

Family Planning and HIV Services

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Why Discuss Family Planning and HIV Care?

Worldwide

- **50% pregnancies unintended**
(133 million) WHO (unprotected sex)
- **340 million curable STIs occur each year** —WHO (unprotected sex)
- **5.4 million people acquire HIV via heterosexual transmission annually**
(2.3 million women)—UNAIDS (unprotected sex)

What else?

- If a woman wants to get pregnant, She will
- If a woman isn't actively trying to NOT get pregnant, She will ----get pregnant
- If she can get pregnant, she can get or spread HIV

Why integrate FP and HIV Care?

- The risk factors are the same
 - Sex
 - Substance use
 - Unplanned sex
 - Unprotected sex
 - Risky sex
- The goals are the same
 - Optimal health
 - Adherence to care
 - No treatment interruptions

Why integrate FP into HIV?

- Most women first seek FP care as they seek pregnancy testing or pregnancy termination counseling
 - Come after unprotected sex
 - risk for becoming pregnant
 - At risk for HIV
 - Already pregnant
 - HIV Medication exposures
 - May not have optimal health
- More medication initiation and change occurs in HIV care
 - Consider meds and pregnancy, meds and contraception
- HIV services have more access to patients before they become pregnant
- Current recommendations for HIV Rx impact FP care

Why is HIV care suited to include FP care?

- Counseling and education is part of care
- Education to correct misinformation
- Primary prevention and secondary prevention (prevention with positives) efforts provide information that can be used with FP
 - Sexual history over time
 - Sexual education
 - Safe sex
- Patients seen more regularly in HIV care
- HIV and FP medication interactions

Effective Family Planning and HIV Services

- The skills are the same
 - Listens to patient
 - Avoids doing all of the talking
 - Uses props, diagrams, methods, and fact sheets
 - Observes non verbal cues
 - Provides opportunity for patient to summarize and report back understanding
 - Confidentiality

What do we need to know to integrate Family Planning and HIV concerns

- Contraception safety and efficacy
- Medication interactions
- Teratogenicity
- Impact on HIV
- What impacts risk
- What other services should be offered

Contraception Safety

- Depoprovera (IM)
 - Decreased ovarian estrogen production
- Bone demineralization
 - 1 yr - decr. 1.5 %
 - 2yr - decr 3.1 %
 - 3yr - lumbar spine
 - 15 yr osteopenia
 - Reversible

Why do we care about Depo/ HIV/Bone demineralization?

- HIV and/ or HIV treatment can result in bone demineralization
 - Adolescent Depo use?
 - Long term use in HIV + women

Evaluation of Bone Mineral Density Recovery Following Discontinuation of DMPA-IM Contraception

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**Results: Long-Term Use in Adult Women
(N=538)**

- **4.6 Years on treatment**
 - Decreases in BMD occurred in DMPA users
- **1.8 Years post-treatment**
 - Recovery of BMD took place in DMPA users
- **No HIV data**

Kaunitz AM et al. Abstract. ACOG; 2005; San Francisco, Calif.

Menopause

- **No difference in onset of menopause with HIV** Fantry AIDS Pt Care & STDs 2005
- **Other considerations**
 - Bone loss with age
 - Bone loss with HIV/ HAART
 - Bone loss with prolonged Depo use
 - reversible
 - ? Utility of Calcium ?

Contraception and HIV treatment

- **ARV and pregnancy**
- **ARV and hormonal contraception**

HIV Treatment and Pregnancy

- Organogenesis complete at 12w gestation
- Current treatment regimens contain medications not recommended for use in pregnancy
 - EFV, APV, ATV, TPV, ABC, Nelfinavir
 - Efavirenz (Sustiva, EFV) is teratogenic
 - Abacavir contains propylene glycol
 - Minimal data on ATV, TPV
- d4t + ddl markedly increased risk lactic acidosis in pregnancy
- Most women don't realize they are pregnant until (at least) 6-8 weeks gestation

USPHS 2008

Hormones, HIV, and ARV

- Sex Steroids and Immunity
 - Sex steroids have regulatory function in the immune response
 - Sexual dimorphism in the response
 - Estrogen inhibits cellular immunity
 - Estrogen enhances humoral immunity
 - Progesterone enhances T suppressor cell activity

- Grossman, Endocrine Review 1984
- Maor, Acta Endocrinol 1974
- Siiteri, Ann NY Acad Sci. 1977

HAART and Hormonal Contraception

Chu A J Epi 2005

- CD4 and VL response
 - Initiation of HAART
 - Combined hormonal contraception and progestin only
- Contraception has no impact on CD4 or viral load

* No data on impact of HAART on hormonal contraception efficacy

Contraceptive/Antiretroviral Drug Interaction		
Antiretroviral	↑ Estradiol	↑Norethindrone
Indinavir (Crixivan)	24%	26%
Amprenavir & Fosamprenavir	↓Amprenavir 20%	↓Amprenavir 20%
Atazanavir	48%	110%
Delavirdine	*	
EFV , ETV	37%	
RTV		↑ USPHS 2008

Contraceptive/Antiretroviral Drug Interactions		
Antiretroviral	↓ Estradiol	↓Norethindrone
Nelfinavir	47%	18%
Lopinavir	42%	
Nevirapine	20%	
Kaletra (Lop/RTV)	42%	
DRV/RTV	50%	
TPV/RTV	50%	

- What do FP Providers Need to Know?**
- What antiretroviral is used
 - No hormonal contraception with Amprenavir, Fosamprenavir
 - Alternate/additional contraception ?
 - Nelfinavir, Ritonavir, Lopinavir, Nevirapine, Kaletra, TPV/RTV
 - No Efavirenz (Sustiva), Abacavir if no effective contraception
 - Lowest effective hormonal dose with Atazanavir
 - Limited data on Kaletra (Lop/RTV), Atazanavir, Tipranavir in pregnancy

**Lipid disorders
and hormonal contraception**

- HIV treatment with protease inhibitors can cause lipid abnormalities
 - Estrogen
 - Decrease HDL and increase removal of LDL
 - Increases triglycerides
 - Progesterone
 - (some) decrease HDL and increase LDL
- Net recommendation
 - Women with controlled dyslipidemia and no other risks can use CHCs with < 35ug of estrogen
 - Women with uncontrolled LDL, or multiple additional risk factors should use other methods

What does a provider need to know?

- Lipid profile of patients on protease inhibitors
- Other cardiac risk factors

IUD and HIV

Sinei Lancet 1998

- 615 women with new IUDs
 - Complications in 37

	HIV +	HIV-
Any infectious	10 (6.9%)	27 (5.7%)
PID	2 (1.4%)	1(0.2%)
Overall complication	OR 0.8	
Infectious complications	OR 1.0	

Other FP services issues that intersect with HIV

Vaginitis and HIV

- **BV**
 - National rate 29% (Allsworth NHNS OB/Gyn 2007)
 - Rate HIV + 42.8 % / HIV at risk 47% (Watts JID 2006)
 - Upper and lower genital tract HIV shedding
 - Abnormal flora- OR 5.2
 - Decreased lactobacilli- OR 15.8 (p = .01)
 - Endometritis OR 15.8
- **Candida** Spinillo AJOG 2005
 - Cervicovaginal HIV shedding — OR 2.03

Bacterial Vaginosis

- Increased inflammatory cells (CD4)
- Change to more basic vaginal pH (Acidic is protective)
- Increase risk for infection/infectiousness?

- Increase HIV infectious variant
 - Increase HIV infectivity

Lactobacillus vs BV

- Lactobacillus decreases risk for HIV infection
 - Decreased vaginal pH protective26 CVL Hitti, CROI 2008
- Bacterial Vaginosis
 - Olinger AIDS 13:1905 1999
 - specimens from 17 women
 - HIV inducing factor (HIF)

	HIF +
pH > 4.5	p = .006
BV	p = .007
M. Hominus	p = .002
G. Vaginalis	p = .04

Why do we need to know this?

- BV screening as part of care
- BV treatment (after Dx) as standard?
- Watch out for coming attractions
 - Lactobacillus as microbicides ???

HPV and HIV

Clifford AIDS 2006, Jamieson AJOG 2006

- Multiple HPV types
 - 16-(4.5%), 18 (3.1%), 52 (2.8%), 31 (2.0%)

Prevalence ratio

- > Risk for HPV 2.3
- High level expression 1.3-1.6
- Multiple types 1.9

HPV vaccine

- Vaccine effective for 16/18, 6/11
- Most effective immune response in HPV uninfected girls age 10-14
- ? What about the other serotypes?
- HPV testing for HIV positive women/girls?
 - Will not impact management!
- No HIV specific efficacy information

Planning a family

- Getting pregnant
 - Planning a pregnancy
 - Optimal HIV health to decrease perinatal HIV transmission
 - Fertility issues

Pregnancy Rates and Predictors of Conception

Massad et al. WIHS AIDS 18:281 2004

- Self reported pregnancy frequency and outcome 10/94-2/2002
- Pregnancy rates in HIV + vs. Women at risk for HIV

1407 HIV+	409 HIV- at risk
7.9/100 person y	15.2/ 100 person y
OR 0.53 (0.44-0.65)	
- Conception correlates

HIV +	OR
Younger age	1.2
Prior AB	1.79
Lower VL	1.3
Unmarried	1.59
ARV	0.34
- Spx abortion less likely after HAART
- No differences preg outcome
 - Livebirth, stillbirth, abortion, miscarriage, ectopic

? Menopause vs. HIV Amenorrhea
Cetjin et al. JAIDS 2005

- **Menopause = 12 mos amenorrhea**
 - High FSH
- **Studied 136 women ages 47-50**
 - HIV + and HIV –
 - OR 3.16 (p=.015) Amenorrhea without increased FSH in HIV +

HIV prevention

- **Abstinence**
 - **Condoms**
 - **Microbicides**
 - **HIV vaccines**
- } Many miles to go

Recognizing Acute HIV

- **Women seek care that is familiar**
- **FP service may be first point of care**
- **This is a missed opportunity!**

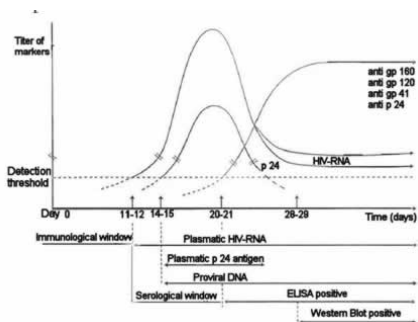
Acute HIV infection

- Occurs within first 2 weeks of HIV exposure
- Elevated viral load despite negative HIV antibody test
 - HIV antibody takes 21 days to 6 weeks to appear
 - Viral load can be > 100,000 copies/ml
- Patient is highly infectious
 - Perinatal transmission
 - Partner transmission

Acute HIV Infection
% of patients with symptoms

Symptom	%	Symptom	%
Fever	> 80-90	Night sweats	50
Fatigue	70-90	Aseptic meningitis	24
Rash	> 40-80	Oral ulcers	10-20
Fever	32-70	Genital ulcers	5-15
Lymphadenopathy	> 40-70	Thrombocytopenia	45
Pharyngitis	50-70	Leukopenia	40
Myalgia/arthralgia	> 50-70	Elevated LFTs	21

Diagnosing Acute HIV infection



Acute HIV

- **Negative HIV antibody test**
 - Rapid Test, ELISA, Western Blot
- **Need specific viral testing**
 - Viral load (Very High)
 - P-24 antigen
 - B-DNA test
- **Need input from HIV specialist/ specialty services**

How to integrate FP into HIV care

- Ask about pregnancy desire and plans
- Work with women and their partners to plan getting pregnant
- Become informed about FP methods
- Discuss and plan for HIV safety issues with pregnancy
 - ARV
 - MTCT
 - Discordant couples
 - Concordant couples
- At each medication initiation and change, have the above discussion
- Review HIV medication interactions
- Establish and maintain a working relationship with an HIV care provider
