AETC AIDS Education & Training Center Program
Southeast Regional Conference 2023

Women's Health and HIV

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Disclosures

- *None*

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By the end of this session, each participant will be able to:

1. Describe critical health screenings specific to women with HIV
2. Discuss reproductive considerations in women with HIV
3. Recognize appropriate perinatal care for people with HIV

QUESTION

What percent of your patient population identifies as cisgender female?

HIV AND WOMEN'S HEALTH

HIV may cause some **health problems** that are **unique to women**.

Your **doctor** can help you navigate them.

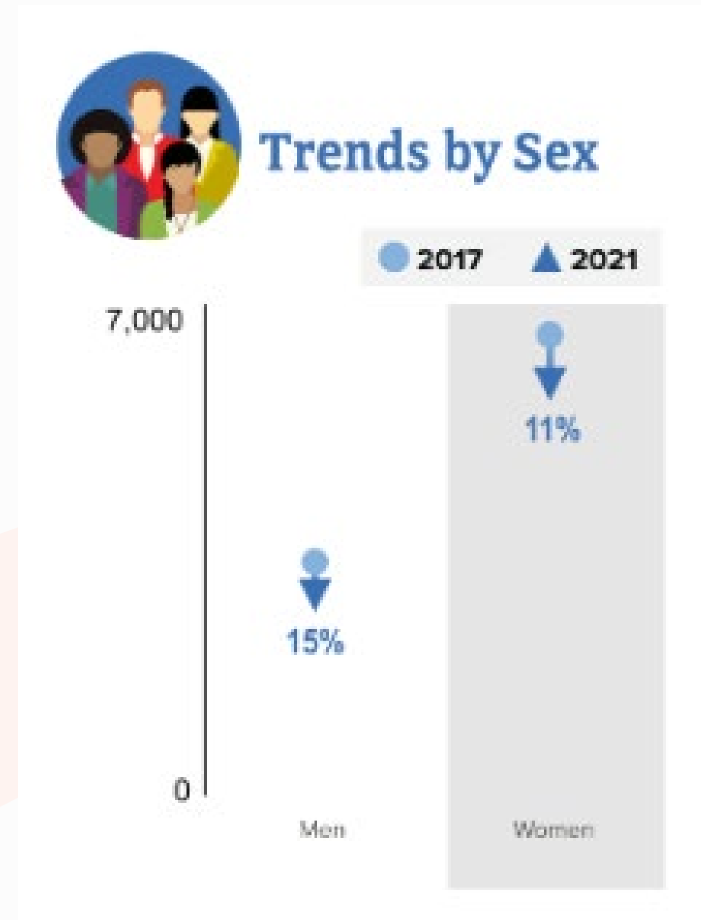
Epidemiology of HIV in Women

- Globally, about 50% of the population of people with HIV are women
- In the US, women account for about 20% of the population living with HIV
  - In 2019, 84% of new HIV diagnoses in women were attributed to heterosexual sex, 16% to injection drug use

https://www.cdc.gov/hiv/group/gender/women/diagnoses.html

Trends in New HIV Diagnoses in Women

Between 2017 and 2021, there has been an 11% decline in new HIV diagnoses among US women



CDC. Diagnoses of HIV infection in the United States and dependent areas, 2021. *HIV Surveillance Report* 2023;34.

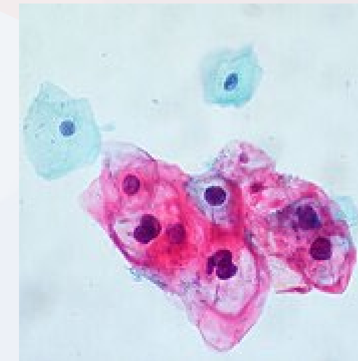
HEALTH SCREENINGS FOR WOMEN WITH HIV

Case

- Mrs. T presents for follow-up of HIV. She has an undetectable viral load on bictegravir/TAF/FTC. She just turned 65 and she is so pleased because her PCP told her she doesn't have to have any more PAP smears due to her age.
- What do you tell her?

Cervical Cancer Screening

- Cervical cancer screening is an essential component of care for all persons with HIV who have cervix
- Abnormal cervical cytology is nearly 11 times more common among women with HIV than the general female population
  - Human papillomavirus (HPV) infection
  - Immune dysfunction



https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-opportunistic-infections/human-0?view=full

Cervical Cancer Screening

- **Age of Onset for Screening**: 21 years of age
- **Duration of Cervical Cancer Screening**: Cervical cancer screening should continue throughout the life of people with HIV who have a cervix, as opposed to the recommendation to stop after age 65 in the general population

https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-opportunistic-infections/human-0?view=full

Screening in < 30 years old

- Annual Pap testing is recommended in people with HIV younger than age 30 who have a cervix
- If 3 consecutive annual screens are normal, Pap tests can be performed every 3 years
- Co-testing with HPV is not recommended for routine screening in this age group due to high HPV prevalence
- HPV testing can be done reflexively on abnormal Pap results to direct further evaluation

https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-opportunistic-infections/human-0?view=full

Screening in ≥ 30 years old

- For those 30 or older, one of the following methods may be used:
  1. Cervical cancer screening by Pap testing alone OR
  2. Pap testing plus simultaneous HPV co-testing

- If Pap testing alone, should be performed at baseline and every 12 months; if the results of 3 consecutive Pap tests are normal, then follow-up testing can occur every 3 years

- If Pap and HPV co-testing are performed and both are negative, follow-up screening can be performed in 3 years

https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-opportunistic-infections/human-0?view=full

Management of Co-testing in ≥ 30 yo

If the Pap test is normal but HPV co-testing is positive, there are two options:

- Option 1
  - Follow up test with Pap test and HPV co-testing in 1 year
  - If the 1-year follow-up Pap test is abnormal, or HPV co-testing is positive, referral for colposcopy is recommended
- Option 2
  - Perform HPV genotyping
  - If the HPV genotyping is positive for HPV-16 or HPV-18, colposcopy is recommended
  - If the HPV genotyping is negative for HPV-16 and HPV-18, repeat the HPV co-testing in 1 year; if the follow-up HPV test is positive or the follow-up Pap test is abnormal, colposcopy is recommended

https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-opportunistic-infections/human-0?view=full

Management of Abnormal PAP Smear

- Any Pap test result of low-grade squamous intraepithelial lesion (LSIL) or worse (including ASC-H, AGC, and HSIL)—refer for colposcopy regardless of HPV status
- For atypical squamous cells of undetermined significance (ASC-US), HPV co-testing should be performed in women of all ages with HIV
  - If the HPV test is positive, the woman should be referred for colposcopy
  - If the HPV test is negative (or was not done) may be rescreened with Pap smear and reflex HPV test in 6 to 12 months
    - If the subsequent result is ASC-US or worse, or if the HPV test is positive, refer for colposcopy

https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-opportunistic-infections/human-0?view=full

HPV 9-Valent Vaccine for Adult with HIV

- For people with HIV aged 18-26 who have not been vaccinated previously, administer three doses of the recombinant HPV 9-valent vaccine at 0, 1 to 2, and 6 months

- Catch up vaccination is not recommended for all adults over age 26
  - Shared clinical decision-making is recommended for some who were not adequately vaccinated previously
  - Ideally vaccination should occur prior to potential exposure to HPV through sexual contact

https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-opportunistic-infections/immunizations

Cancer Screening

- Screening for breast, colon and lung cancer are the same as for the general population
- Current United States Preventive Services Task Force (USPSTF) guidelines recommend biennial screening mammography for women ages 40-74
- There is insufficient evidence to recommend routine breast cancer screening in women aged 75 or older

https://www.uspreventiveservicestaskforce.org/uspstf/draft-update-summary/breast-cancer-screening-adults

Case

- Ms. D is 53 years old and is transferring her HIV care to your clinic. She was originally diagnosed in 2000, has been on various antiretroviral therapies (ART) since then and has never had to change medications due to virologic failure. She is currently well-controlled on bictegravir/FTC/TAF. She is post-menopausal and has been seeing TV ads for medications for osteoporosis. She notes that her mother had this and wonders if she could too.
- What's your next step?

Osteopenia and Osteoporosis in HIV

- As the population of individuals living with HIV ages, osteopenia and osteoporosis are becoming more common, leading to increased fracture risk

- Risk factors for increased bone loss include:
  - Physical inactivity
  - Suboptimal intake of calcium and vitamin D
  - Cigarette smoking
  - Alcohol and opiate use
  - Hepatitis C coinfection
  - Low BMI
  - Early menopause

Bone Mineral Density (BMD)

- Bone loss occurs faster in women with HIV than in those who do not have HIV
- Limited studies suggest that women experience more bone density loss after initiation of antiretroviral therapy (ART) compared with men
- This is one of the reasons that TAF is preferred over TDF

Screening for Bone Mineral Density

- Bone mineral density (BMD) screening with dual X-ray absorptiometry (DXA) scan is recommended in the United States for all postmenopausal females with HIV
- If osteopenia or osteoporosis is identified, measure 25-OH-Vitamin D levels and if low, start supplementation with calcium and vitamin D (goal>30)
- Encourage lifestyle changes: smoking cessation, increase weight-bearing exercise

Thompson MA et.al CID. 2021;73 (11) e3572-605

FAMILY PLANNING OPTIONS FOR WOMEN WITH HIV

Case

- Ms. J is 23 year-old woman presenting for routine HIV follow-up. She is doing well with Bictegravir/TAF/FTC one pill once a day, and has an undetectable viral load. She is in a new relationship and is wondering what birth control options are available to her. She has heard that only “certain types” of birth control will work with her antiretrovirals.
- Is that true or false?

Contraceptive Options and HIV

- Family planning should be incorporated into all health care visits
- Women with HIV can use all forms of birth control
  - Choice may be determined by numerous factors including: desire to conceive, ability to disclose status, other medical conditions
- Although HIV transmission does not occur if a person with HIV is ART and consistently virally suppressed, a form of barrier contraception is always recommended because of the risk of other sexually transmitted infection transmission

HIV and Birth Control

Women with HIV can use all forms of birth control to prevent pregnancy.

Barrier Methods block sperm from reaching an egg.
CONDOM
INTERNAL CONDOM
DIAPHRAGM/ CERVICAL CAP
CONTRACEPTIVE SPONGE

Short-Acting Hormonal Methods interfere with ovulation, fertilization, and/or implantation of a fertilized egg.
BIRTH CONTROL PILLS
VAGINAL RING
PROGESTIN SHOTS
PATCH

Long-Acting Reversible Contraceptives interfere with ovulation, fertilization, and/or implantation of a fertilized egg.
IMPLANTABLE ROD
INTRAUTERINE DEVICE (IUD)

Emergency Contraception can be used after unprotected sex or when another form of birth control fails.
EMERGENCY CONTRACEPTIVE PILLS
COPPER IUD

Some HIV medicines may make hormonal birth control less effective. Some women may need to use an additional form of birth control to prevent pregnancy.

The Bottom Line

Women with HIV can safely use any form of birth control to prevent pregnancy. However, condoms are the only form of birth control that can prevent HIV transmission and protect against other STDs such as gonorrhea or syphilis.

Talk to your health care provider about the form of birth control that's best for you.

For more information about HIV, visit HIVinfo.NIH.gov

For more information about birth control, visit fda.gov and womenshealth.gov

Hormonal Contraceptives

- Hormonal contraceptives (oral, injectable, implants) are effective reversible methods for the prevention of pregnancy
- Efficacy of hormonal contraception can be affected by drug interactions between progesterone/estrogen and certain antiretrovirals including:
  - Non-nucleoside reverse transcriptase inhibitors (specifically efavirenz)
  - Protease inhibitors
  - Boosting agents like ritonavir, cobicistat

Interactions between ART and Hormonal Contraception

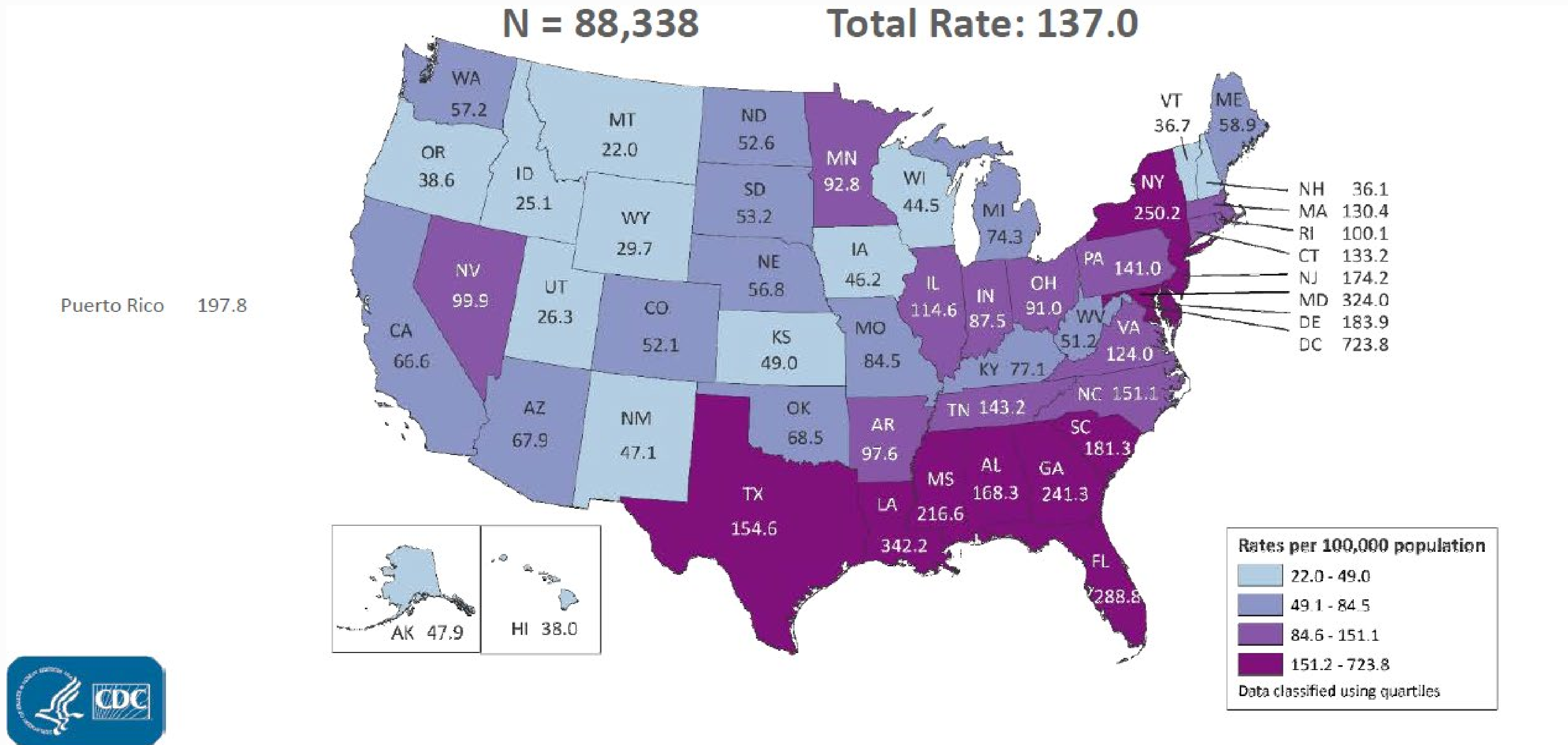
- Drug interactions between ART and hormonal contraceptives are detailed in Table 3 of the Perinatal HIV guidelines

	Dolutegravir (DTG)
Dosing Recommendation/Clinical Comment for COC/P/R, POPs, DMPA[a], Etonogestrel Implants	No additional contraceptive protection is needed.
Effect on Contraceptive Drug Levels and Contraceptive's Effects on ART and HIV	COC • No significant effect on etonogestrel implants[69] • No significant effect on norgestimate or EE • No change in DTG AUC[47]
Clinical Studies	N/A
Justification/Evidence for Recommendation	For COCs, no change in EE or progestin. No clinical data No data on POPs

https://clinicalinfo.hiv.gov/en/guidelines/perinatal

CARE OF PREGNANT PEOPLE WITH HIV

Rates of Females Aged 15-44 Years Living with Diagnosed HIV Infection by Area of Residence, 2017



CDC.gov. Available at https://www.cdc.gov/hiv/pdf/library/slidesets/cdc-hiv-surveillance-pediatric-2018.pdf. Accessed 3.7.20.

Case

- Ms. B is 38 years-old, on daily dolutegravir/lamivudine with undetectable viral load. She would like to start a family with her partner, who does not have HIV. She is would like to know how best to conceive to prevent transmission to partner and then steps to have a healthy pregnancy and baby.
- How do you counsel her?

Preconception Counseling and Care

- Discuss reproductive desires of all persons with HIV of childbearing potential on an ongoing basis throughout the course of their care (AIII)
- Discuss contraceptive options & safer sex practices (AI)
- Encourage elimination of alcohol, tobacco and other drugs of abuse (AII) or counsel on how to manage health risks
  - Methadone or buprenorphine
  - Syringe services programs

https://clinicalinfo.hiv.gov/en/guidelines/perinatal/prepregnancy-counseling-childbearing-age-overview?view=full

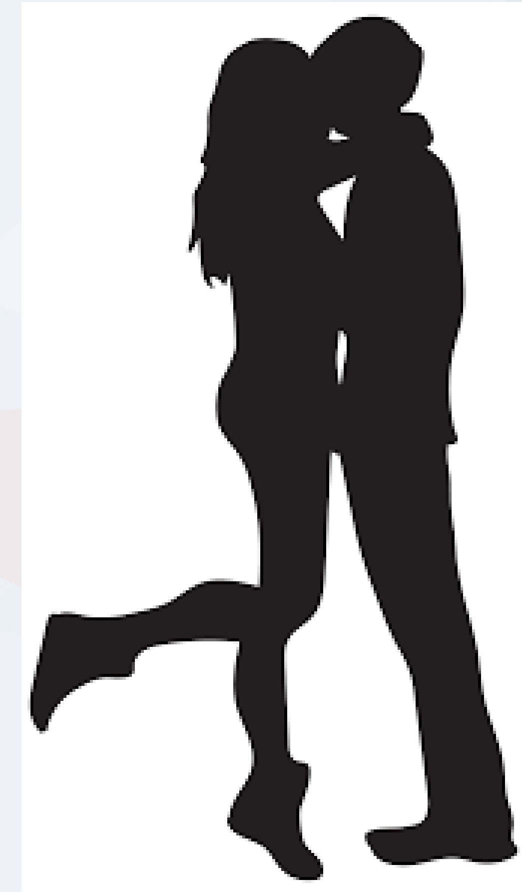
Preconception Counseling and Care

- Persons with HIV should attain maximal viral suppression before attempting conception:
  - for their own health
  - to prevent sexual transmission of HIV to partners without HIV (AI),
  - to minimize the risk of *in utero* transmission to the infant (AI)

https://clinicalinfo.hiv.gov/en/guidelines/perinatal/prepregnancy-counseling-childbearing-age-overview?view=full

Pre-Conception Considerations When One or Both Partners Live with HIV

- Both partners should be screened and treated for genital tract infections before attempting conception (AII)
  - Partners with HIV should attain maximal virologic suppression before trying to conceive (i.e. 2 recorded undetectable viral loads at least 3 months apart [AII])



https://clinicalinfo.hiv.gov/en/guidelines/perinatal/prepregnancy-counseling-childbearing-age-reproductive-options-partners?view=full

Pre-Conception Considerations

- For couples with differing HIV statuses, sexual intercourse without a condoms allows for conception with effectively no risk of sexual HIV transmission to the partner without HIV when the partner is on ART and has achieved sustained viral suppression (BII)

https://clinicalinfo.hiv.gov/en/guidelines/perinatal/prepregnancy-counseling-childbearing-age-reproductive-options-partners?view=full

Pre-Conception Considerations

- Administration of antiretroviral pre-exposure prophylaxis (PrEP) to the partner without HIV reduces the risk of sexual acquisition of HIV (AI)
- When partners with different HIV statuses attempt conception, the partner without HIV can choose to take PrEP even if the partner with HIV has achieved viral suppression (CIII)

https://clinicalinfo.hiv.gov/en/guidelines/perinatal/prepregnancy-counseling-childbearing-age-reproductive-options-partners?view=full

Preconception Counseling and Care

- When fully suppressive ART is started before pregnancy and undetectable viral load is maintained throughout pregnancy and at delivery, there is no risk of HIV transmission to the infant

https://clinicalinfo.hiv.gov/en/guidelines/perinatal/prepregnancy-counseling-childbearing-age-overview?view=full

French Perinatal Cohort: Update

- 14630 HIV-infected mother-infant pairs
- 2000 to 2017
- Pregnant people received ART, delivered live-born children with determined HIV status, and did not breastfeed

Sibiude et al. CID 2023:76 (1 February)

French Perinatal Cohort: Update

- 5482 children born to mothers on ART prior to conception, ART throughout pregnancy, HIV viral load < 50 copies/mL at delivery, no breastfeeding
  - No HIV transmission
- Regardless of viral load at birth, risk of transmission varied based on when ART was started
  - ART prior to conception 0.14%
  - ART started in first trimester 0.52%
  - ART started in second trimester 0.75%
  - ART started in third trimester 1.67%

Sibidue et al. CID 2023:76(1February)

Preferred ART For Those Trying To Conceive

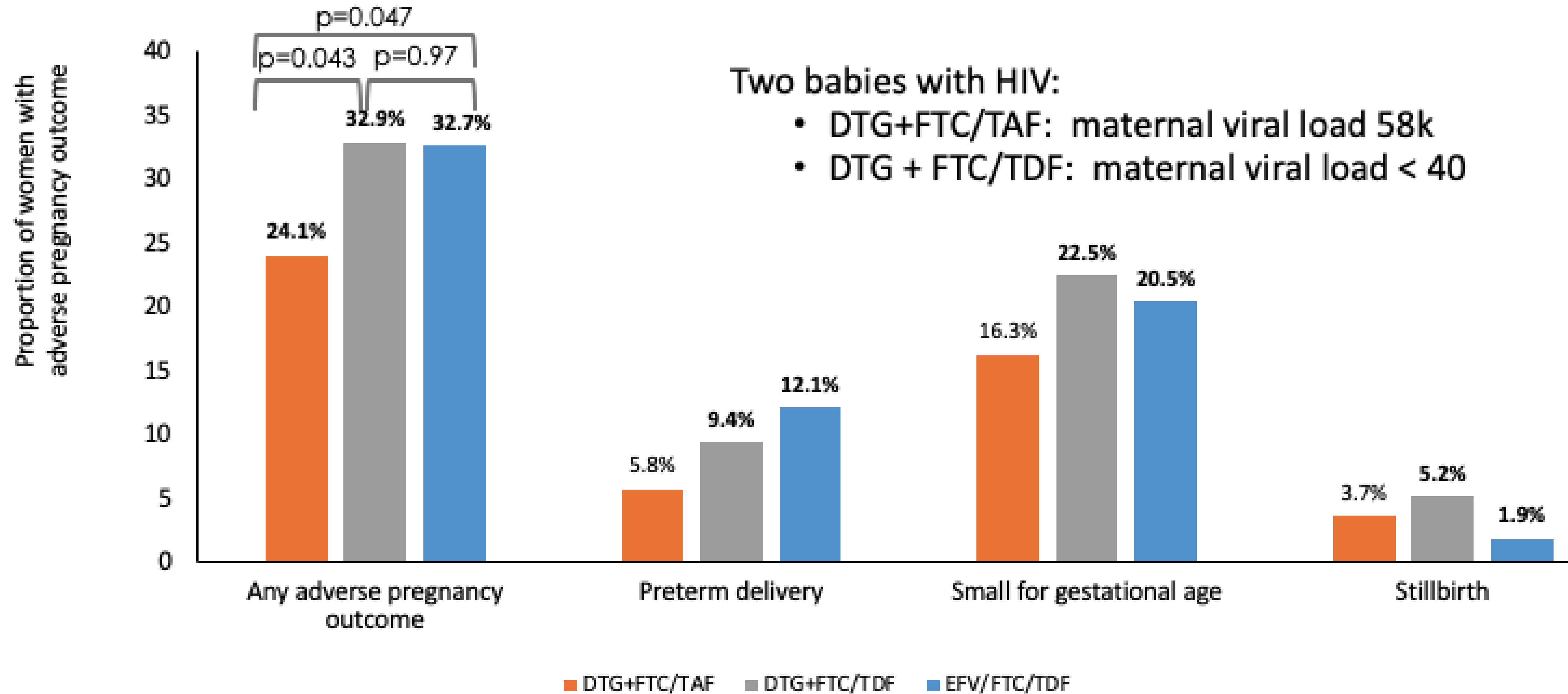
- Dolutegravir 50 mg by mouth once daily (INSTI)

  and

- TAF/FTC or TDF/FTC (2 NRTIs)

NRTI = Nucleoside Reverse Transcriptase Inhibitor
INSTI = Integrase Strand Transfer Inhibitor

IMPAACT 2010: DTG + TAF/FTC associated with *fewest* adverse pregnancy outcomes when started during pregnancy



Chinula L, et al. 27th CROI; Boston, MA; March 8-11, 2020. Abst. 130LB.

What about 2 drug or injectable regimens?

- Pregnant persons who present to care on DTG/3TC or DTG/RPV and maintained viral suppression can continue the regimen **(BIII)** with viral load monitoring every 1 to 2 months throughout pregnancy **(CIII)**

- Insufficent data exist regarding cabotegravir (CAB-LA) and RPV during pregnancy

https://clinicalinfo.hiv.gov/en/guidelines/perinatal/recommendations-arv-drugs-pregnancy-taking-therapy-when-pregnant

Case

- Ms. M is 31 years old, presenting for HIV follow-up. She was last seen 6 months ago when her viral load was elevated to 2000 due to missing doses of bictegravir/TAF/FTC. She missed a prior followup appointment due to work schedule, difficulty with transportation.
- She has been taking ART daily with no missed doses since she found out she was pregnant about 6 weeks ago. She is now 15 weeks pregnant. She read that her ART may not be good for the baby and would like your input.
- How do you counsel her?

HIV Transmission from Mother to Baby

An **HIV+ pregnant woman**
can transmit HIV to her baby **3 WAYS:**

- **During pregnancy**
- **During vaginal childbirth**
- **Through breastfeeding**

- 25% risk of perinatal transmission in absence of therapy
  - 20% before 36 weeks
  - 50% between 36 weeks and delivery
  - 30% active labor and delivery
- Less than 1% risk if
  - Suppressive antiretroviral therapy (ART) throughout pregnancy
  - Postnatal infant antiretroviral prophylaxis
  - C-section & zidovudine (AZT) if indicated
  - Avoidance of breastfeeding

Connor EM et al. N Engl J Med.1994;331:1173-80.
Kourtis AT et al. JAMA. 2001,285;709-12.

Perinatal Antiretroviral Therapy

- Start as soon as possible
  1. Earlier viral suppression = reduced risk of transmission to the fetus
  2. Modify therapy later if needed
  3. **Goal**: Maintain HIV viral load level below the limit of detection during and after pregnancy
  4. “PrEP” for the fetus

https://clinicalinfo.hiv.gov/sites/default/files/guidelines/documents/PerinatalGL.pdf

Antiretroviral Therapy in Pregnancy Key Points

1. In most cases, people who present for obstetric care on fully suppressive HIV therapy should continue their current regimen
2. Use the same regimens recommended for nonpregnant adults in pregnant people when sufficient data suggests appropriate drug exposure, efficacy, and safety
3. Note: there are often incomplete data on safety of HIV drugs in pregnancy

https://clinicalinfo.hiv.gov/en/guidelines/perinatal

Table 7. Situation-Specific Recommendations for Use of Antiretroviral Drugs in Pregnant People and Nonpregnant People Who Are Trying to Conceive

ART Regimen Component	ART for Pregnant People Who Have Never Received ARV Drugs and Who Are Initiating ART for the First Time	Continuing ART for People Who Become Pregnant on a Fully Suppressive, Well-Tolerated Regimen	ART for Pregnant People Who Have Received ARV Drugs in the Past and Who Are Starting or Restarting ART[a]	New ART Regimen for Pregnant People Whose Current Regimen Is Not Well Tolerated and/or Is Not Fully Suppressive[a]	ART for Nonpregnant People Who Are Trying to Conceivea[a,b]
Integrase Strand Transfer Inhibitor (INSTI) Drugs Used in combination with a dual-nucleoside reverse transcriptase inhibitor (NRTI) backbone[c]					
DTG[a]	Preferred[a]	Continue	Preferred[a]	Preferred	Preferred[a]
RAL	Alternative	Continue	Alternative	Alternative	Alternative
BIC[d]	Insufficient data	Continue with frequent viral load monitoring or consider switching due to insufficient data	Insufficient data	Insufficient data	Insufficient data
CAB[e] Oral (lead-in) Long-acting (IM)	Not recommended	Continue with frequent viral load monitoring or consider switching due to insufficient data[e]	Insufficient data	Insufficient data	Insufficient data
EVG/c[f]	Not recommended	Continue with frequent viral load monitoring or consider switching	Not recommended	Not recommended	Not recommended

https://clinicalinfo.hiv.gov/en/guidelines/perinatal/recommendations-arv-drugs-pregnancy-situation-specific-conceive-full

Antiretrovirals **Not** Recommended In Pregnancy

- Cobicistat containing regimens due to pharmacokinetic changes that can reduce medication efficacy
  - (Atazanavir/c, darunavir/c, elvitegravir/c)
- Stavudine (d4T), Didanosine (ddI), Fosamprenavir, indinavir, nelfinavir, ritonavir (as sole PI), saquinavir, tipranavir, or a three NRTI regimen

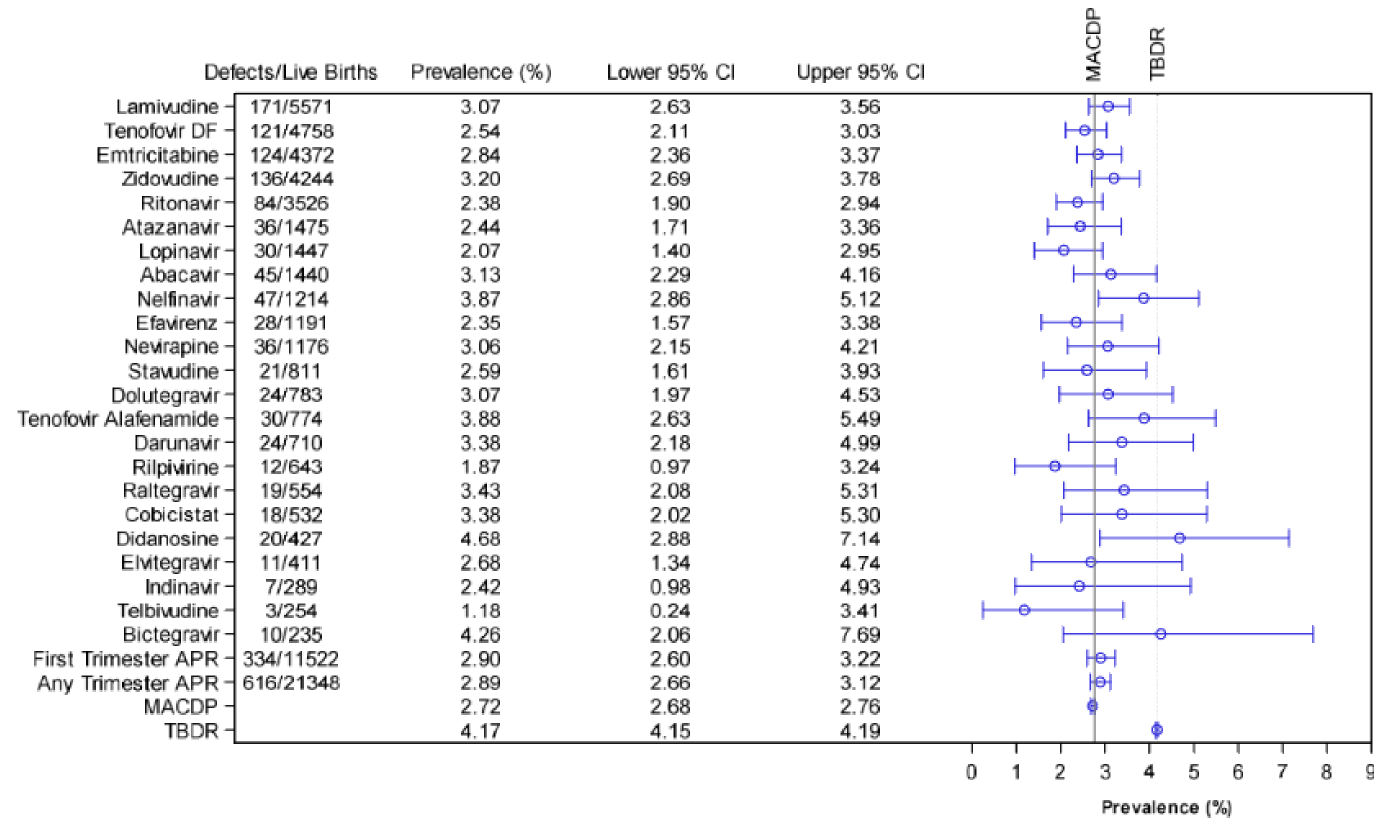
DHHS Perinatal Guidelines Available at https://clinicalinfo.hiv.gov/en/guidelines/perinatal. Accessed 5/4/2023.

THE ANTIRETROVIRAL PREGNANCY REGISTRY INTERIM REPORT

1 JANUARY 1989 THROUGH 31 JULY 2022

(Issued: December 2022)

Figure 1: Summary of Birth Defects among First Trimester Exposures, Prospective Registry Cases Closed with Outcome through 31 July 2022



	Defects/Live Births	Prevalence (%)	Lower 95% CI	Upper 95% CI
Lamivudine	171/5571	3.07	2.63	3.56
Tenofovir DF	121/4758	2.54	2.11	3.03
Emtricitabine	124/4372	2.84	2.36	3.37
Zidovudine	136/4244	3.20	2.69	3.78
Ritonavir	84/3526	2.38	1.90	2.94
Atazanavir	36/1475	2.44	1.71	3.36
Lopinavir	30/1447	2.07	1.40	2.95
Abacavir	45/1440	3.13	2.29	4.16
Nelfinavir	47/1214	3.87	2.86	5.12
Efavirenz	28/1191	2.35	1.57	3.38
Nevirapine	36/1176	3.06	2.15	4.21
Stavudine	21/811	2.59	1.61	3.93
Dolutegravir	24/783	3.07	1.97	4.53
Tenofovir Alafenamide	30/774	3.88	2.63	5.49
Darunavir	24/710	3.38	2.18	4.99
Rilpivirine	12/643	1.87	0.97	3.24
Raltegravir	19/554	3.43	2.08	5.31
Cobicistat	18/532	3.38	2.02	5.30
Didanosine	20/427	4.68	2.88	7.14
Elvitegravir	11/411	2.68	1.34	4.74
Indinavir	7/289	2.42	0.98	4.93
Telbivudine	3/254	1.18	0.24	3.41
Bictegravir	10/235	4.26	2.06	7.69
First Trimester APR	334/11522	2.90	2.60	3.22
Any Trimester APR	616/21348	2.89	2.66	3.12
MACDP		2.72	2.68	2.76
TBDR		4.17	4.15	4.19

Monitoring of HIV During Pregnancy

- HIV viral load testing
  - Initial visit
  - 2-4 weeks after starting or changing ART
  - Monthly until HIV viral load is below limit of detection of test ("undetectable")
  - Every 3 months during pregnancy
  - 34-36 weeks' gestation to inform delivery decisions (4 weeks prior to delivery)
- Antiretroviral resistance testing
  - Prior to starting ART if never on treatment
  - Prior to changing regimen if HIV RNA above threshold for resistance testing (> 500 to 1,000 copies/mL)

https://clinicalinfo.hiv.gov/en/guidelines/perinatal

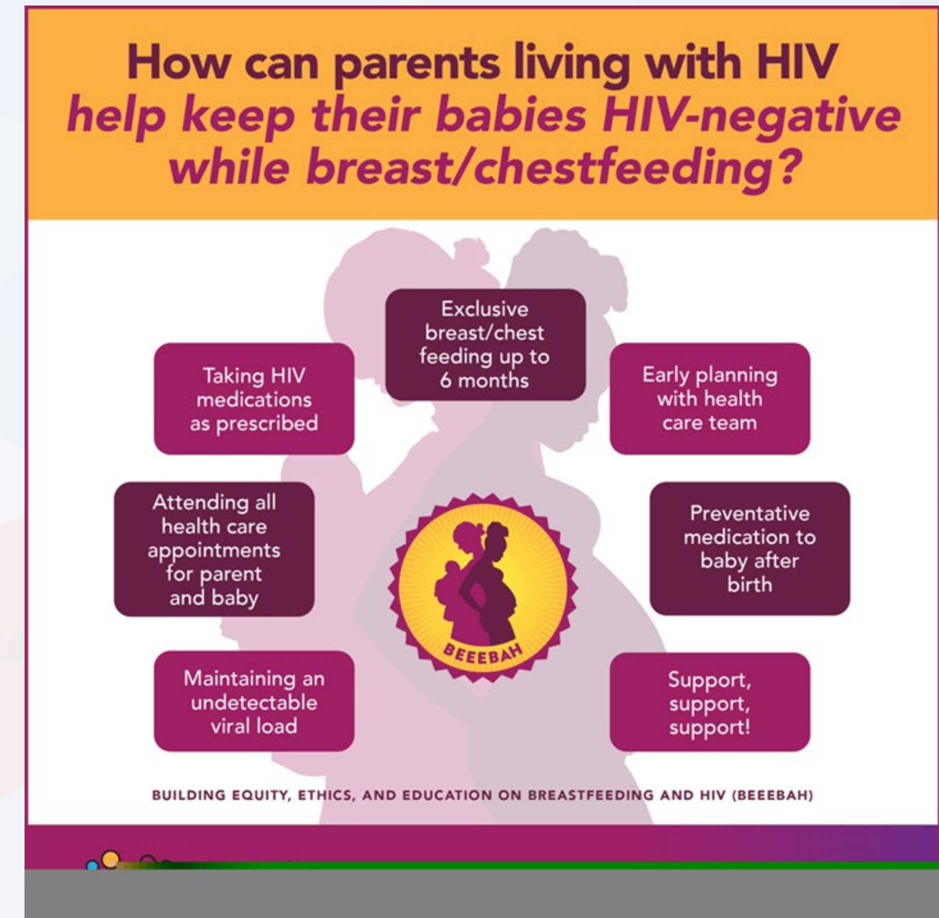
Case

- Kelly is a 32-year-old woman, with perinatally-acquired HIV, well-controlled on DTG +TAF/FTC, pregnant with her first child
- She understands that the baby will be given prophylactic ART upon delivery
- She would like to breastfeed her child and wants to know how best to go about doing this for her and her child’s health
- How do you advise her?

Infant Feeding for Individuals with HIV in the US

- Fully suppressive ART during pregnancy and breastfeeding decreases breastfeeding transmission risk to less than 1%, but not zero

- People with HIV should receive evidence-based, patient-centered counseling to support shared decision-making about infant feeding



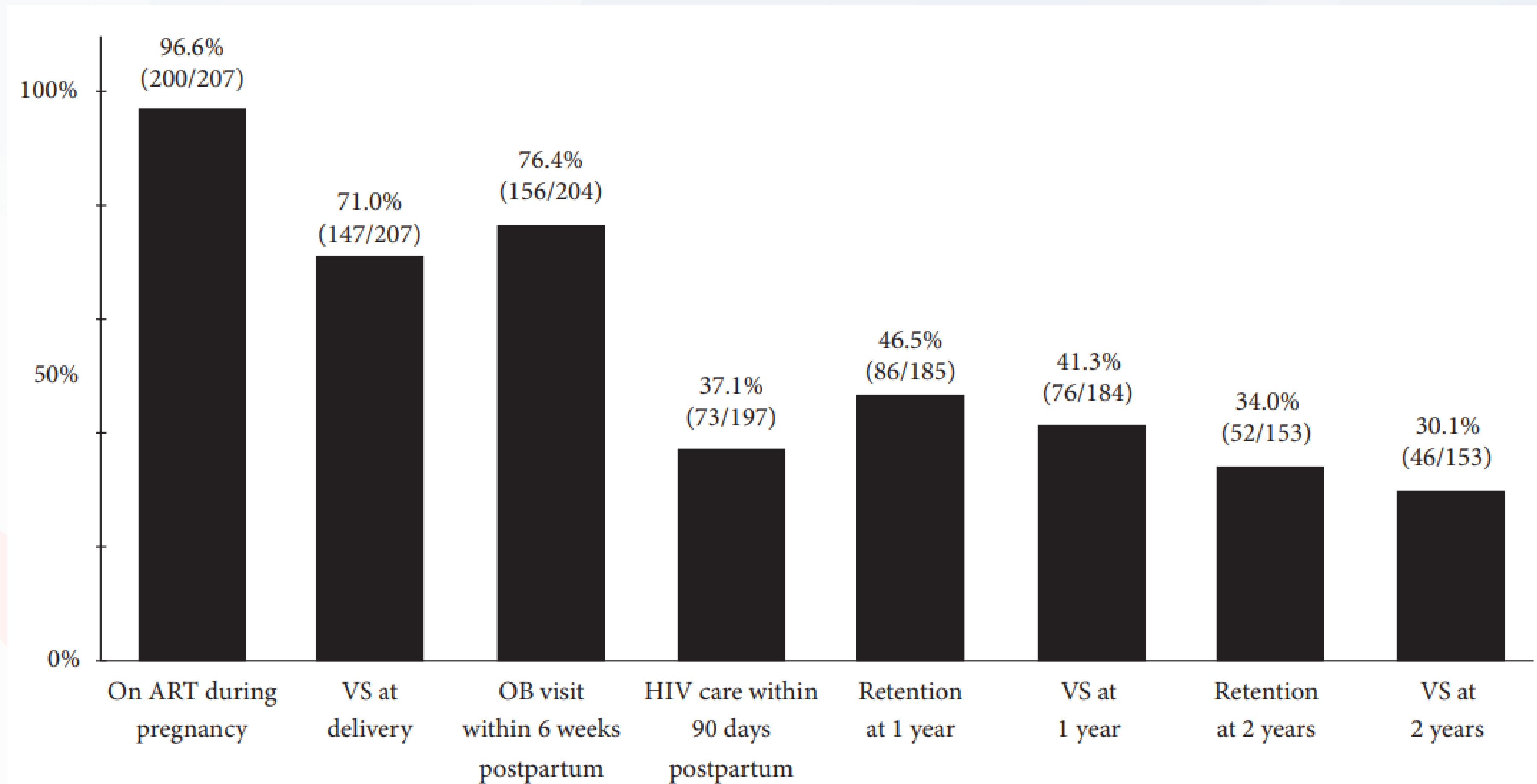
https://clinicalinfo.hiv.gov/en/guidelines/perinatal/infant-feeding-individuals-hiv-united-states?view=full

The Fourth Trimester: Postpartum Care

- The 12 weeks postpartum are referred to as “the fourth trimester”
- Address the following
  - Mood and emotional wellbeing
  - Infant care and feeding
  - Sleep, fatigue and physical recovery from birth
  - Sexuality, contraception, birth spacing
  - Chronic disease management and coordination of care with PCP
  - Health Maintenance
- Women living with HIV are often lost to HIV follow-up during this time period

https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2018/05/optimizing-postpartum-care

Postpartum HIV Care Continuum Atlanta 2011 - 2016



Meade CM, et al. Infect Dis Obstet Gynecol. 2019 Feb 14;2019:8161495.

Summary

- Routine health screenings, including cervical cancer and BMD screenings, are an important part of providing optimal medical care to women with HIV
- Women with HIV are able to utilize numerous family planning options
- Preconception planning can help promote a healthy pregnancy for mother and baby

Thank you!

AETC Program National Centers and HIV Curriculum

- **National Coordinating Resource Center –** serves as the central web –based repository for AETC Program training and capacity building resources; its website includes a free virtual library with training and technical assistance materials, a program directory, and a calendar of trainings and other events. Learn more: https://aidsetc.org/
- **National Clinical Consultation Center –** provides free, peer-to-peer, expert advice for health professionals on HIV prevention, care, and treatment and related topics. Learn more: https://nccc/ucsf.edu
- **National HIV Curriculum –** provides ongoing, up –to-date HIV training and information for health professionals through a free, web –based curriculum; also provides free CME credits, CNE contact hours, CE contact hours, and maintenance of certification credits. Learn more: www.hiv.uw.edu