- Hi….if you printed out your slides ahead of time…great. Please don't look through though, we are doing case based learning and if you know the answers it won't be as much fun

1

# A Tuesday Morning in the GYN clinic

James Cook MD

2

- I have no financial disclosures to make.
- Then above items may have 1 correct answer, multiple correct answers, or no correct answers

3

8:00

- 19 yo G0 presents for annual exam. She reports that she and her boyfriend are "in love" and she is ready to have a baby, as she is moving to Colorado to be near him. Her PMH/PSH is unremarkable and with the exception of daily marjiuna use, see seems to be health. You recommend:
  - A) Prenatal vitamins
  - B) Prenatal vitamins and Aspirin 81 mg
  - C) Prenatal vitamins and Folic Acid (0.4 mg)
  - D) Prenatal vitamins and Folic Acid (4.0 mg)

4

- Folic Acid
  - General recommendation is 0.4 mg(400 mcg) for general obstetric population
  - High Dose is 4 mg and recommended for:
    - Prior open neural tube defect (off spring of either parent, or 1st or 2nd degree relative)
    - Antiepileptic drugs (Valproate and carbamazepine)

5

- List of Anomalies requiring higher DOSE of Folic Acid:
  - Cleft lip/palate
  - Congenital heart defects
  - Limb reduction defects
  - Urinary tract defects
  - Congenital hydrocephalus

6

7

## USPTF and ACOG's joint ASA recommendations

High Risk Factors

- Previous pregnancy with preeclampsia, especially early onset and with an adverse outcom
- Multifetal gestation
- Chronic hypertension
- Type 1 or 2 diabetes mellitus
- Chronic kidney disease
- Autoimmune disease with potential vascular complications (antiphospholipid syndrome, systemic lupus erythematosus)

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## USPTF and ACOG's joint ASA recommendations

- 2 or more Moderate Risk Factors
  - Nulliparity
  - Obesity (body mass index >30 kg/m$^2$)
  - Family history of preeclampsia in mother or sister
  - Age ≥35 years
  - Sociodemographic characteristics (African American race, low socioeconomic level)
  - Personal risk factors (eg, previous pregnancy with low birth weight or small for gestational age infant, previous adverse pregnancy outcome [eg, stillbirth], interval >10 years between pregnancies)

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## USPTF and ACOG's joint ASA recommendations

- Aspirin Timing of Initiation
  - After 12 weeks
  - Best before 16 weeks

10

## 8:00 am (Part B)

- She is excited to be moving to be near her partner, and reports being interested in the legal marijuana. With respect to her pregnancy you inform her?
  - A) Increases risk of preterm birth **(2 fold**), increased rate of small for gestational age, placental abruption, transfer to NICU, and five minute agar score of less then 4
  - B) Increases risk of preterm birth (4 fold), increased rate of small for gestational age, placental abruption, transfer to NICU, and five minute agar score of less then 4
  - C) Increases risk of preterm birth (6 fold), increased rate of small for gestational age, placental abruption, transfer to NICU, and five minute agar score of less then 4

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## Marijuana and Pregnancy

- a population-based retrospective cohort study comparing over 9000 prenatal cannabis users with nonusers
  - **twice** the rate of preterm birth <37 weeks of gestation (12 versus 6 percent), and increased rates of small for gestational age, placental abruption, transfer to neonatal intensive care, and 5-minute Apgar score less than 4

12

## 8:05

- 19 yo G0 presents for annual exam. She reports that she and her boyfriend are "in love" and she is ready to have a baby, Her PMH/PSH is remarkable only for Obesity and MTHF(heterozygote) You recommend:
  - A) Prenatal vitamins
  - B) Parnatal vitamins and Asprin 81 mg
  - C) Prenatal vitamins and Folic Acid (0.4 mg)
  - D) Prenatal vitamins and Folic Acid (4.0 mg)

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- **Routine** Folic Acid recommendations for: Obesity and methyl tetrahydrofolate reductase (MTHFR) polymorphisms
- Testing for MTHFR polymorphisms is **not** recommended as routine folic acid supplementation at 0.4 mg per day will adequately increase red cell and serum folate concentrations whether or not the woman has a polymorphism

14

## 8:10

- 24 yo g1p1 presents for contraception counseling. She is average height and weight and would like to proceed with depo-provera for contraception. She is worried about "bones breaking", you tell her:
  - A) while risk is real, it's low (1 to 2 more fractures per 1000 person years)
  - A) while risk is real, it's moderate (5 to 10 more fractures per 1000 person years)
  - A) The risk is real, (1 to 2 more fractures per 100 person years)

15

- retrospective cohort study of over 300,000 women
  - absolute risk difference was low (1 to 2 more fractures per 1000 person-years compared with non-use
  - **increased risk was not present two years after discontinuation**

16

8:15

- 30 yo G0 is being seen for a well women exam. At the time of the visit she tells you she wants to be pregnant. She reports not wanting to hurt the baby and therefore does not want to get a "flu" shot, because she is young and healthy. You advise her:
  - A) Pregnancy is a High Priority group
  - B) Everyone should get the flu shot
  - C) Herd Immunization will likely protect her

17

- The United States Advisory Committee on Immunization Practices (ACIP) recommends annual influenza vaccination for all individuals six months of age and older
- High Priority Groups
  - Pregnancy
  - Immunocompromised
  - Health Care Workers

18

- You world treat her with
  - A) inactivated influenza vaccine (IIVs)
  - B) recombinant influenza vaccine (RIV),
  - C) live attenuated influenza vaccine (LAIV)

19

- LAIV4 (Flumist) is a quadrivalent live-attenuated vaccine
  - Healthy, non-pregnant, 2-49
- Inactivated influenza vaccine (IIVs)
  - Safe in pregnancy
    - egg-based preparations of subvirion components derived from seed strains grown in eggs and inactivated cell-culture based vaccines
- RIV
  - >18 years old

20

8:20

- She reports that she can't take the Flu vaccine after all, since she has a allergy to Eggs. You should:
  - A) give her the vaccine
  - B) determine if the allergy was severe(Anaphylaixis) - if severe don't give vaccine, if not severe - give vaccine
  - C) do not give vaccine regardless of type of allergy

21

- Both ACIP and NACI **do not** consider egg allergy a contraindication to influenza vaccination
- Advisory Committee on Immunization Practices (ACIP)- part of CDC
- National Advisory Committee on Immunization (NACI)

Grohskopf LA, Alyanak E, Broder KR, Walter EB, Fry AM, Jernigan DB. Prevention and control of seasonal influenza with vaccines: recommendations of the Advisory Committee on Immunization Practices - United States, 2019-20 influenza season. *MMWR Recomm Rep.* 2019;68(3):1-21. doi: 10.15585/mmwr.rr6803a1. [Pubmed 31441903]

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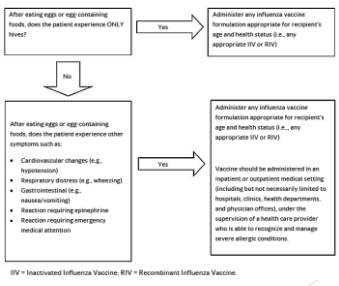
- Persons with a history of egg allergy may receive any licensed, recommended influenza vaccine that is otherwise appropriate for their age and health status.
- However…if allergy
  - angioedema or swelling, respiratory distress, lightheadedness, or recurrent emesis) or
  - who required epinephrine or another emergency medical intervention

23




24

- She is hesitant because her partner "googled" the manufacture, and the website states Egg allergy is a contraindication. You tell her based on the Vaccine Safety Datalink study, her rate of developing anaphylaxis from the Flu vaccine is
  - A) 1 in 10,000
  - B) 1 in 100,000
  - C) 1 in 1,000,000
  - D) 1 in 10,000,000

25

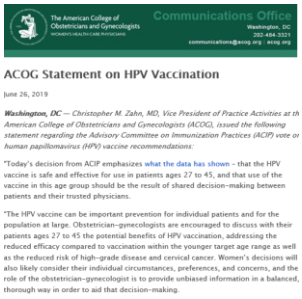
- 25.1 million doses of vaccines of various types given to children and adults over 3 years, only 33 people had anaphylaxis.
  - 8/30 = onset within 30 minutes
  - 21/30 = onset after 30 minutes
  - 1/30 = onset started following day

26

9:00

- Your 32 yo G2P2002 comes for annual exam. She reports that she married her high school sweetheart and has only been "intimate" with one partner. She is getting divorced and wants to prepare for "Dating in the real world". She wants the HPV vaccine. You should:
  - A) Not offer it
  - B) Offer it

27



The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

Communications Office
Washington, DC
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**ACOG Statement on HPV Vaccination**

June 26, 2019

***Washington, DC*** *— Christopher M. Zahn, MD, Vice President of Practice Activities at th American College of Obstetricians and Gynecologists (ACOG), issued the following statement regarding the Advisory Committee on Immunization Practices (ACIP) vote on human papillomavirus (HPV) vaccine recommendations:*

"Today's decision from ACIP emphasizes what the data has shown – that the HPV vaccine is safe and effective for use in patients ages 27 to 45, and that use of the vaccine in this age group should be the result of shared decision-making between patients and their trusted physicians.

"The HPV vaccine can be important prevention for individual patients and for the population at large. Obstetrician-gynecologists are encouraged to discuss with their patients ages 27 to 45 the potential benefits of HPV vaccination, addressing the reduced efficacy compared to vaccination within the younger target age range as well as the reduced risk of high-grade disease and cervical cancer. Women's decisions will also likely consider their individual circumstances, preferences, and concerns, and the role of the obstetrician-gynecologist is to provide unbiased information in a balanced, thorough way in order to aid that decision-making.

28

- Your patient is excited to get HPV vaccine. She wants to know "what's bugs areout there now". You tell her.
  - A) For past 4 years a dramatic increase in Chlamydia; Gonorrhea and Syphilis are relatively stable
  - B) For past 4 years a dramatic decrease in Syphillis; Gonorrhea and Chlamydia are relatively stable
  - C) For past 4 years a dramatic decrease in Gonorrhea; Chlamydia and Syphilis are relatively stable

29

- 2014-2018
  - 70% increase in incidence of syphilis
    - Increase in MSM
      - ½ of these were HIV positive
    - Increase in Women
    - Increase in congenital

30

- She starts to freak out when she hears the news. She wants to know….
  "Isn't there some medication or vaccine I can take that will protect me out there". You should:
  - A) Encourage safe sex practices and prescribe PrEP
  - B) Encourage safe sex practices

31

## PrEP

- PrEP = pre-exposure prophylaxis
- HIV Prep = TDF-FTC
  - tenofovir 300 mg disoproxil fumarate-emtricitabine 200 mg

32

## Eligibility for PrEP

- Negative HIV test
  - RNA test if symptoms or exposure in past 4 weeks
- Confirm that patient is at substantial, ongoing, high risk for acquiring HIV infection based upon detailed sexual and drug use history and results of STI testing
- Confirm that calculated estimated glomerular filtration rate is ≥60 mL/min/1.73 $m^2$

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## Other Tests for PrEP Patients

- Screen for HBV[¶] and HCV[Δ]
- Obtain urinalysis in patients with risk factors for renal disease[◊]
- Perform DXA scan in patients with, or at high risk for, osteoporosis[§]
- Perform pregnancy testing for patients who could become pregnant

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## Beginning PrEP medication regimen

- Prescribe 1 tablet of TDF-FTC daily
- In general, prescribe no more than a 90-day supply, renewable only after HIV testing confirms that patient remains HIV uninfected
- Provide counseling on condoms,[¥] risk reduction, and PrEP medication adherence

35

## 9:15

- 14 yo female was seen and Immunized by your partner for HPV, and received dose at January 1st 2019 and March 1st 2019. You recommend
  - A) No more HPV vaccines
  - B) Restarting the 2 does series
  - C) Restarting a 3 dose series
  - D) Give one dose now

36

## HPV Immunization schedule

- If < 15 years old
  - Two doses given, O and 6-12 months
- If < 15 years old, and second dose is <5 months after 1st
  - Give 3nd dose,
    - At >12 weeks from 2nd dose
    - At least >5months from 1st dose

37

## 9:30

- 18 year old (sister of your 9:15 patient) is also her for her annual eam. She started her vaccine in the past, but was lost to follow up… Shot 1 (Jan 1 2018) Shot 2 (march 1st 2018). You recommend
  - A) Restarting 2 dose protocol
  - B) Restarting 3 dose Protocol
  - C) giving 1 dose now

38

## HPV Immunization schedule

- >15 years of age
  - Give at 0, 2 months, and 6 months
    - Minimum intervals
    - 1st and 2nd = 4 weeks
    - 2nd and 3rd = 12 weeks
    - 1st and 3rd = 5 months

39

## HPV Immunization schedule

- The ACIP recommends
  - If the vaccination series is interrupted for any length of time, it can be resumed without restarting the series.

40

## 9:45

- 22 yo female presents for annual exam(oldest sister). She had a pap smear 2 years ago that demonstrated ASCUS, and subsequent HPV typing was positive for high risk type. You recommend
  - A) HPV vaccine 2 dose series
  - B) HPV Vaccine 3 dose series
  - C) No HPV vaccine to be given

41

## Preexisting HPV-associated disease

- HPV testing, Genital warts and abnormal cytology→ prior HPV infection
- Vaccine still recommended
  - Protection against other types of HPV

42

9:55

- As a concerned health care provider you are thinking about ways in which you could improve HPV vaccines in your patients. Your colleagues in your clinic feel the issue is "lack of opportunity", stating that can't vaccinate people who don't show up. After reviewing national data, you feel:
  - A) Lack of Opportunity is big obstacle. Efforts should be undertaken to offer the vaccine at schools and other locations where the high risk population are
  - B) Lack of Opportunity plays a small role in the low usage

43

84%

44

Interventions to Improve HPV rates

- Patient reminders
- Provider-focused (alerts or reminders)
- School-based vaccination programs
- Social marketing strategies

45

## 10:00

- 38 yo G3P3 presents for annual exam. She reports having a history of having a sexual interest/arousal disorder. She tried Flibanerin in the past, but was not happy with the daily dosing and dizziness. She wants to try something new. You recommend:
  - A) Counseling
  - B) Pelvic Physical Therapy
  - C) Bremelanotide

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- Bremelanotide (Vyleesi)
  - Melancortin receptor agonist – approved by FDA June 2019
  - Sub Q injection – 45 minutes before anticipated activity
  - However
    - 40% woman have nausea(mostly with 1st injection)
    - Pregnancy data not available – DO NOT use if pregnancy is possible
  - Contraindications
    - Uncontrolled Hypertension
    - Known Cardiovascular disease

47

## 10:15

- 23 yo G1P1 returns for contraceptive counseling. She is on the nuva ring and likes it, but states it's to "expensive". You recommend
  - A) switch to a LARC
  - B) switch to Anoveera
  - C) switch to Sprintec

48

## Good Rx Prices

- Nuva ring = $168.82 x 13 = $2184
- Nuva ring generic = $60.21 x 13= $782
- Annovera = $1981.20

49

## 10:30

- 17 yo G0 presents for watery discharge, and states she has been sexually active with "a few friends". You collect GC/swabs. Your wet prep is negative. You know that there is a high prevalence of Trichomonas locally. You Should:
  - A) Flagyl 500 mg po BID x 7 days
  - B) Test for Trichomonas with Nucleic Acid Amplification Test (NAAT)
  - C) Clindamycin 300 mg po BID x 7days
  - D) Reassure the patient that she does not have Trichomonas

50

- Wet prep: sensitivity = 51-65% Specificity= up to 100%
- Culture sensitivity = 75-96% Specificity= up to 100%
- OSOM Rapid Test sensitivity = 82-95% Specificity= 97-100%
- AFFIRM VPIII sensitivity = 63% Specificity= 99.9%
- APTIMA (NAAT) sensitivity = 95-100% Specificity= 95-100 %

- Sensitivity = A highly Sensitive test will have few false **negative** results
- Specificity = A highly Specificity test will have few false **positive** results

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10:40

- 44 yo G4P2022 presents to your office due to a vaginal odor, and post-coital bleeding. She tells you that she hasn't been to a doctors office for over 10 years, smokes tobacco, and works as a commercial sex worker. What would be in your initial work up
  - A) Wet Prep
  - B) Pap Smear
  - C) HPV typing
  - D) STI testing

52

- Your pap smear returns with adenocarcinoma and high risk HPV. Wet prep and STI were negative. You refer her to GYN Oncology. Which of the following was the patient's greatest risk factor for malignancy
  - A) Tobacco abuse
  - B) Multiple Sexual partners
  - C) Obesity
  - D) Lack of cervical Cancer screening in 10 years

53

- Lack of cervical cancer screening is the largest risk factor for cervical Cancer
  - This just emphasizes how good our screening tests are at picking up "pre-cancer"
  - Pap Smear is a great Screening test

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10:45

- 27 yo G3P2012 presents for contraception counseling. She is 5 months post-partum, sexually active, breastfeeds (75% of feeds) and is amenorrheic. She is interested in an Progesterone IUD and has a negative UPT in the office.
  - A) Proceed with placing IUD at the visit
  - B) Provide back-up contraception until health care provider can be reasonably certain that she is not pregnant

55

- A health care provider can be reasonably certain that a woman is not pregnant if she has no symptoms or signs of pregnancy and meets any one of the following criteria:
  - is ≤7 days after the start of normal menses
  - has not had sexual intercourse since the start of last normal menses.
  - has been correctly and consistently using a reliable method of contraception
  - is ≤7 days after spontaneous or induced abortion
  - is within 4 weeks postpartum
  - is fully or nearly fully breastfeeding (exclusively breastfeeding or the vast majority [≥85%] of feeds are breastfeeds), amenorrheic, and <6 months postpartum
- +/- use of Upt if criteria is meet via clinical judgement

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11:00

- 19 yo G1P1001 presents 3 months after a NSVD and post-placental mirena insertion. She reports unscheduled vaginal bleeding. On exam you note a 6wk sized uterus, with normal cervix and no strings visible. You order
  - A) Urine HCG
  - B) Urine HCG and Pelvic US
  - C) Urine HCG and KUB
  - D) Urine HCG and Pelvic US and KUB

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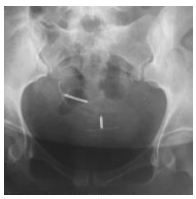
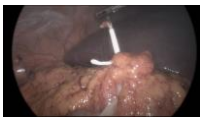
- Urine HCG = Rule out Pregnancy
- Pelvic US = check for location of IUD
- KUB = if IUD not on Ultrasound, to make sure not in pelvis
  - Just because IUD not on ultrasound, does not mean it's not in the pelvis
  - Just because IUD is seen on the KUB, does not mean that the IUD is in the uterus
  - Back up contraception until you know for sure

58

## Oops





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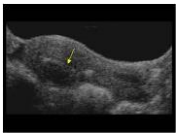
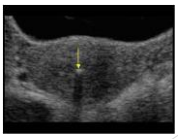
## Ultrasound of Intrauterine IUD

Longitudinal



Transverse



60

- Her HCG was negative and Ultrasound shows in placed correctly in the uterus. You discuss options for management. She is not interested and wants it removed. You should:
  - A) Refer to Gynecologist for Operative Hysteroscopy
  - B) Place endocerival brush to see if strings are at os
  - C) Use IUD hook/bozeman and remove in the office
  - D) Place paracervial block and remove in the office with hook

61

- Reasonable to try ambulatory clinic removal prior to hysteroscopy.
  - Paracervial block helps a lot
  - Real time ultrasound useful
    - Helps you "feel" it with hook
    - Once you feel "plow and twist"
  - Can do cervical ripening if needed
    - Shown to facilitate dilation, but unknown it's effect on patient pain

62

IUD Hook

63

## Paracervical Block

- 10-20 ml (0.5% - 1 %) Lidocaine
  - Study in 1st-trimester abortion showed when 20 ml used, equally efficacious
- 1-2 ml at site of tenaculum (if using)
- Slight traction of tenaculum to move cervix and define transition of smooth cervical epithelium to vaginal tissue (Vaginal tissue is more elastic and appears folded)
- In the reflection – inject 2-5 ml at 4:00 and 8:00
  - Slowly to reduce pain
- Inject to a depth of 1-1.5 inches
  - Deeper injections are more effective then superficial

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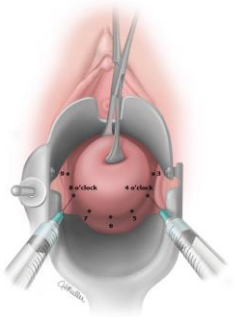

65

## 11:30

- 29 yo G0 presents for an annual exam. She is asymptomatic and she had a benign exam. Her pap smear returns with "Normal, but with evidence of clue cells suggestive of BV". You should:
  - A) Flagyl 500 mg po BID
  - B) Have her return to clinic for wet prep- treat if positive
  - C) Clindamycin 300 mg po BID x 7 days
  - D) Do nothing

66

- The sensitivity and Specificity of liquid based cytology for BV is unknown
- If pap suggests BV
  - A) symptomatic patient – screen for BV in normal fashion
  - B) asymptomatic patient - no treatment indicated

67

## Amsel Criteria

- At least 3 present
  - ●Homogeneous, thin, grayish-white discharge that smoothly coats the vaginal walls
  - ●Vaginal pH >4.5
  - ●Positive whiff-amine test, defined as the presence of a fishy odor when a drop of 10 percent potassium hydroxide (KOH) is added to a sample of vaginal discharge
  - ●Clue cells on saline wet mount. For a positive result, at least 20 percent of the epithelial cells on wet mount should be clue cells.

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## 11:40

- 19 yo G0 presents 6 months after IUD insertion. She presents for discharge and pelvic pain. She is stable. You make the diagnosis of PID based on CMT. You should
  - A) Pull IUD and Ceftriaxone IM and doxycycline po
  - B) Pull IUD and Ceftriaxone IM and doxycycline po and flagyl po
  - C) Leave IUD and Ceftriaxone IM and doxycycline po
  - D) Leave IUD and Ceftriaxone IM and doxycycline po and flagyl po

69

## (CDC) US Selected Practice Recommendations for Contraceptive Use

- Leave IUD in place
- Exceptions
  - Known Actinomyces
  - Woman who fail to respond to inpatient ABX

70

## 11:45

What is the best treatment option for unscheduled/heavy bleeding on progesterone IUD?

A) NSAIDS (Naproxen 500 mg po BID x 5 days)
B) Tranexamic Acid 650 mg po TID until bleeding stops (<4 days)
C) Mifepristone 100 mg po once a month
D) Observation

71

- Proven to work for Progesterone IUD

A) NSAIDS (Naproxen 500 mg po BID x 5 days)
B) Tranexamic Acid 650 mg po TID until bleeding stops (<4 days)
C) Mifepristone 100 mg po once a month

72

- Unproven treatment for Bleeding with Progesterone IUD
  - Mefenamic (no improvement)
  - Estrogen (increased bleeding)
  - Ulipristal (increased bleeding)
- Doxycline
  - Studied with use of POP, but not progesterone IUD

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## Contraindications of Tranexamic acid

- active thromboembolic disease (eg, cerebral thrombosis, DVT, or PE);
- history of thrombosis or thromboembolism, including retinal vein or retinal artery occlusion
- intrinsic risk of thrombosis or thromboembolism (eg, hypercoagulopathy, thrombogenic cardiac rhythm disease, thrombogenic valvular disease)
- concurrent use of combination hormonal contraception

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## Heavy Bleeding in Cooper IUD

- NSAID (Motrin 400 mg po QID x 7 days)
- Antifrinolytic (Tranexamic Acid 1300 mg po TID x 5 days)
- Antidiruetic (Desmopressin 300 mcg intranasally daily for 5 days.

75

June 2016


76

July 2017


77

January 2020


78

(2014)THANK YOU
(SNOW DAY in Columbia)

79

Thank You

80