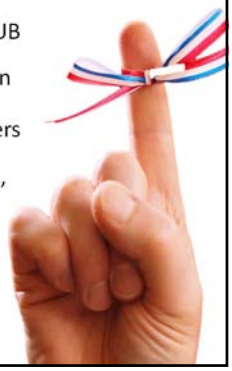
WOMEN VETERANS HEALTH CARE EDUCATION & TRAINING

Objectives

- Define abnormal uterine bleeding
- Identify high acuity/risk presentations
- Discuss etiology and management of AUB
- Review polycystic ovary syndrome

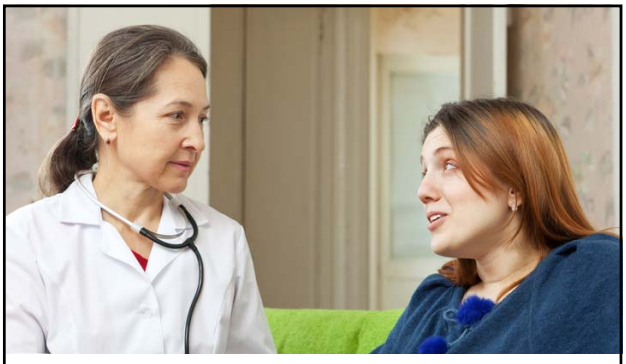
Remember…

- 10% of primary care visits due to AUB
- Many causes are routinely treated in primary care: thyroid disease, coagulation disorders, renal disorders
- Also iatrogenic causes (medications, herbal supplements)
- AUB is not difficult to manage!



Shwayder JM. *Obstet Gynecol Clin North Am*, 2000.

Case 1



Jenny, a 25-year-old female Veteran presents with vaginal bleeding

Acute vs. Chronic Bleeding?

AUB can be Acute or Chronic

First determine acuity

1. ***Acute bleeding*** is often associated with ***pregnancy*** complications and ***can be life-threatening***
   - Evaluate as with any other acute bleeding
   - Requires immediate evaluation (but not always urgent)
2. ***Chronic bleeding*** allows time for work-up
   - Evaluate systematically

Acute Bleeding: Initial Steps

1. Evaluate for pregnancy
   - *All women of reproductive potential* require pregnancy testing*
2. Assess for abnormal vital signs
3. Ask about abdominal/pelvic pain (i.e. ectopic)
4. Obtain objective evidence of blood loss

**VHA definition: 52 years and younger without documented hx of hysterectomy or documented menopause (1 year menses free)*

Objective Evidence of Blood Loss

For triage, quantify bleeding by number of pads or compare it to normal menses

- Profuse bleeding: soaks large pad/tampon every 1-2 hours for ≥2 hours
- Prolonged uterine bleeding = bleeding for >7 days

For diagnosis, pad/tampon counts are unreliable

- CBC and ferritin are best ways of estimating blood loss

Urgent Cases

ALL newly diagnosed pregnant women with abdominal pain and/or bleeding, should be evaluated immediately to rule out ectopic pregnancy

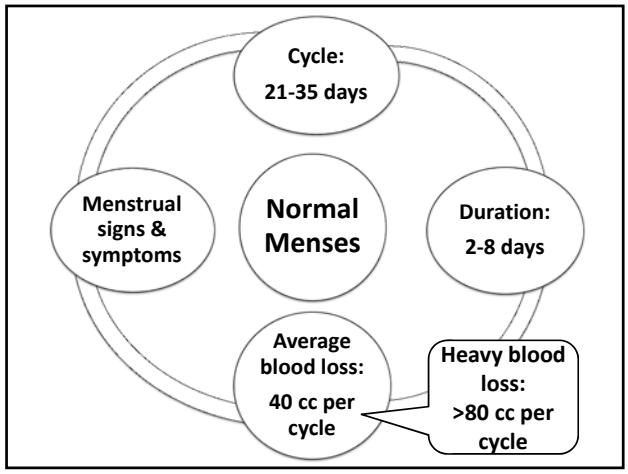
Re-check vitals frequently if heavy bleeding

If hemodynamically unstable with acute or prolonged bleeding…

- Immediate intervention
- Transfer to acute care setting

Chronic Bleeding

- **Many women present with months of abnormal menstrual bleeding**
- Goal of evaluation is to determine whether…
  - *Normal menstruation, but unacceptable to patient*
  - *Ovulatory bleeding*
  - *Anovulatory bleeding*



Cycle interval & bleeding duration should match

Short interval between cycles = short bleeding duration

Follicular phase	• **Estrogen-dominant** • Endometrium proliferates
Luteal phase	• **Progesterone-dominant** • Proliferation stops

Long interval between cycles = long bleeding duration

Timing of Ovulation

Every 14 days prior to onset of menses

21-day cycle	Ovulation day 7	7 days of endometrial thickening	Lighter menses
35-day cycle	Ovulation day 21	21 days of endometrial thickening	Heavier menses

When to Work Up?

- Symptoms are problematic for the patient
  - Missing work
  - Avoiding social activities
  - Soiling clothes
- Iron deficiency anemia, suggesting significant chronic blood loss

Definitions

Menorrhagia (heavy menstrual bleeding)
- *blood loss > 80cc/cycle*

Intermenstrual bleeding
- *bleeding/spotting between otherwise normal periods*

Menometrorrhagia
- *irregular and heavy bleeding*

Definitions

Oligomenorrhea
- *< 9 periods/year; > 35 days between periods*

Amenorrhea
- *no menses for 3 months*

Postmenopausal bleeding
- *bleeding occurring >1 year after menopause*

Case 2

Abnormal Uterine Bleeding Non-Pregnant

Jessica, who is 32-years-old, presents to your clinic with heavy vaginal bleeding x 4 days (soaking ~1 pad every few hours) .

She appears hemodynamically stable during her initial nursing assessment with normal vitals.

She endorses 2/10 crampy pelvic pain typical of her usual menstrual cramps that began today. Her LMP was 4 weeks ago.

POC pregnancy test is negative.

Characterize the Bleeding

Ovulatory (regular) ***vs.*** **non-ovulatory** (unpatterned)

Key to differential diagnosis, etiology, and management

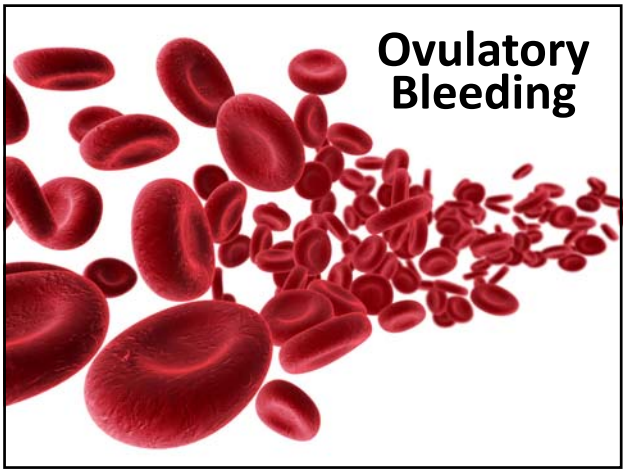
Menstrual charting helps assess:

- Frequency
- Duration
- Volume
- Nature of the bleeding

Age of Patient

Ovulatory (regular): *most common in reproductive years*

Anovulatory (unpatterned): *frequent where failure to ovulate occurs (i.e., adolescent, premenopausal women)*



Ovulatory Bleeding

Impaired endometrial hemostasis, focal or global

Two patterns:

1. **Menorrhagia**
   - *Excessive and/or prolonged blood loss at regular intervals*
   - May signify bleeding disorder or structural lesion
2. **Intermenstrual bleeding**
   - *Bleeding between regular cycles*
   - May be caused by cervical disease or IUD.
   - Midcycle spotting may result from rapid decline in estrogen before ovulation

Ovulatory Bleeding: Heavy Menstrual Bleeding

Normal menses is most common "etiology"

- Hormonal imbalance → longer time between periods → increased estrogen exposure → heavy periods

Coagulopathies

Structural lesions (fibroids, adenomyosis, polyps, cancers)

Other (hypothyroidism, endometritis, endometriosis, hyperestrogenism)

Ovulatory Bleeding

History	Physical
• Sexual activity • Contraceptive use • Pelvic pain • Hypothyroid symptoms • Bruising/bleeding • Liver/renal disease • Medications, herbals	• Thyromegaly, dry skin & hair, diminished reflexes • Bruising • Abdominal/pelvic pain • Vaginal/vulvar lesions, uterine enlargement, adnexal mass, cervical softening

All women with AUB require a pelvic exam

Bleeding can emanate from:

- Vulva or vagina
- Uterus or cervix
- GI and/or GU tract
- Localized trauma
- Tumor
- Manifestation of systemic disease
- Medication complication

Ovulatory Bleeding: Lab Work

- Pregnancy testing
- CBC with platelets, ferritin
- PT/PTT, von Willebrand's screen
- TSH
- Pap, GC/Chlamydia tests
- Consider endometrial biopsy if >40 and/or risk factors for endometrial carcinoma

Risk Factors for Endometrial Cancer

- Age >40 years
- FHx of uterine, breast, ovarian, colon cancer
- Obesity
- Bleeding >10 days or frequency <21 days
- Bleeding not regulated with hormonal therapy

When to Biopsy?

Age 19-39	Endometrial cancer risk per 100,000 women = 2.3 - 6.1	**Consider biopsy** if chronic anovulation or unresponsive to medication
Age 40-49	Endometrial cancer risk per 100,000 women = 36	**Biopsy** *unless pregnant/other reason to avoid sampling endometrium

ACOG. *Int J Gynaecol Obstet,* 2001.

Ovulatory Bleeding: Management

- Correct hypothyroidism
- Refer lesions to gynecology
- NSAIDs
- Combined hormonal contraceptives
- Progesterone agents

**Add an iron supplement if deficient.*

Ovulatory Bleeding
Combined Hormonal Contraceptives

- **Shortens long cycles to 28 days**
  Less estrogen exposure → less endometrial proliferation
- **All OCPs are combination pills**
  Therefore no unopposed estrogen exposure

Ovulatory Bleeding: Progesterone

- **Minimizes endometrial proliferation**
  No unopposed estrogen
- **Decreases overall bleeding**
  Expect spotting until endometrium stabilizes
- **Appropriate for women who can't or won't take estrogen-containing compounds**

Ovulatory Bleeding: Intermenstrual Bleeding

- OCP use (most common)
- Ovulation bleeding
- Pelvic or vaginal infection
- Cervical or endometrial polyps
- Cancer

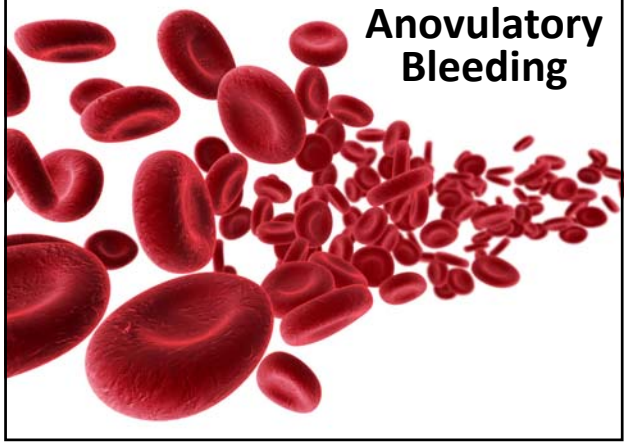
Postcoital bleeding suggests cervicitis, cervical polyps/cancer, ectropion

Case 3

Irregular Uterine Bleeding
45-year-old

Becky is 45 years old.

She skipped the last two periods and has now been bleeding for the past 14 days.



Anovulatory Bleeding: Menstrual Patterns

Ovulation is key for orderly menstruation

- *Ovulation → corpus luteum formation → progesterone*

Anovulatory cycles can be interspersed with ovulatory cycles

- *Absent premenstrual signs (e.g., bloating, breast pain)*

~50% of perimenopausal women (>40) and 20% of adolescents experience anovulatory bleeding; both are due to estrogen withdrawal

Anovulatory Bleeding: Menstrual Patterns

Can either present with no bleeding at all (amenorrhea) OR irregular/unpredictable bleeding of variable flow & duration

Sex hormones are produced but not cyclically

- Thus bleeding, but irregular bleeding

Think of building a tower of blocks…

- **Unopposed estrogen:**
  - *Endometrium proliferates unchecked*
  - *Endometrium is heavy and disordered → sloughing occurs*
- **Common at menarche and perimenopause**

Anovulatory Bleeding Differential Diagnosis

Pregnancy, pregnancy, pregnancy!!!

Hypothalamic dysfunction

Ovarian dysfunction

Thyroid dysfunction

Anovulatory Bleeding

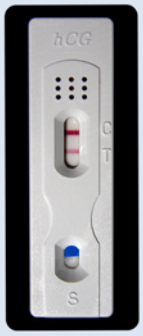
History	Physical
• Medication • Sexual • Contraceptive use • Social • Hirsutism, acne, hair loss • Hot flashes, vaginal dryness • Galactorrhea	• Obesity • Hirsutism, male pattern balding, acne • Hyperthyroidism signs • Breast discharge • Vaginal atrophy

Reliability of Pregnancy Risk

- History is notoriously unreliable
- ED study of women presenting with abdominal pain and menstrual bleeding…

swore no way they could be pregnant but 50% were!

Pregnancy Determination



All women of reproductive potential with abnormal menses require pregnancy testing

Pregnancy testing is highly sensitive:

- Urine test - 2 weeks after conception
- Serum test - about 1 week after conception

Anovulatory Bleeding: Lab Work

- Pregnancy testing
- TSH
- Prolactin
- Free testosterone
- FSH and LH, *if considering menopause*

Anovulatory Bleeding: Management

Treatment goals = regulate cycles, minimize blood loss, prevent iatrogenic complications from chronic unopposed estrogen

Treat underlying condition
- Thyroid dysfunction
- Bleeding disorder

Hormonal management
- Combination contraception
- Progesterone: *cyclic or IUD*

Anovulatory Bleeding
Combined Hormonal Contraceptives

- Restores orderly bleeding
- Prevents unopposed estrogen, thus checking uterine proliferation
- Provides contraception

Anovulatory Bleeding: Management

For women who can't or won't take OCPs…

- **Cyclic progesterone**
  - *10 days of medroxyprogesterone acetate every 30 days if no bleeding*
- **Progestin-containing IUD**

Case 4

Irregular Uterine Bleeding
25-year-old

Melinda, a 25-year-old woman, presents with irregular bleeding.

She has had only five menstrual cycles in the last 12 months and wonders if she's going through "early menopause".

She also complains about her weight, some hair loss, and acne.

Polycystic Ovary Syndrome (PCOS)

Nearly 10% of women are affected

Consequences for all phases of a woman's life

- **Early** – *irregular menses, obesity, hirsutism, acne*
- **Middle** – *infertility, sleep apnea*
- **Late** – *CVD, diabetes, endometrial cancer*

PCOS Diagnostic Criteria

<u>Rotterdam Criteria</u> ***(any 2 of these 3):***

- *Anovulation or oligo-ovulation (<9 menses/year)*
- *Evidence of hyperandrogenism*
- *Polycystic ovaries (seen on pelvic ultrasound)*

- **Does not include obesity/insulin resistance**

Some Perspective…

Two thirds of cases have symptoms of anovulation

Two thirds have hirsutism

One half are obese

Only one third have all 3 Rotterdam criteria

Buggs & Rosenfield. *Endocrinol Metab Clin North Am,* 2005.

PCOS Differential Diagnosis

Hyperandrogenism, if pronounced
signs and symptoms may signal…

Nonclassic congenital adrenal hyperplasia

Cushing Syndrome

Adrenal or ovarian androgen-secreting tumors

PCOS Diagnosis

Physical	Diagnostic Tests
• Obesity • High blood pressure • Body hair, acne • Enlarged ovaries	• Pregnancy • TSH • Total or free testosterone • Prolactin • 17 OH progesterone • DHEAS • 2-hr GTT • Lipoproteins • Pelvic ultrasound

PCOS Management

- Restore menses for endometrial protection
- Manage hyperandrogenism
- Treat infertility, if desired
- Assess risk factors for CVD and DM

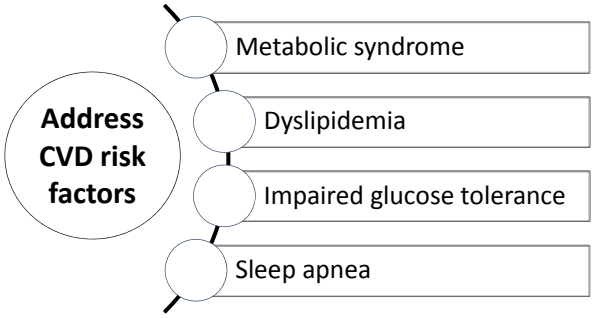
Endometrial Protection

Weight loss	• Mere 5% weight reduction may induce ovulatory menses
Combined contraceptive	• Pill, patch, or ring
Progestin-only contraceptive	• Medroxyprogesterone • Levonorgestrel IUD
Metformin	• Restores ovulatory menses • Remember contraception!

Managing Hyperandrogenism

- Weight reduction
- Antiandrogens
  - *Spironolactone*
- Combined hormonal contraception
  - *Decrease ovarian androgen production,* increase synthesis of SHBG

PCOS: High Comorbid CVD Risks



The Metabolic Syndrome

Any 3 of the following:

- Abdominal obesity (>35 inch waist)
- Blood pressure (>130/85mm Hg)
- Triglycerides (>150 mg/dl)
- HDL (<40 mg/dl)
- Fasting glucose (>100 mg/dl)

The Metabolic Syndrome
Prevalence in PCOS

47% of women with PCOS meet diagnostic criteria for the Metabolic Syndrome

Dokras et al. *Obstet Gynecol,* 2005.

Why Does Metabolic Syndrome Matter?

- Pro-inflammatory
- Pro-thrombotic
- Increased risk for CVD and DM

Diabetes in PCOS

- Study of obese women with PCOS:
  - *35% impaired glucose tolerance*
  - *10% diagnosed with DM*
- Subset of women repeated GTT after ~3 years:
  - *40% had deterioration in glucose tolerance*

Ehrmann et al. *Diabetes Care,* 1999.

Sleep Apnea

- Study of women with PCOS compared to premenopausal controls:
  - *Sleep apnea significantly more common (OR 30.6!)*
  - *Difference remains even when controlling for BMI*
  - *Important to recognize the health consequences*

Vgontzas et al. *J Clin Endocrinol Metab,* 2001.

Managing CVD Risk in PCOS

Obese women need screening for Metabolic Syndrome and DM

- Waist measurement, BP, fasting lipids
- OGTT ideal; FBG and A1c alternatively

Ask about sleep apnea symptoms *(even in women with normal BMIs)*

Rotterdam Consensus Conference. *Hum Reprod,* 2004.

Summary

AUB is common

Assess high acuity/risk

Determine ovulatory *vs.* anovulatory

Can be managed in primary care

Don't forget about contraception

Author: Melissa McNeil, MD, MPH
VA Pittsburgh Health Care System

Contributor: Linda Baier Manwell, MS
University of Wisconsin-Madison

Chronic Pelvic Pain

VETERANS HEALTH ADMINISTRATION

WOMEN VETERANS HEALTH CARE EDUCATION & TRAINING

Objectives

- Discuss the epidemiology of chronic abdominal and pelvic pain focusing on noncyclic pain
- Describe evaluation components, including triage
- Identify the most common causes and symptoms
- Review treatment options and evidence
- Provide appropriate patient education

Chronic Pelvic Pain (CPP)

- Non-cyclical
- ≥ 6 months duration
- Pelvis, anterior abdominal wall, lower back, buttocks
- Disability or medical care

Zondervan et al. *Obstet Gynecol* 2004.

Epidemiology

- Occurs in 15% of reproductive-aged women
- 10% of outpatient gynecologic consults
- Indication for 15-40% of laparoscopies; 12% of hysterectomies
- $2 billion annual cost

Zondervan & Barlow. *Baillieres Best Pract Res Clin Obstet Gynaecol*. 2000; Yunker et al. *Obstet Gynecol Surv* 2012.

Most Common Causes

- Endometriosis
- Adhesions
- Irritable bowel syndrome (IBS)
- Interstitial cystitis
- Multiple causes

Pain is rarely associated with a single disorder

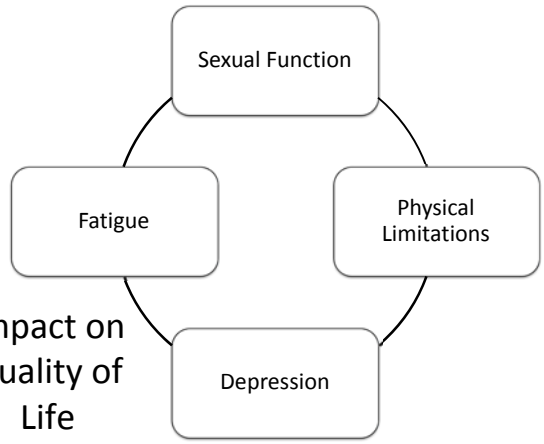
Laparoscopy is normal in 35-40% of cases

Etiology

- No definitive diagnosis in 61% of cases
- 40%-60% of women with CPP have >1 cause
- Don't assume just a gynecologic problem
  - Consider GI and GU too

Zondervan et al. *Obstet Gynecol* 2004; Ortiz D. *Am Fam Physician* 2008.

Impact on Quality of Life



Co-Morbidities

- Up to 50% concomitant depression
- Drug and alcohol abuse predispose to pain
- Not affected by sociodemographic factors
- Consider depression and AUDIT-C screens

Latthe et al. *BMJ* 2006.

CPP and Women Veterans

- 1 in 5 women veterans experience MST
- Women with MST are 2x as likely to have CPP

	No MST (n=2738)	MST (n=805)	Age-adjusted odds ratio
CPP	8%	17%	2.1 (1.7, 2.6)

Frayne et al. *J Womens Health Gend Based Med* 1999.

Chronic Pelvic Pain and Sexual Abuse

Women with history of sexual abuse have more:

⇩

GI disorders (OR 2.43)

⇩

Non-specific chronic pain (OR 2.20)

⇩

Chronic pelvic pain (OR 2.73)

Paras et al. *JAMA* 2009.

Chronic Pelvic Pain and Trauma

Is PTSD a mediator for trauma and chronic pain?

Of 713 women in a pain clinic:

⇩

Hx of sexual/physical abuse 46.8%

⇩

PTSD symptoms 31.3%

⇩

Trauma hx = worse medical sx

Meltzer-Brody et al. *Obstet Gynecol* 2007.

CPP is a Form of Chronic Pain

- Tissue injuries trigger chemicals leading to inflammatory reaction
- Pain signals carried by nociceptors synapse with spinal cord dorsal horn neurons
- Over time, changes in dorsal horn lead to allodynia and upregulation of pain fibers
- After pain becomes chronic, *chronic pain model* kicks in

Care Preferences of Women with CPP

- To be addressed as an individual by supportive nurses and providers
- To feel that she and her pain are taken seriously
- To receive an explanation for her condition
- To be reassured that CPP is not *"all in her mind", is common,* and is *not cancer*

Price et al. *BJOG: Int J Obstet & Gynaecol* 2006.

Differential Diagnosis of CPP

GYN	GI	GU	Musculoskeletal
Endometriosis	IBS	Interstitial cystitis	Myofascial pain in abdomen or pelvic floor
Pelvic adhesions	IBD	Chronic UTI	Fibromyalgia
Chronic PID	Chronic constipation	Urethral syndrome	Coccygeal or low back pain
Adenomyosis	Colitis	Radiation cystitis	Nerve pain
Vulvodynia	Diverticulitis	Urinary calculi	
Ovarian cyst or varicosity			
Uterine myoma			

Reiter R. *Clin Obstet Gyne* 1990; Bordman & Jackson. *Can Fam Phys* 2006.

History-Taking

- Detailed pain history, validate symptoms
- Differences in pain from previous episodes
- Timing of pain
- Exacerbating and remitting factors
- Prior/current treatments

History-Taking (cont'd)

- Medical history
- Surgical history
- Gynecologic history
- Sexual history
- Psychological history

Nursing Role for Physical Exam

- Assess vital signs
- Assess pregnancy risk
- Listen to her concerns and prepare provider
- Set up for room pelvic exam, anticipating labs & specimens
- Serve as (female) chaperone

Trauma-Informed Care: Pre-Exam

Nurses

Inform provider if patient has a trauma history or is reluctant to have a pelvic exam

Providers

While the patient is dressed, discuss:

- Her symptoms
- Rationale for exam, what it entails
- Stress relievers
- Stop exam anytime

Trauma-Informed Care: The Exam

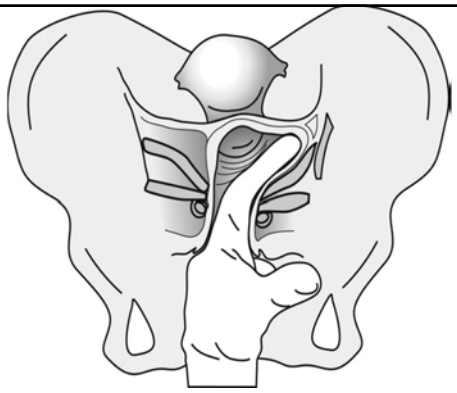
Providers and Nurses

- Monitor verbal/non-verbal cues of discomfort
- Employ distractions
- Get permission before starting/resuming exam
- If signs of distress…
  Would you like a minute to relax?
  Would you like to delay rest of the exam?

Physical Exam for CPP

- General physical, looking for abnormalities
- Pelvic exam, Pap (if due), specimens as indicated
- Bimanual
- Try to reproduce the pain
- Lack of PE findings doesn't rule out pathology

Zondervan et al. *Obstet Gynecol* 2004.



Reprinted from *Urology*, vol. 70, Peters et al. Prevalence of pelvic floor dysfunction in patients with interstitial cystitis, pp 16-18, ©2007, with permission from Elsevier

Physical Exam Findings

- Palpation of outer pelvis can reveal trigger points suggesting myofascial component to pain
- Assess for nodularity, point tenderness or cervical motion tenderness on bimanual exam
- Rectal exam may show rectal or posterior uterine masses, nodularity, or pelvic floor point tenderness

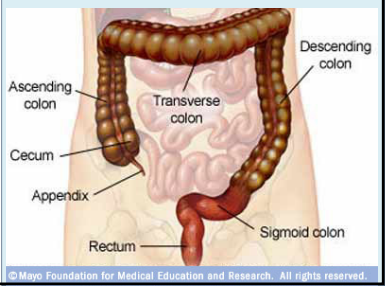
Common Causes of Chronic Pelvic Pain

- Irritable Bowel Syndrome
- Endometriosis
- Interstitial Cystitis
- Pelvic Adhesions

Irritable Bowel Syndrome (IBS)

Abdominal discomfort + altered bowel habits for ≥3 months

- 20% of population
- 1.5x more common in women
- Onset <age 35 in 50% of cases
- Poorer physical/ mental health
- $20 billion annually



IBS Etiology

- May be related to:
  - Motility
  - Absorption
  - Serotonin receptor activity
  - Bacterial infection
- Commonly occurs with endometriosis, interstitial cystitis, other female-predominant pain syndromes

IBS Diagnosis: Exclude Other Pathology

History	• Abdominal pain, bloating, cramping • Diarrhea or constipation
Physical exam	• Findings supporting other cause
Labs	• Celiac disease • Basic blood work
Colonoscopy	• Consider, especially if warning symptoms

IBS Diagnosis Rome Criteria

3 months abdominal pain/irritation that may be:

- Relieved with a BM
- Coupled with changes in frequency or stool consistency

Diagnosis: 2+ must be present ≥25% of the time:

- Change in frequency (>3 BM/day OR <3 BM/wk)
- Noticeable difference in stool form
- Mucous in stools
- Bloating or feeling of abdominal distention
- Altered stool passage (sensations of incomplete evacuation, straining, or urgency)

Symptoms Suggesting Alternate Diagnosis

- Weight loss
- Anemia
- Rectal bleeding
- Fever
- Nocturnal symptoms
- Onset >age 50
- Abrupt change in symptoms
- Family hx colorectal cancer

IBS Treatment

- Dietary manipulation
  - Symptom diary to identify pain patterns
  - Elimination diet
  - Fiber (slowly work up to 30g per day over several weeks)
- Stress management

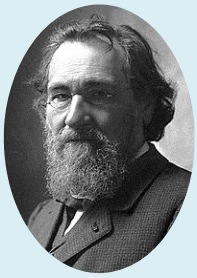
IBS Treatment Medication Options

- Treat symptoms of diarrhea of constipation
- Tricyclic antidepressants
  +/- benefit in trials
- Antispasmodics
  Efficacy data lacking

Mayer EA. *N Engl J Med* 2008.

IBS Treatment
FDA-Approved Medications

- Alosetron (Lotronex®)
  - Diarrhea-predominant IBS
  - Risk of ischemic colitis limits use
- Lubiprostone (Amitiza®) and linaclotide (Linzess®)
  - Constipation-predominant IBS



Élie Metchnikoff first suggested colonizing the gut with beneficial flora in 1907

IBS Treatment
Probiotics

Meta-analysis of 10 RCTs
(Moayyedi et al. *Gut,* 2010)

- Probiotics better than placebo (RR of IBS not improving 0.71, NNT=4)
- Magnitude of benefit, most effective strain, and ideal dose uncertain

Lactobacillus on VA formulary

IBS Treatment
2008 meta-analysis

Fiber	RR of persistent symptoms 0.87, NNT= 11
Antispasmodics	RR 0.68, NNT = 5
Peppermint Oil	RR 0.43, NNT= 2.5

Ford et al. *BMJ* 2008.

Peppermint Oil

- Dose 0.2-0.4 ml (200-400 mg) TID
- Enteric coated capsules
- Smooth muscle relaxant – can cause GERD

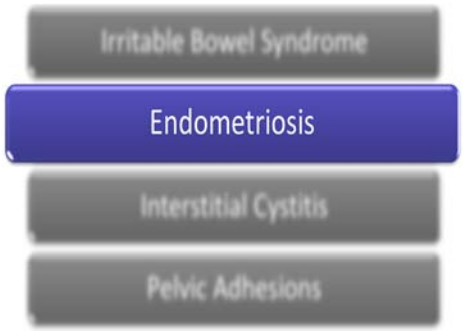
Merat et al. *Dig Dis Sci* 2010.

Integrative Medicine Approach

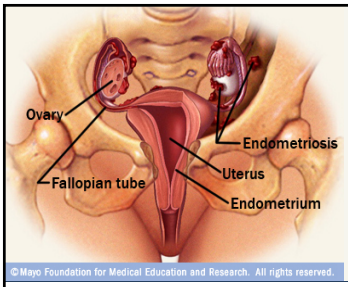
Treat IBS as insult to the gut	Remove irritants (elimination diet)	Restore healthy gut bacteria (probiotics)and function (fiber, peppermint oil)
Stress management (exercise, yoga, meditation)	CBT, hypnosis	

Teaching module on IBS: www.fammed.wisc.edu/integrative

Common Causes of Chronic Pelvic Pain



Endometriosis Definition



- Endometrial tissues (glands, stroma) appear outside uterus
- Usually confined to pelvis, but can occur elsewhere

Endometriosis Facts

- Affects 3-15% (avg 10%) of general population
- 25-50% of infertility population
- Mean age at diagnosis 25-30
- Etiology is unclear

Endometriosis Risk Factors

Increased Risk

- Family hx
- Increased exposure to menstruation
- Flow obstruction at early age
- Obesity

Decreased Risk

- Menstrual disorders
- Decreased body fat content
- Exercise
- Smoking

Endometriosis Symptoms

Pelvic Pain (75-80% of women w endometriosis)

- Increasing dysmenorrhea, deep dyspareunia, premenstrual dysmenorrhea, bilateral lower abdominal pain, back pain
- Pain may be constant rather than cyclical and occur in multiple areas
- Symptom severity not related to pathology

Infertility

Endometriosis Diagnosis

- History
- Pelvic exam (tender pelvic structures, fixed retroverted uterus, adnexal masses, uterosacral ligament nodularity)
- Laparoscopy
- Other: CA-125, ultrasound, MRI

Endometriosis Treatment Approaches

- Presumptive treatment
  - OCPs interrupt menstrual cycle
- Surgery to destroy lesions
- Hysterectomy

Integrative Medicine Approach

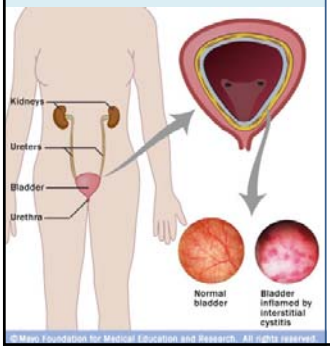
- Stress management
- Support positive estrogen balance
  - Healthy weight
- Exercise >4 hrs/week

Common Causes of Chronic Pelvic Pain

- Irritable Bowel Syndrome
- Endometriosis
- **Interstitial Cystitis**
- Pelvic Adhesions

Interstitial Cystitis (IC)

Chronic bladder pain



- Cause unknown; maybe damage to bladder wall causes sympathetic nervous change and pain
- 90% of cases female
- Nurse's Health Study: 0.4 - 1.4% of subjects
- Avg age of onset 40, but 25% under age 30
- Flares and remissions
- Co-morbidities: IBS, IBD, allergies

Curhan et al. *J Urol* 1999.

IC Diagnosis

- Dysuria, frequency, urgency, CPP, dyspareunia, vulvodynia (may improve while pregnant)
- Exclude UTI, bladder ca, GYN disease
- UA and urine culture
- Cystoscopy usually with biopsy, testing of bladder capacity

IC Management

- Symptom and voiding diary
- Low potassium, low acid diet trial for 2 weeks
- Urinary alkalinization (Prelief® dietary suppl reduces acids)
- Increase water intake

IC Management (continued)

- Bladder retraining (slowly increase voiding intervals)
- Physical therapy focused on levator ani spasms, pelvic floor dysfunction, biofeedback
- Cystoscopic passive bladder hydrodistention (relief for 20-25%)
- Antihistamines (e.g. hydroxyzine), tricyclics, nifedipine

IC Management (continued)

Pentosan (Elmiron®)

- Functions as synthetic GAG layer
- 100 mg capsule PO TID
- >6 months for improvement
- SE: GI upset, hair loss
- Monitor LFTs

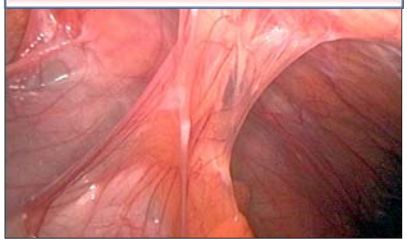
IC Management (continued)

Intravesical dimethyl sulfoxide (DMSO)	Symptomatic remission for up to 2 years (uncontrolled studies)
Intravesical heparin	Symptom relief in up to 50% of patients

Common Causes of Chronic Pelvic Pain

- Irritable Bowel Syndrome
- Endometriosis
- Interstitial Cystitis
- **Pelvic Adhesions**

Pelvic Adhesions



- Bands of scar tissue form between pelvic organs or between pelvic and GI structures
- Risk factors: infection, pelvic surgery, trauma
- Can lead to infertility, chronic pelvic pain

Pelvic adhesion diagnosis

- Exclude other pathology
- Laparoscopy

Pelvic Adhesion Treatment

- High fiber diet + fluids
- Surgical lysis

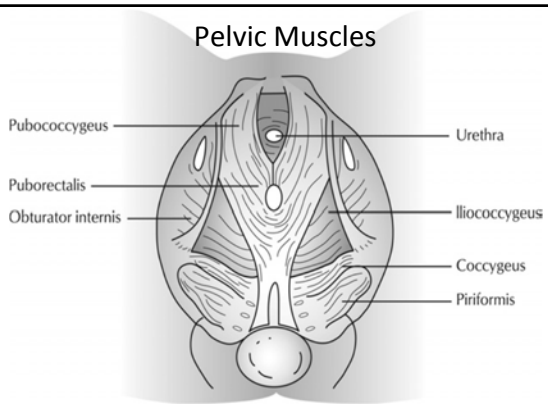
Emerging Cause of Pelvic Pain…

Pelvic Floor Dysfunction

Pelvic Floor Dysfunction

- Myofascial pain syndrome of pelvic floor muscles
  - Usually levator ani
- Seen in up to 85% of women with IC or chronic pain syndromes
- Common comorbidity with conditions already discussed

Pelvic Muscles



Reprinted from *Urology*, vol. 70, Peters et al. Prevalence of pelvic floor dysfunction in patients with interstitial cystitis, pp 16-18, ©2007, with permission from Elsevier

Pelvic Floor Dysfunction Treatment

Analgesics	Pelvic floor physical therapy
Trigger point injections	Botulinum toxin A injections

Treatment for women with pelvic pain, regardless of etiology

Lack of Evidence for CPP Management

- No standard diagnostic algorithm for CPP
- Inadequate studies
  - Not placebo-controlled
  - Low participant numbers
  - Etiology of CPP not defined prior to intervention
  - Don't compare medical and surgical treatment

Andrews et al. AHRQ comparative effectiveness review no. 41, 2012.

Non-Hormonal Pharmacologic Options

Diagnosed/undiagnosed/multifactorial CPP

- NSAIDs are first-line; try to avoid opioids

"Chronic pain medications"

- Gabapentin, amitriptyline most studied for CPP
- Topiramate, pregabalin, antidepressants can be considered

Hormone-Based Treatments

For endometriosis, GnRH-agonists are better than OCPs alone

DMPA (Depo-Provera®): mixed evidence of benefit; ACOG supports use

If first-line therapy with OCPs or DMPA doesn't work, refer to GYN

ACOG practice bull #114, 2010; ACOG practice bull #110, 2010.

GnRH Agonists

- Leuprolide (Lupron®)
  - SQ or IM (depot)
- Nafarelin (Synarel®)
  - Nasal spray
- Goserelin (Zoladex®)
  - SQ implant

"Add-back" HRT often used as GnRH agonists can cause a menopausal state and osteoporosis

Other Treatment Approaches

Botulinum toxin A (not on VA formulary)

Pelvic floor physical therapy

Integrative Medicine

- Organic, psychological, dietary, environmental causes and treatments for pain

Treat PTSD

- Shown to reduce other forms of chronic pain

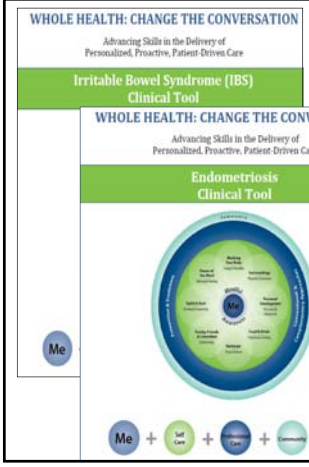
Surgery for Idiopathic CPP

- Presacral neurectomy
  - Up to 70% reduction in midline pain
  - Potential significant SE on bowel/ bladder function
- Hysterectomy
  - Supporting evidence is lacking
- AHRQ review: *Strength of evidence for surgical approaches overall is insufficient to low*

Andrews et al. AHRQ comparative effectiveness review no. 41, 2012.

Multidisciplinary Treatment Approach

- Based on multiple causes of pain
- High prevalence of concomitant psychiatric dx
- Importance of clinician-patient relationship
- Inclusion of Mental Health, Integrative Medicine
- Counseling, support, ?group visits



Clinical Tools on VHA Office of Patient Centered Care & Cultural Transformation website

Developed in collaboration with University of Wisconsin-Madison Integrative Medicine and Family Medicine Programs

http://projects.hsl.wisc.edu/SERVICE/index.php

Patient Education for CPP

Questions about treatment plan or discharge instructions

How to reach staff

Understanding of when to return

When to seek immediate emergency care

Conclusions

- CPP is complex condition
- High prevalence, little therapeutic research
- Lack of standard definitions, algorithms, RCTs
- Multidimensional care to treat multi-organ involvement
- Patients rely on us to listen and provide best treatment plan possible

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