



# PrEP

HIV PREVENTION IS PRIMARY CARE



# GRANT

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# Abbreviations:

- ▶ F/TDF – emtricitabine, tenofovir df
- ▶ F/Taf – emtricitabine, tenofovir af
- ▶ CAB – Cabotegravir
- ▶ MSM – Men who have sex with men
- ▶ TGW – Transgender women
- ▶ PWID – Persons who use IV Drugs
- ▶ AMAB – Assigned male gender at birth
- ▶ AFAB – Assigned female gender at birth

# OBJECTIVES

- ▶ Identify the demographics of those people at risk for HIV
- ▶ Understand the different medications available for PrEP and suitable patients for each medication.
- ▶ Discuss Importance of taking a sexual history in identifying persons at risk for HIV
- ▶ Understand the rationale for testing in a population at risk for HIV, and on PrEP

# Who is at risk?

- ▶ Sexually active persons with multiple sexual partners
- ▶ Persons with a recent history of STI
- ▶ PWID
- ▶ MSM, Black MSM have a lifetime risk of HIV 1:2, white MSM lifetime risk of 1:11.
- ▶ Only about 25% of people at risk for HIV are taking PrEP

# HIV is still a problem

- ▶ About 38,000 new cases of HIV annually in the US
  - ▶ Most new cases are MSM ages 24-35
  - ▶ Majority of new cases are in the SE US
  - ▶ Black men and TGW are at highest risk.
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- ▶ CDC data 2019

# Ending The Epidemic

- ▶ Identify those persons living with HIV
- ▶ CDC guidelines recommend all adults have at least one test for HIV, more testing for those at increased risk.
- ▶ Get everyone with HIV engaged in care, on meds, with suppressed viral load
- ▶ U=U, treatment as prevention
- ▶ Prevent HIV, only about 25% of at risk populations are on PrEP, those most at risk are less likely to be on PrEP

# First studies of PrEP

- ▶ TDF alone
- ▶ TDF vaginal gel
- ▶ F/TDF



# PrEP Studies

- ▶ IPREX
  - ▶ MSM and TGW
  - ▶ Daily F/TDF vs placebo
  - ▶ Results: decreased risk by 50%
  
- ▶ TDF2
  - ▶ Heterosexual men and women- Botswana
  - ▶ Daily F/TDF vs placebo
  - ▶ Results: decreased risk by 60%

# PrEP Studies

- ▶ Partners PrEP
  - ▶ Serodiscordant heterosexual couples – Kenya, Uganda
  - ▶ Daily F/TDF vs placebo
  - ▶ Results: decreased risk by 75%
  
- ▶ FEM PrEP
  - ▶ Heterosexual women – African
  - ▶ Daily F/TDF vs placebo
  - ▶ Compliance in study was less than 20%,
  - ▶ Results: no decreased risk of HIV

# PrEP Studies

- ▶ Caprisa
  - ▶ Heterosexual women- African
  - ▶ Vaginal gel vs placebo
  - ▶ Results: if patients were >80% compliant, decreased risk by 50%
- ▶ In all studies, poor compliance was seen as the highest risk factor for getting HIV,
- ▶ In MSM and TGW taking at least 4 doses a week increased protection to greater than 90%, in women they needed 7 doses a week to get protection greater than 90%

# PrEP Studies

- ▶ Discover
  - ▶ MSM and TGW
  - ▶ Oral F/TDF vs F/TAF
  - ▶ 2500 each arm
  - ▶ Results: greater than 95% protection in both arms.

# Injectable CAB

- ▶ HPTN 077
  - ▶ MSM and heterosexual women
  - ▶ Oral F/TDF and placebo injection vs oral placebo and injectable CAB
  - ▶ Results: decreased risk by 60%
  
- ▶ HPTN 083
  - ▶ MSM and TGW women
  - ▶ Same design as above
  - ▶ 2200 people in each arm
  - ▶ 39 new HIV in oral PrEP arm vs 13 in the CAB arm (4 in CAB arm were > 2 months after the last injection, 5 infections in CAB arm had mutations to CAB, study only used HIB Ab, Ag test)

# Injectable CAB

- ▶ HPTN 084
  - ▶ Only women at high risk
  - ▶ Same design as prior 2 studies,
  - ▶ 2200 in each arm
  - ▶ 34 new infections in oral arm vs 4 in CAB
  - ▶ No infections in women without missed injections
  - ▶ Both studies, HPTN 083 and 084 stopped early due to superiority of CAB over oral

# Injectable CAB

- ▶ Adverse events: injection site reactions most common, decreased over time
- ▶ CAB has more drug interactions than oral
- ▶ CAB has very long half life.
- ▶ Need to test HIV RNA in addition to a rapid HIV Ab, Ag test

# PrEP Testing Oral Medication

- ▶ Baseline Cr , Hep A&B serology, STI testing (3 site), Rapid HIV Ab, Ag and HIV RNA, lipids for F/TAF, Hep C for MSM, TGW, and PWID
- ▶ Q3 months: STI, HIV Ab, Ag
- ▶ Q 6 months: STI HIV Ab, Ag, Cr if age >50 or baseline eGFR <90
- ▶ Q12 months: STI, HIV Ab, Ag, Cr, lipids if on F/TAF



# PrEP Testing CAB

- ▶ Baseline: HIV Ab, Ag, HIV RNA, STI
- ▶ At one month ( second injection) :HIV Ab, Ag, HIV RNA
- ▶ Q 2 months: HIV Ab, Ag, HIV RNA
- ▶ Q 4 months: HIV Ab, Ab, HIV RNA, STI

# Summary

- ▶ Oral /TDF or F/TAF for MSM and TGW > 99% effective if 4 doses or more are taken weekly
- ▶ Off label intermittent dosing, less effective but may be used, 2-1-1 dosing.
- ▶ Oral F/TDF for persons AFAB, > 90% effective if more than 80% compliant
- ▶ CAB for MSM, TGW, and women superior to oral meds especially for AFAB

# Let's Prevent HIV

- ▶ Get a sexual history
- ▶ Identify persons at risk
- ▶ Counsel on safe sex practices, PrEP use, Birth Control
- ▶ Start PrEP for those at risk