HIV PRIMARY CARE UPDATE
2023

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PHILADELPHIA DEPARTMENT OF PUBLIC HEALTH

MAY 18, 2023

HOWARD UNIVERSITY HIV-HCV
CARIBBEAN CLINICIANS
COMMUNITY OF PRACTICE
(HU-CCCoP)

CME Disclosures:
Planning Committee And Speaker

Speaker: The following speaker discloses a financial relationship with ViiV Healthcare:

Helena Kwakwa, MD, MPH

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Goulda A. Downer, PHD, RD, LN, CNS – Principal Investigator/Project Director

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Planning Committee And Speaker

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Planning Committee: The following committee members have nothing to disclose in relation to this activity:

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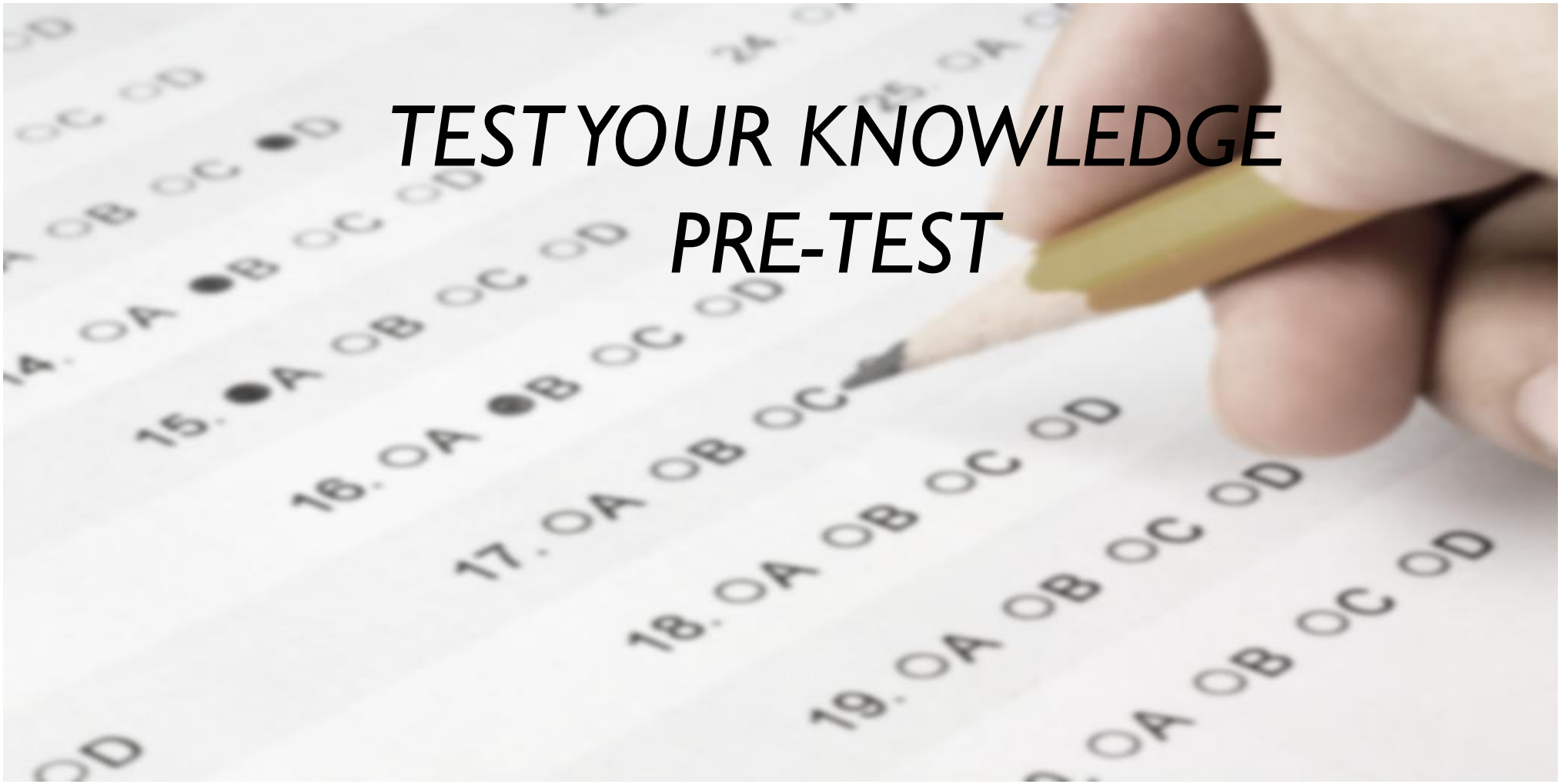
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TEST YOUR KNOWLEDGE
PRE-TEST

Test Your Knowledge
Question #1

Antiretroviral therapy is recommended for everyone diagnosed with HIV.

A. This statement is true
B. This statement is false
C. This statement is true for people with CD4 > 500
D. This statement is true for people with CD4 < 500

Test Your Knowledge
Question #2

A patient with HIV and a CD4 count of 274 presents for care. What prophylaxis would you recommend?

A. Dapsone

B. Azithromycin

C. TMP/SMX or dapsone

D. Fluconazole

Test Your Knowledge
Question #3

A 26-year-old woman with a VL<50 on TLE therapy notes disturbing dreams leading to her not taking her ARV. The next step should be:

A. Remind her that her VL is undetectable only because of her TLE and restart
B. Have her take her TLE in the morning
C. Switch her to TLD and monitor
D. Lower the dose of her Efavirenz

Test Your Knowledge
Question #4

Special considerations for the care of key populations beyond the general standard of care include which of the following?

A. Access to clean needles/syringes
B. Testing for asymptomatic STIs
C. Access to rapid ARV starts and quality health care
D. All of the above

HIV Primary Care Update
2023

LEARNING OBJECTIVES

1. Review and describe how to implement current recommendations on antiretroviral therapy.
2. Discuss best practices for improving adherence to antiretroviral and to the HIV Care Continuum.
3. Recognize key populations and provide medical care and support services appropriately to them.
4. Be familiar with the treatment regimens recommended for advanced care in resistant situations.

CASE STUDY #1

CASE STUDY 1: PATIENT AA

- 36yo woman presents to clinic requesting COVID test
- She reports 2 days of fever, non-shaking chills, myalgias, sore throat and profound fatigue
- Her PMH is significant only for gestational diabetes
- She is on no medications and has no known allergies to medicines
- Vital signs significant for Wt 178lb, T 101.4°F BP 161/105, HR 104
- PE: no rash, pharynx erythematous, cervical lymphadenopathy, otherwise normal
- Rapid tests for influenza A, B neg; PCR test for COVID-19 neg
- Routine HIV Ag/Ab neg, specimen sent for viral load testing
- Patient discharged with recommendations on mgmt. of viral syndrome, cause unknown
- 2 days later VL returns at 1.2 million; pt called back in

THINK ACUTE HIV

- U Chicago ED conducted HIV screening (including RNA) for persons in ED with influenza-like illness (ILI) between Mar and Aug 2020
- AHI was defined as
  - + 4th gen Ag/Ab &
  - neg/indet supplemental Ab &
  - + HIV PCR quant
- 9 pts were diagnosed with AHI in Chicago after the first case of COVID-19 was identified
  - All 9 were diagnosed through this U Chicago ED program
  - Rate of AHI dx in 2020 was 14.4/y (6.8/y for previous 4 years, IR 2.14, 95% CI 1.01-4.54)
  - 7 men (6 MSM), 2 cis women
  - 8 with sxs indistinguishable from COVID-19, 1 with co-infection

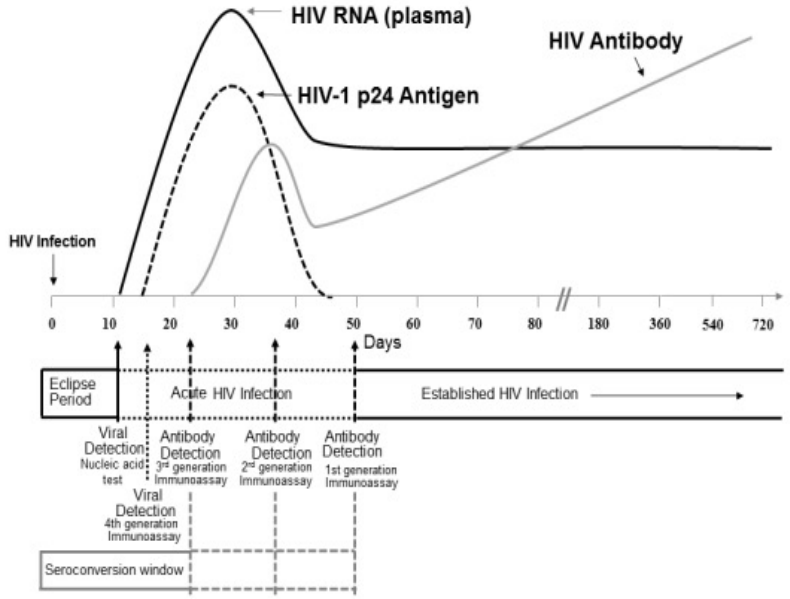
Stanford K et al. IDWeek 2020. Stanford KA et al. AIDS Behav. May 2020.

HIV SEROMARKERS: TIMELINE

For acute infection:

HIV RNA/p24 Ag

Acute HIV diagnosis important for interrupting onward transmission



Centers for Disease Control and Prevention and Association of Public Health Laboratories. Laboratory Testing for the Diagnosis of HIV Infection: Updated Recommendations. Available at http://stacks.cdc.gov/view/cdc/23447. Published June 27, 2014. Accessed April 2, 2023

PATIENT AA, CONT'D

- She has a 2-year-old son
- She is engaged to be married
  - She is very religious
  - Her fiancé is her second partner ever
- She works as a housekeeper in a local hotel
- She is reluctant to disclose her HIV status to her fiancé or anyone else

PATIENT AA, CONT'D

- Optimizing patient for ARV
  - Education
  - Managing stigma
  - Psychosocial assessment
  - Prophylaxis (PCP, MAC)
  - Managing hypertension
  - Family planning services
- Selecting ARV
  - Tolerability
  - Safety (generally and in pregnancy)
  - Convenience
  - Resistance
  - Efficacy and durability
  - Access

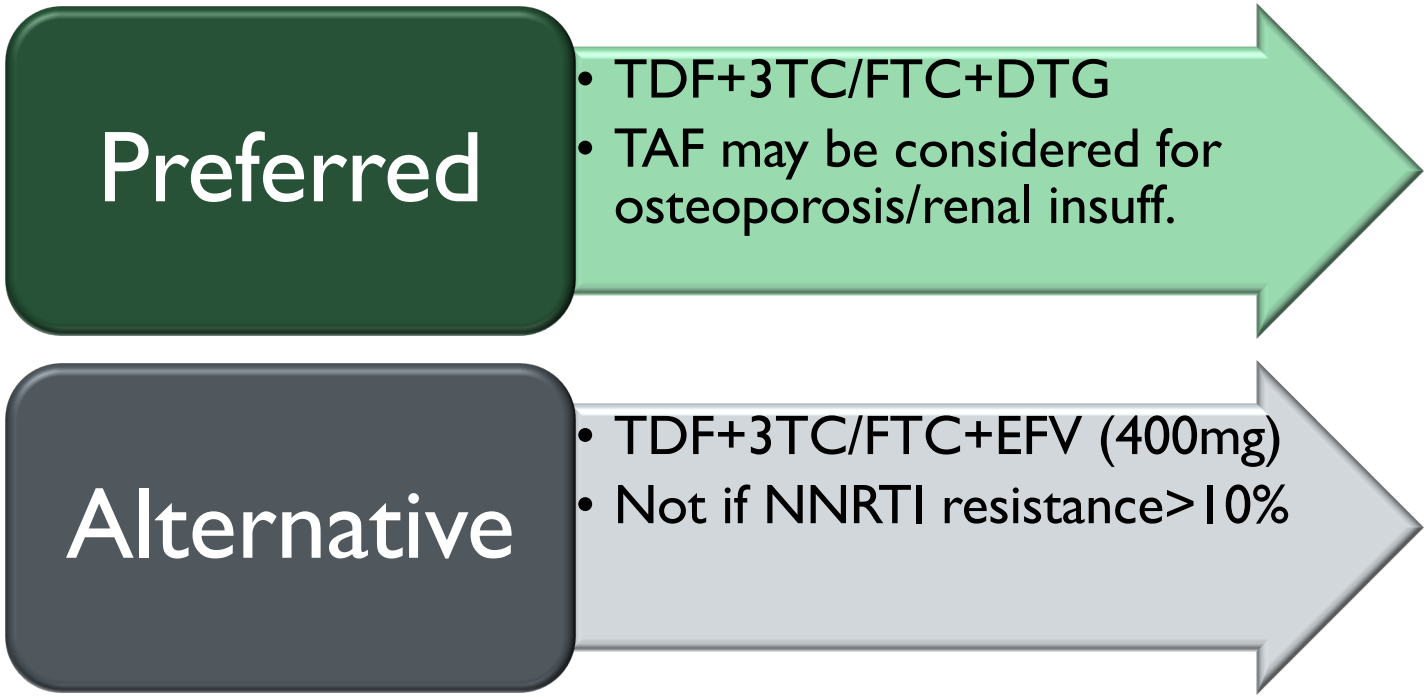
NON-ARV PRIMARY CARE

- Laboratory tests: HBsAg, pregnancy test, TB testing and clinical assessment
- HBV vaccination
- Pap test
- Exercise, weight management, BP control, optimizing health for potential future pregnancy
- Disclosure, support
- IPV screen

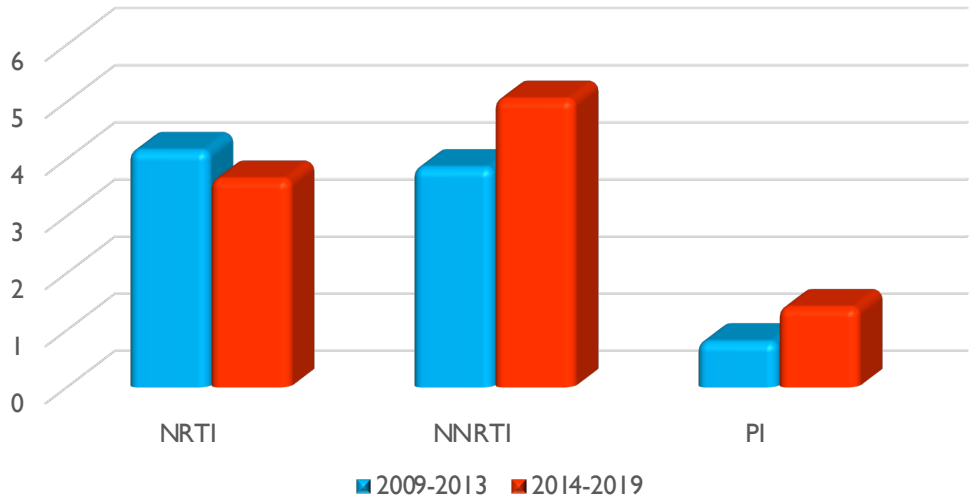
WHEN TO START ANTIRETROVIRALS: WHO

- Since 2016, WHO recommends a "Treat All" strategy
- Priority populations
  - Advanced HIV
  - Pregnant women
  - Breastfeeding women
  - Children

WHAT TO START



Transmitted resistance: Caribbean/Latin America[1,2]



2010-15 analysis in Aruba – 45% NNRTI TDR among tested specimens

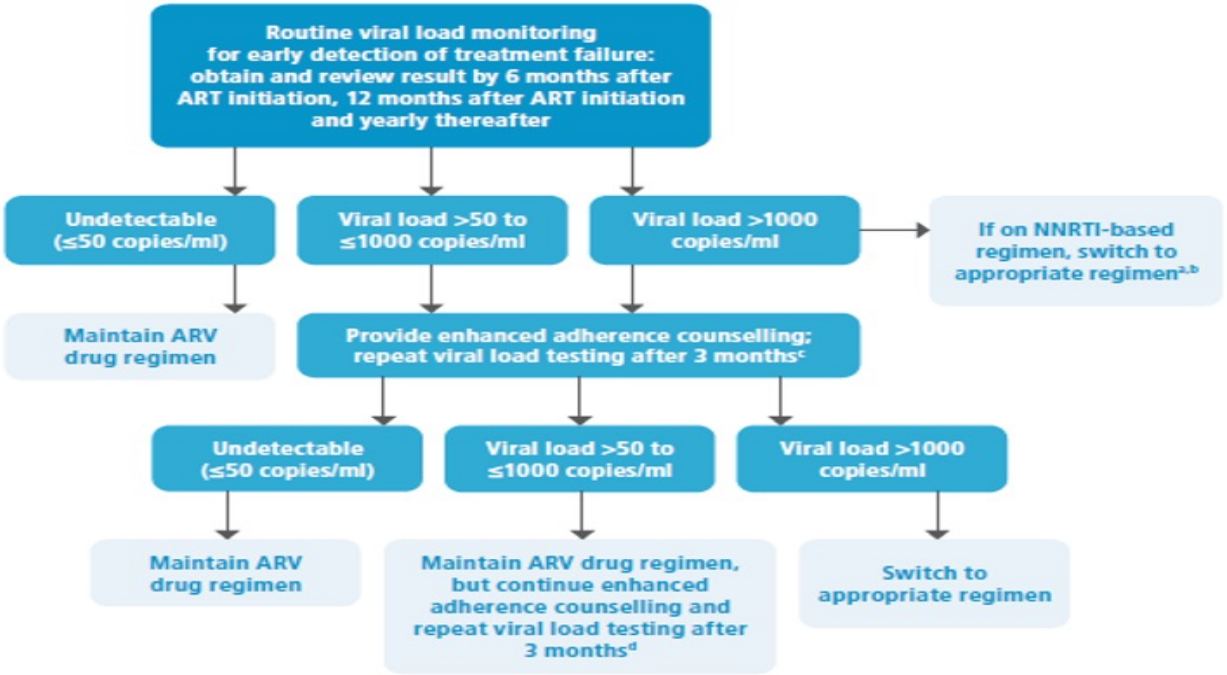
Rhee S-y et al. IIAS 2020;23:e25611. 2. Hofstra LM et al. Clin Infect Dis 2017;64(8):1092

SPECIAL CIRCUMSTANCES

- EFV 600mg + TDF/3TC (AZT/3TC)
- PI/r + TDF/3TC
- DTG + TAF + 3TC
- DTG + ABC + 3TC

WHO Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: recommendations for a public health approach. July 2021.

MONITORING RESPONSE TO ARV



WHO Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: recommendations for a public health approach. July 2021.

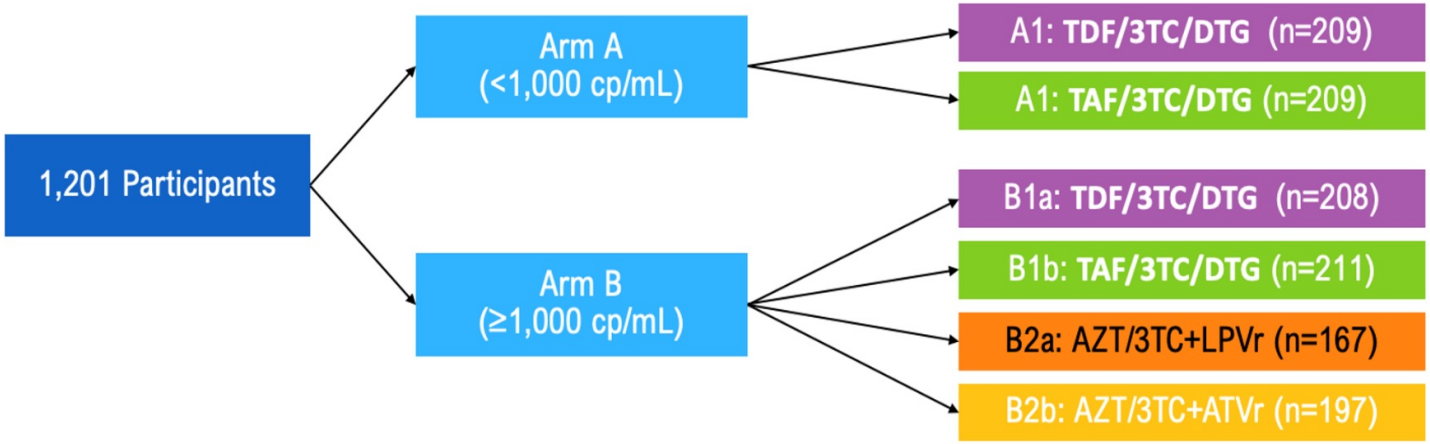
DOLUTEGRAVIR IN WOMEN

- Tsepamo Study
  - Initial analysis showing increased prevalence of NTD (0.94%) in Botswana
  - Longer term data showed prevalence of 0.19% without statistical significance
  - WHO states that benefits outweigh potential risks
  - Recommend folate and Fe supplementation in WCBP

Zash R et al. N Engl J Med. 2019;381:827. 2. Phillips AN et al. Lancet HIV. 2020;7:e193.

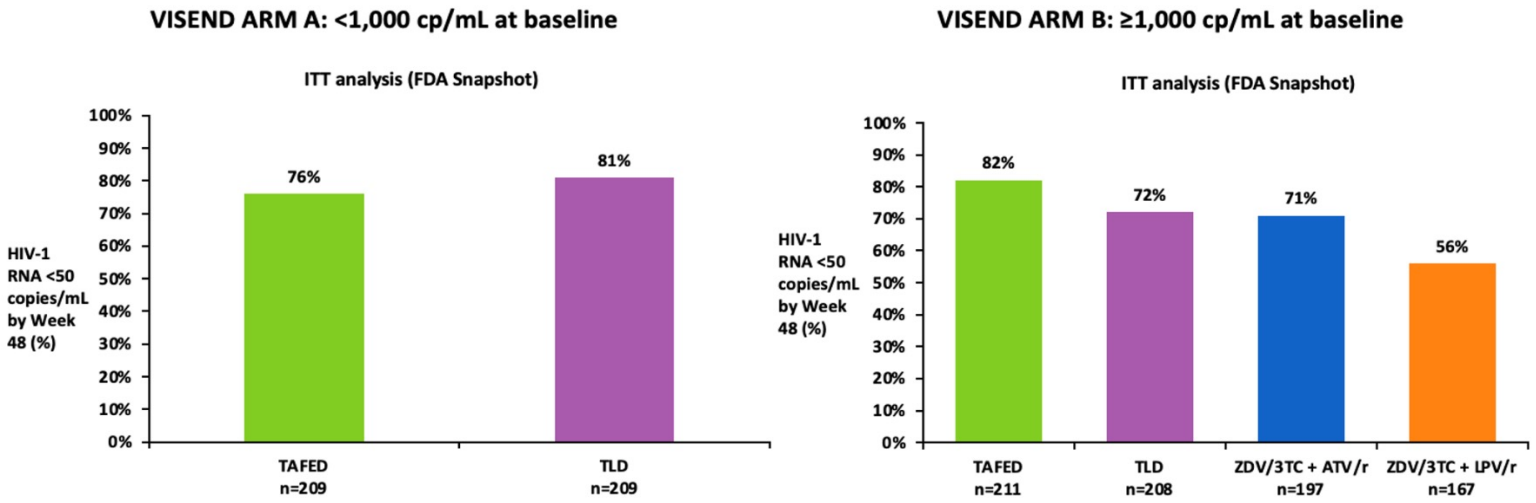
VISEND STUDY DESIGN

- 144 week randomised, open label, noninferiority study in Zambia
- Switching from first line NNRTI based treatment treatment, with HIV RNA either above or below 1000 cp/mL
- Primary endpoint: Proportion VL<1,000 cp/mL at Week 144 (FDA snapshot)
- Enhanced counselling for two consecutive VL ≥50 cp/mL and genotypic resistance testing for individuals
- with two consecutive VL ≥1,000 cp/mL
- Non-inferiority margin: 10%



Mulenga L, et al. Virtual CROI 2022; February 12-16, 2022. Abst. 135.

VISEND STUDY



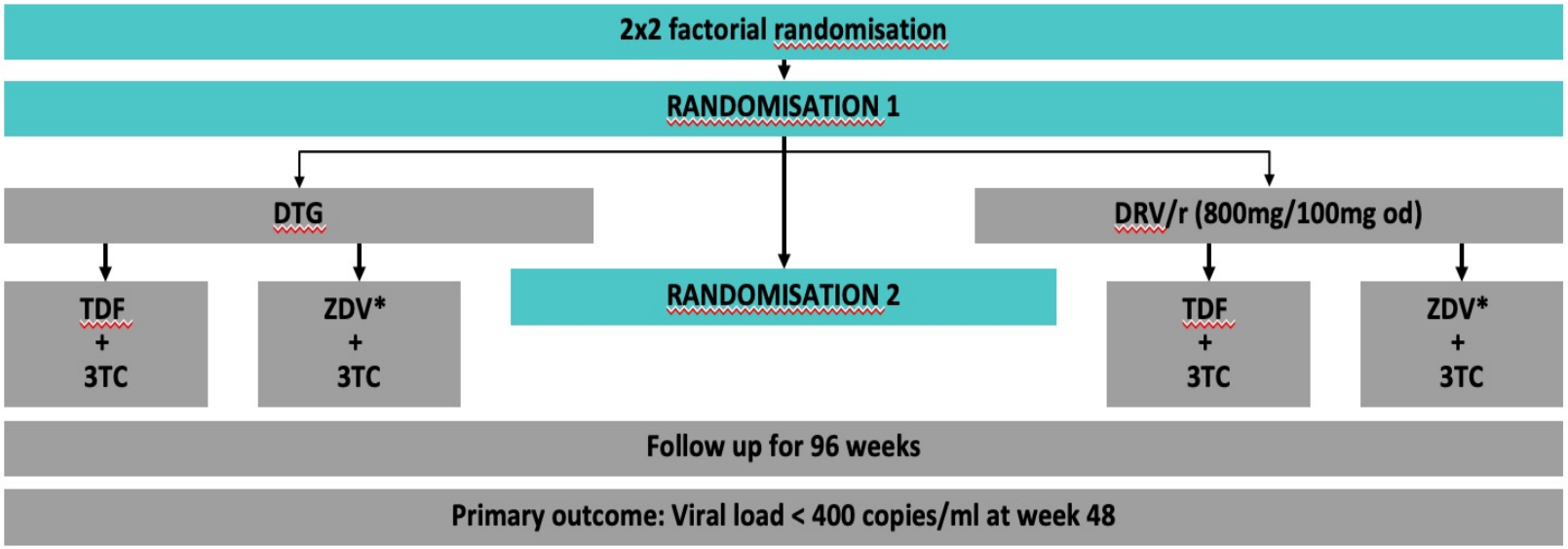
- For the < 50 cp/mL secondary endpoint

1. TAFED not non inferior to TLD in arm A but superior in arm B
2. TAFED(TAF/3TC/DTG) and TLD(TDF/3TC/DTG) superior to combined PI regimens

Mulenga L, et al. Virtual CROI 2022; February 12-16, 2022. Abst. 135.

NADIA STUDY DESIGN

- **Eligible patients:**
  On TDF+3TC/FTC+NNRTI regimen for ≥ 6m with *treatment failure* defined as:
  VL ≥ 1000 copies/ml at screening AND
  EITHER: VL ≥ 1000 copies/ml on test taken < 6m (& ≥4wks) prior to screening
  OR: VL ≥ 1000 copes/ml on confirmatory test taken ≥4wks after screening



NADIA STUDY: BASELINE AND WK 96

Baseline characteristics

Female: 61%, CD4 < 200 cells/mm3: 51%, VL ≥ 100,000c/ml: 28%

Baseline intermediate-high level resistance

TDF: 59%, ZDV: 18%, 3TC: 92%

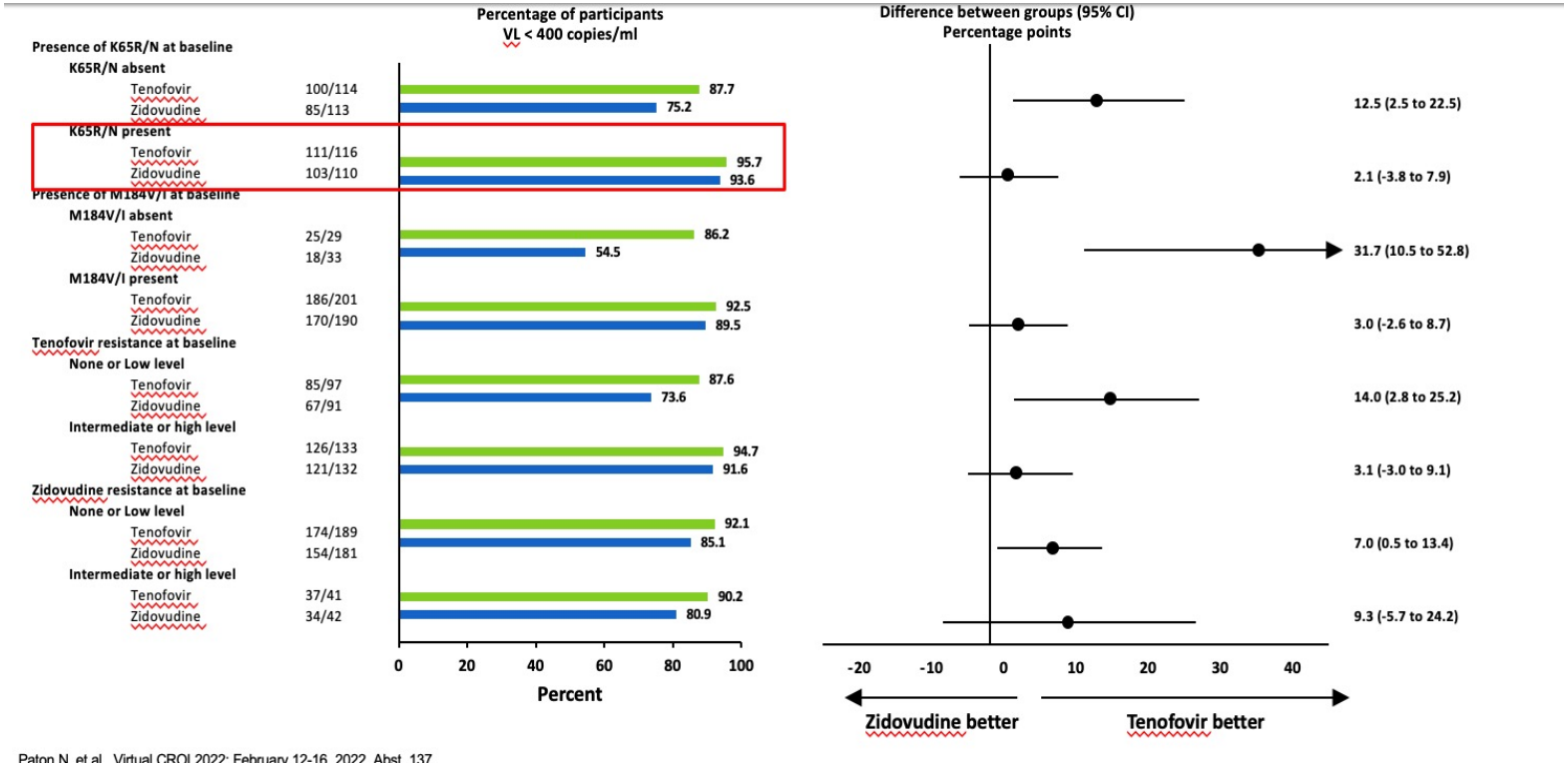
Outcome	Dolutegravir Group (N=235)	Darunavir Group (N=229)	Difference (95% CI) %	P
VL< 50 c/ml (ITT)	189 (80.4)	172 (75.1)	5.3 (-2.2 to 12.9)	0.168
VL rebound ≥ 1000 c/ml, confirmed with ≥1 major RM to DTG or DRV*	7	0	-	-

No differences between DTG and DRV in any subgroup (by NRTI, viral load, CD4, n of predicted NRTI

Outcome	Tenofovir Group (N= 233)	Zidovudine Group (N= 231)	Difference (95% CI) %	P
< 400 copies/ml (adjusted)	92.4	84.5	7.9 (1.9 to 14.0)	0.01
< 50 c/ml	188 (80.7)	173 (74.9)	5.8 (-1.8 to 13.3)	0.133
VL rebound ≥ 1000 c/ml, confirmed with ≥1 major RM to DTG or DRV*	2	5	-	-

Of 9 cases of dolutegravir resistance, 6 occurred in the zidovudine group. 3 in the TDF group
f K65R or M184V/I absent or none or low level TDF/AZT resistance at baseline TDF superior to AZT

NADIA: SUBGROUP ANALYSIS WK 96



Paton N, et al. Virtual CROI 2022; February 12-16, 2022. Abst. 137

DEFINITIONS OF FAILURE

Failure	Definition
Clinical	New/Recurrent clinical event after 6 mo of ARV
Immunological	CD4 count of 250 cells/mm^3 following clinical failure or persistent CD4 count < 100 cells/mm^3
Virological	Viral load > 1000 copies/mL per 2 consecutive VL measurements 3 months apart

WHO Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: recommendations for a public health approach. July 2021.

SECOND-LINE ARV RECOMMENDATIONS

- DTG + optimized NRTI backbone
  - With non-DTG-based 1st regimen
- PI/r + optimized NRTI backbone
  - With DTG-based 1st regimen
- PI/r include ATV/r, LPV/r, DRV/r

WHO Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: recommendations for a public health approach. July 2021.

THIRD-LINE ARV RECOMMENDATIONS

- DRV/r + 1 or 2 NRTIs +/- DTG
- Optimize regimen using a genotype profile

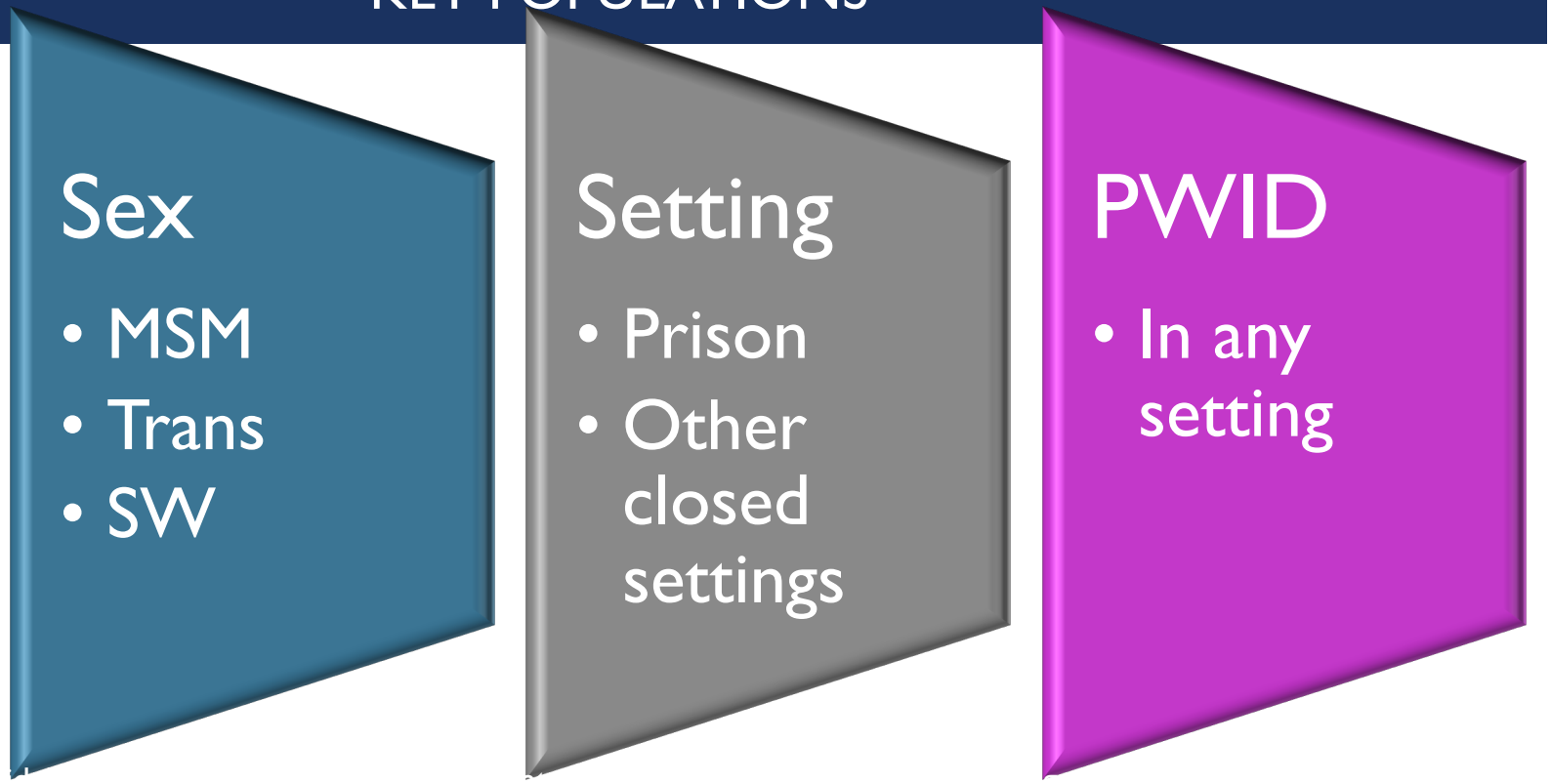
WHO Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: recommendations for a public health approach. July 2021.

CASE STUDY #2

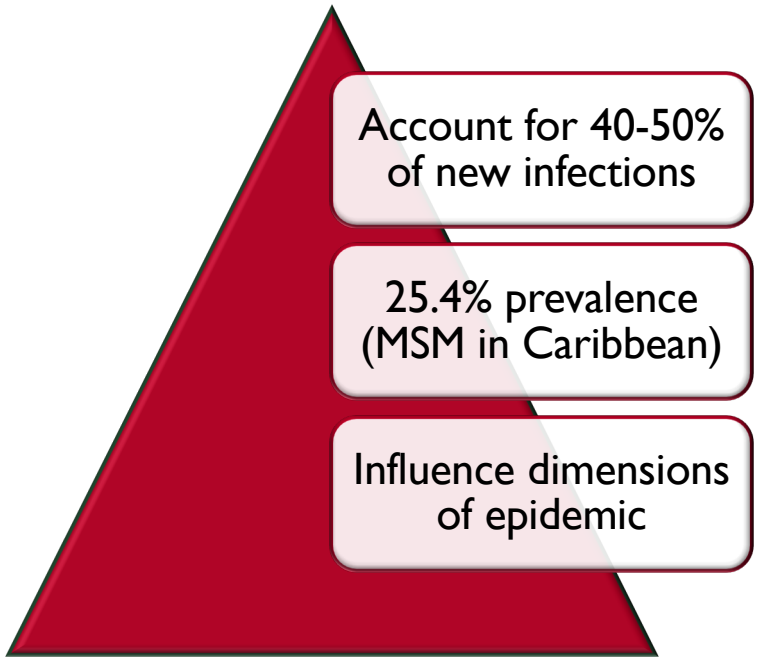
CASE STUDY 2: PATIENT BB

- 48yo man presents for care following HIV diagnosis during hospitalization for pneumonia. Has never been tested previously
- He had heard rumors about a male partner testing positive for HIV, but chose not to seek testing because he thought he would rather die not knowing his status
- He is married with 3 children, his daughter now pregnant with his second grandchild
- He does not want anyone to know his HIV status or to find out he has sex with men
  - He will not bring his wife in for testing

KEY POPULATIONS

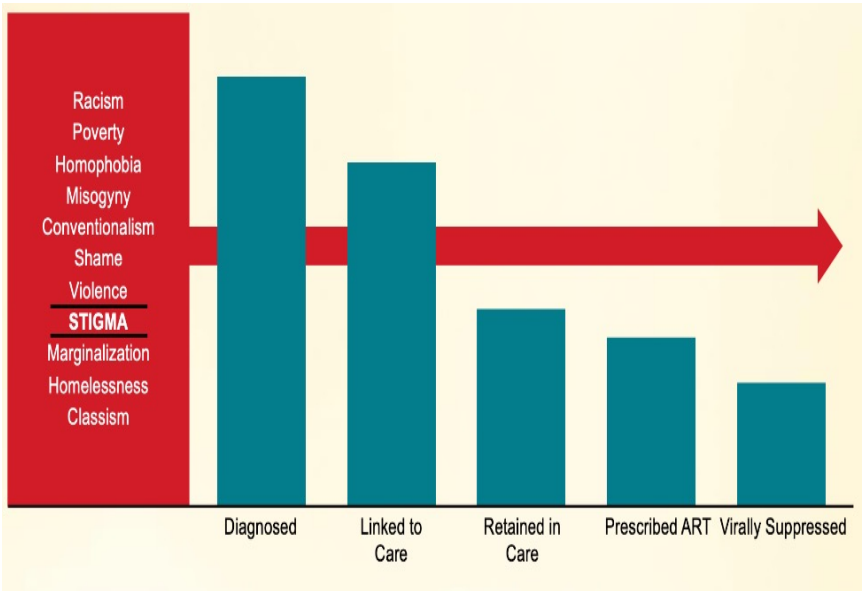


Key populations

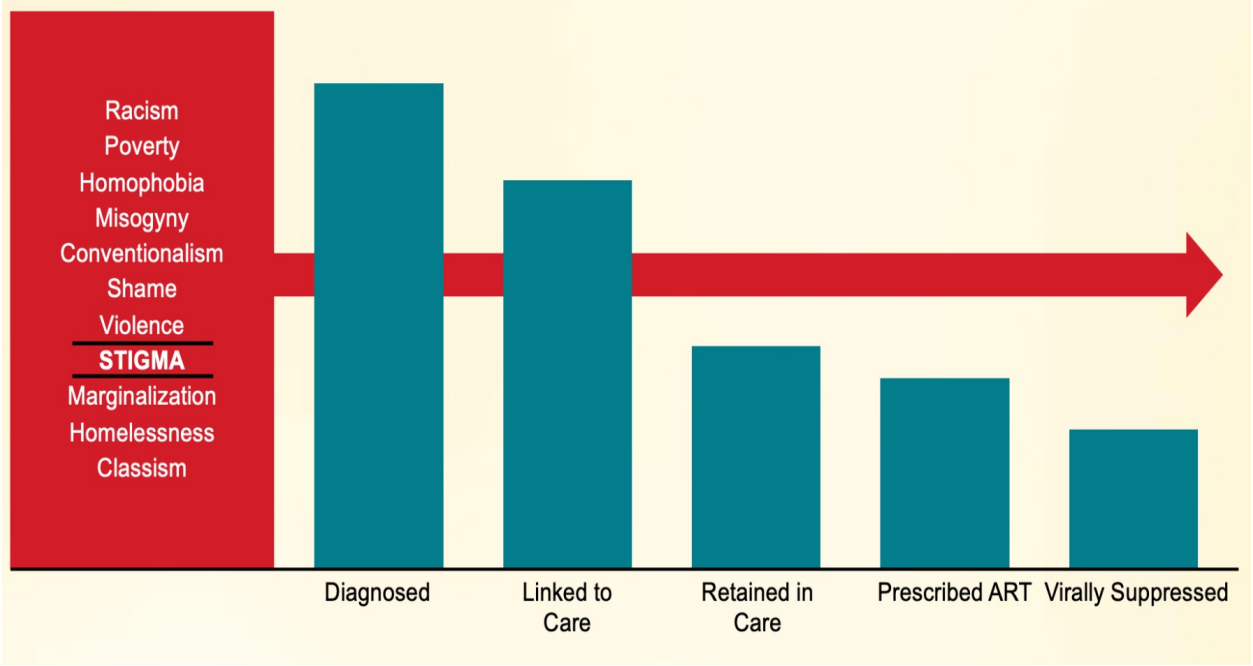


PATIENT BB, CONT'D

- Optimizing patient for treatment
- Primary care
- Rapid initiation of ARV
- Monitoring on ARV



PATIENT BB, CONT'D



PATIENT BB, CONT'D

- No social support
- Works as a police officer (wife is a nurse)
- Prefers to not take daily medicine but he will as long as it does not make him feel sick
- CD4 cell count was 39

RECOMMENDATIONS FOR PROPHYLAXIS[1,2]

- PCP and bacterial infections
  - CD4 count < 350
  - Oral candidiasis
  - TMP/SMX DS daily (dapsone 100mg daily if G6PD neg)
- Toxoplasmosis
  - CD4 count < 100
  - TMP/SMX DS daily (dapsone 50mg/d+pyrimethamine 50mg/wk)
- Mycobacterium avium complex
  - CD4 count < 50
  - Azithromycin 1200mg/wk

1. WHO Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: recommendations for a public health approach. July 2021.
2. Ministry of Health, Jamaica. Clinical Management of HIV Disease: Guidelines for Medical Practitioners 2017.

PREPARING PATIENT BB: IRIS

- State of hyperinflammatory response as suppressed immune system recovers
  - "unmasking" (flare-up of underlying infection)
  - "paradoxical" (worsening of previously treated infection)
  - Occurs in approximately 20% of people starting ARV (IAPAC)
  - Mortality 0-15%

Muller M et al. Lancet Infect Dis. 2010;10(4):251-261.

PATIENT BB, CONT'D

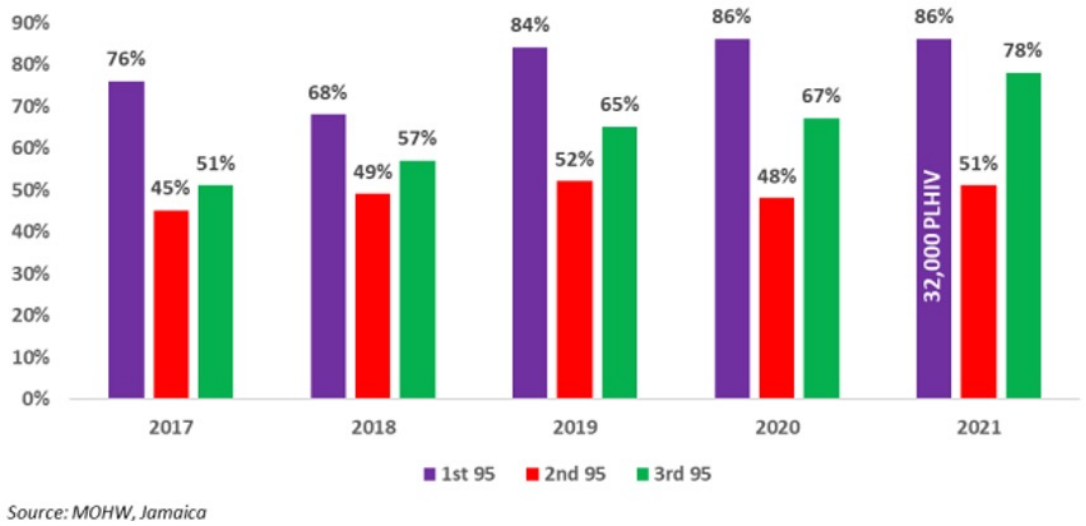
How would you best support his adherence to the HIV Care Continuum?

HIV CARE CONTINUUM
TRINIDAD & TOBAGO



US President's Emergency Plan for AIDS Relief. 2022. Regional Operational Plan (ROP) 2022: Strategic Direction Summary.

HIV CARE CONTINUUM
JAMAICA



Source: MOHW, Jamaica

US President's Emergency Plan for AIDS Relief. 2022. Regional Operational Plan (ROP) 2022: Strategic Direction Summary.

PATIENT BB, CONT'D

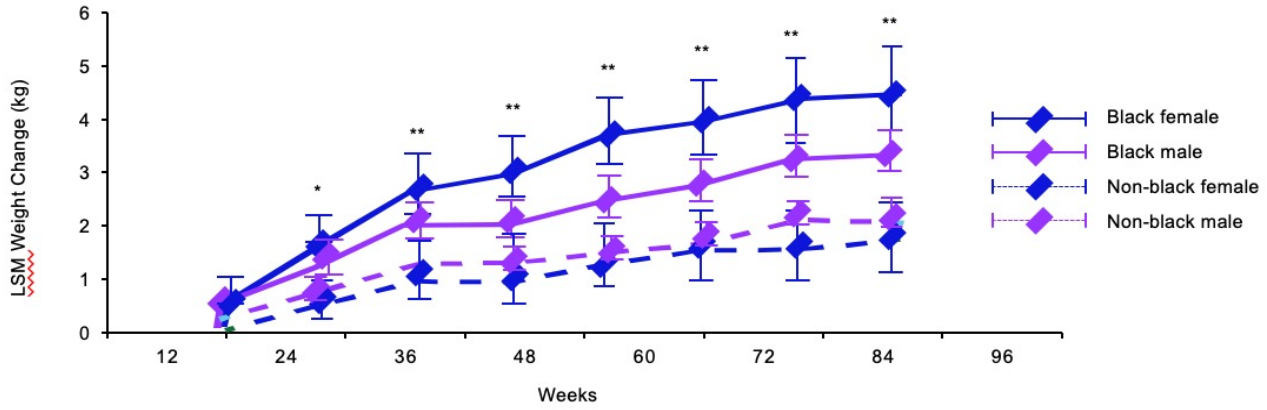
- Secondary prevention
- Routine symptomatic and asymptomatic STI screening – with sampling of exposed sites
- Emphasize viral load testing after CD4 reconstituted and stable
- Routine and "enhanced" primary care

PATIENT BB, CONT'D

- Build trust
  - Non-judgmental
  - Openness and unqualified support
- Interdisciplinary team
  - Representation of key populations whenever possible
- ARV
  - Minimize AEs, inconvenience
  - Manage AEs

WEIGHT GAIN ON ARV: A META-ANALYSIS

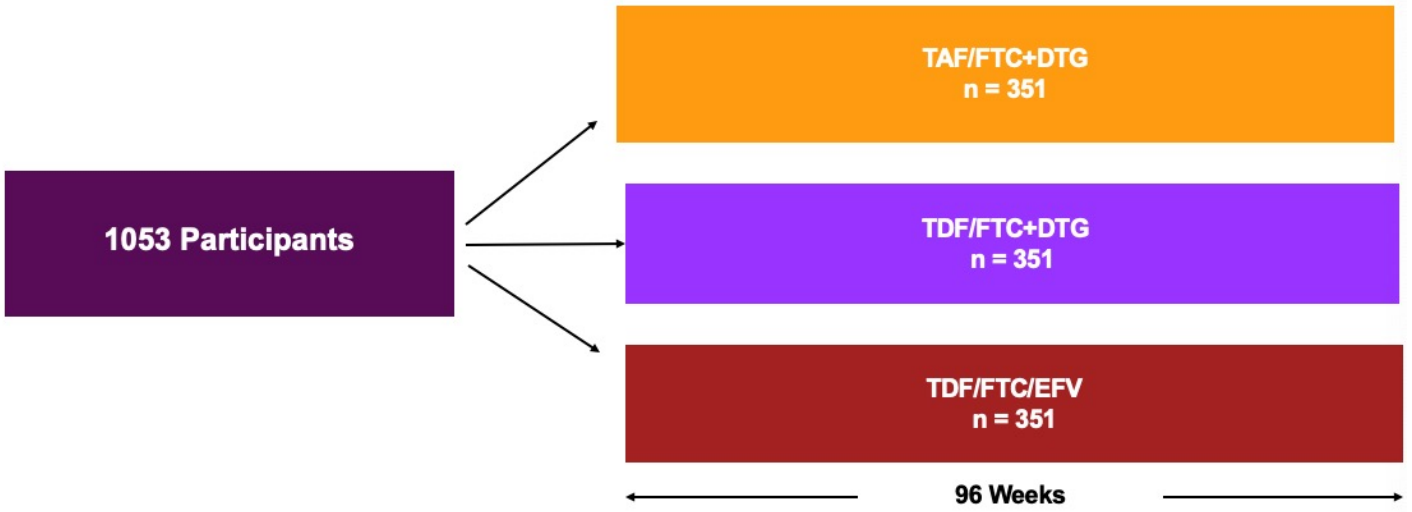
Analysis of 8 RCT (N=5,680) of initial ART conducted by GSI



Factors associated with weight gain in multivariate modelling:
Demographic/HIV: Lower CD4, higher viral load, no IDU, female sex, Black race
Treatment: INSTI (DTG, BIC > EVG); NNRTI (RPV > EFV), NRTI (TAF > TDF, ABC, AZT)

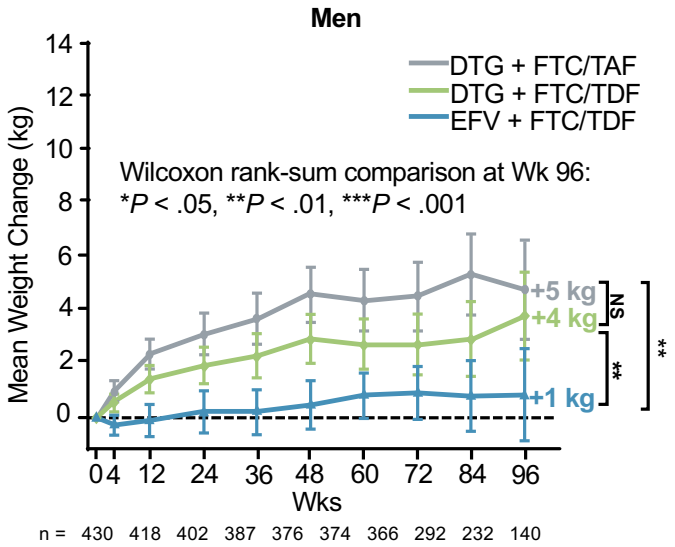
Sax P, et al. Clin Infect Dis, 2019

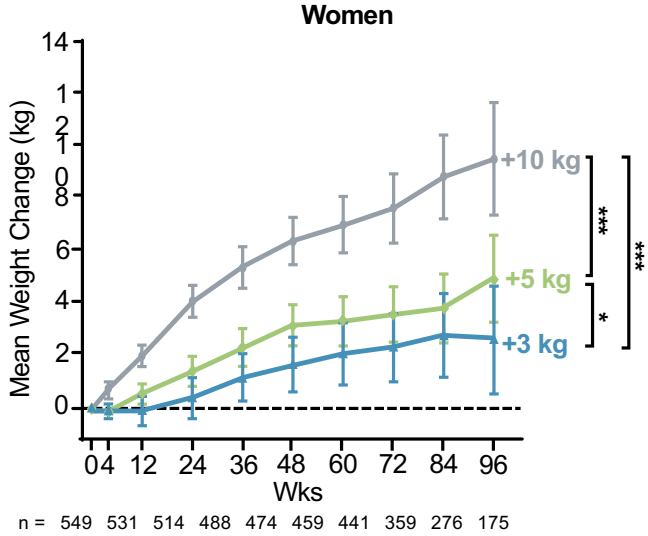
ADVANCE: STUDY DESIGN



Hill. IAS 2019. Abstract MOAX0102LB.

ADVANCE: Mean change in weight, Wk 96





Hill. IAS 2019. Abstract MOAX0102LB.

SUMMARY

- All people with an HIV diagnosis should be offered ARV with support, including key populations
- TLE and TLD, increasingly the latter, remain the cornerstone of ARV globally
  - Future trends determined by TDR and access
- Supportive services and non-judgmental care to optimize adherence to medication and to the HIV Care Continuum are essential
  - Especially for key populations

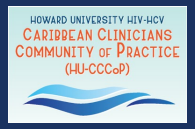


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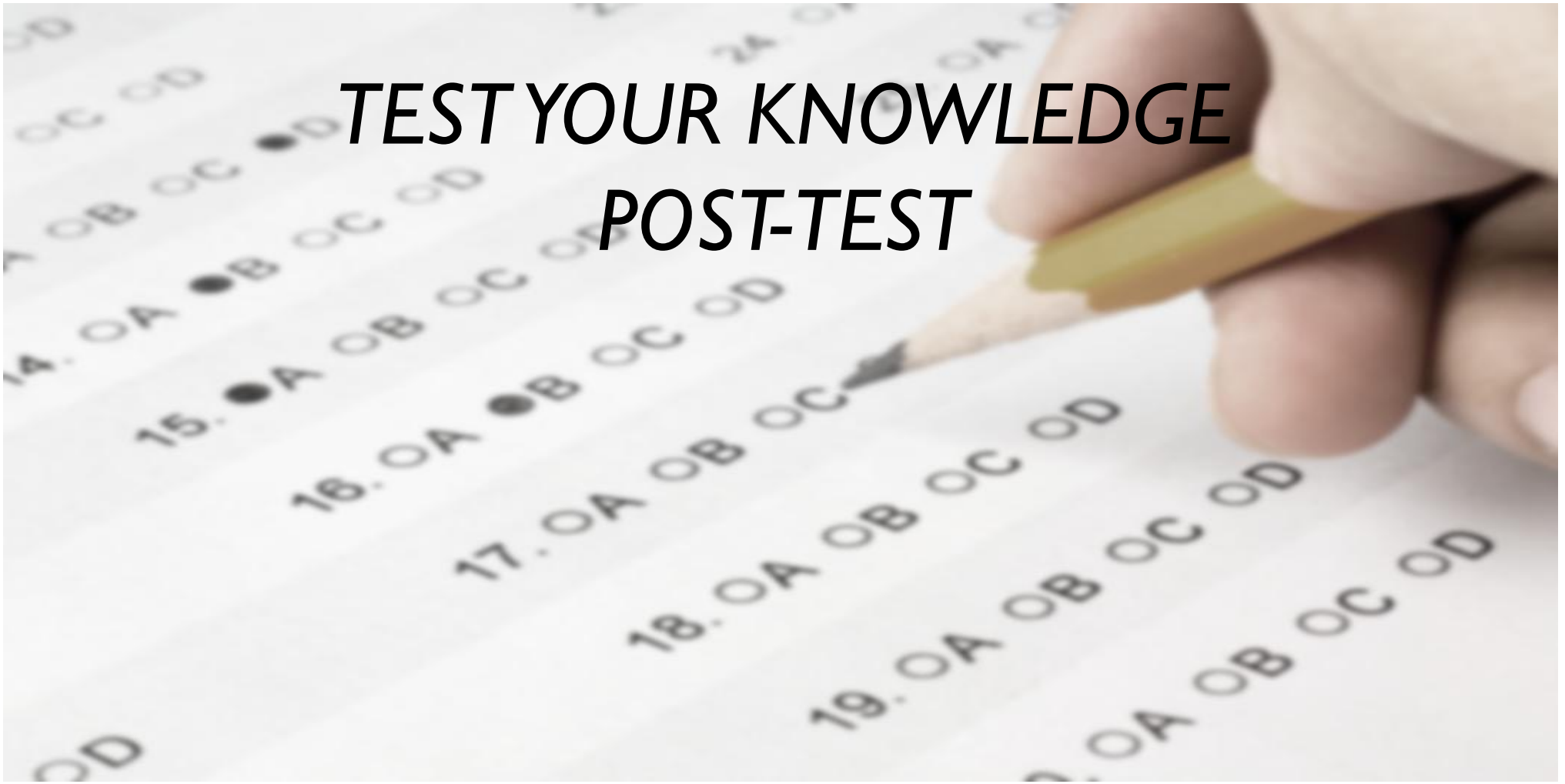
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(HU-CCCoP)

QUESTION & ANSWER SESSION



Thank You

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CARIBBEAN CLINICIANS
COMMUNITY OF PRACTICE
(HU-CCCoP)


TEST YOUR KNOWLEDGE
POST-TEST

Test Your Knowledge
Question #5

Antiretroviral therapy is recommended for everyone diagnosed with HIV.

A. This statement is true
B. This statement is false
C. This statement is true for people with CD4 > 500
D. This statement is true for people with CD4 < 500

Test Your Knowledge
Question #6

A patient with HIV and a CD4 count of 274 presents for care. What prophylaxis would you recommend?

A. Dapsone

B. Azithromycin

C. TMP/SMX or dapsone

D. Fluconazole

Test Your Knowledge
Question #7

A 26-year-old woman with a VL<50 on TLE therapy notes disturbing dreams leading to her not taking her ARV. The next step should be:

A. Remind her that her VL is undetectable only because of her TLE and restart
B. Have her take her TLE in the morning
C. Switch her to TLD and monitor
D. Lower the dose of her Efavirenz

Test Your Knowledge
Question #8

Special considerations for the care of key populations beyond the general standard of care include which of the following?

A. Access to clean needles/syringes
B. Testing for asymptomatic STIs
C. Access to rapid ARV starts and quality health care
D. All of the above

REFERENCES

- Stanford K et al. ID Week 2020. Stanford KA et al. AIDS Behav. May 2020.
- Centers for Disease Control and Prevention and Association of Public Health Laboratories. Laboratory Testing for the Diagnosis of HIV Infection: Updated Recommendations. Available at http://stacks.cdc.gov/view/cdc/23447. Published June 27, 2014. Accessed April 2, 2023
- Rhee S-y et al. IIAS 2020;23:e25611. 2. Hofstra LM et al. Clin Infect Dis 2017;64(8):1092
- WHO Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: recommendations for a public health approach. July 2021.
- Zash R et al. N Engl J Med. 2019;381:827. 2. Phillips AN et al. Lancet HIV. 2020;7:e193.
- Mulenga L, et al. Virtual CROI 2022; February 12-16, 2022. Abst. 135.
- Paton N et al. Virtual CROI 2022: February 12-16 Abstract 137
- WHO Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: recommendations for a public health approach. July 2021.
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- U.S. President's Emergency Plan for AIDS Relief. 2022. Regional Operational Plan (ROP) 2022: Strategic Direction Summary.
- Sax P, et al. Clin Infect Dis, 2019
- Hill. IAS 2019. Abstract MOAX0102LB