



# Dr. Madhombiro

Department of Psychiatry

UZ College of Health Sciences



## Alcohol and substance use and ART Adherence

I have no actual or potential conflicts to declare in relation to this programme and presentation

My work is supported by NIH/Fogarty through PERFECT Program, National Research Foundation South Africa, Partnership for Alcohol and AIDS Intervention research, King's College London and Wellcome Trust through AMARI Consortium



# Outline of this presentation

Background

Alcohol and HIV transmission

Drinking and adherence

Mechanisms of alcohol-induced impairment of the efficacy of antiretroviral therapy

AUDs assessments

Alcohol and adherence interventions

Way forward



# Background

Alcohol is related to HIV in terms of transmission, counselling and testing, treatment, prevention and control

Cannabis causes cognitive impairment and psychosis that prevent consistent use of ART

Stimulants such as cocaine through IDU are associated with transmission of HIV and poor adherence through psychosis and cognitive effects

Opioids have been associated with HIV transmission through IDU

Screening and brief interventions are key in improving HIV treatment outcome in dually diagnosed patients



## Key points about HIV and alcohol

HIV infected AUDs suffer more physiologic harm

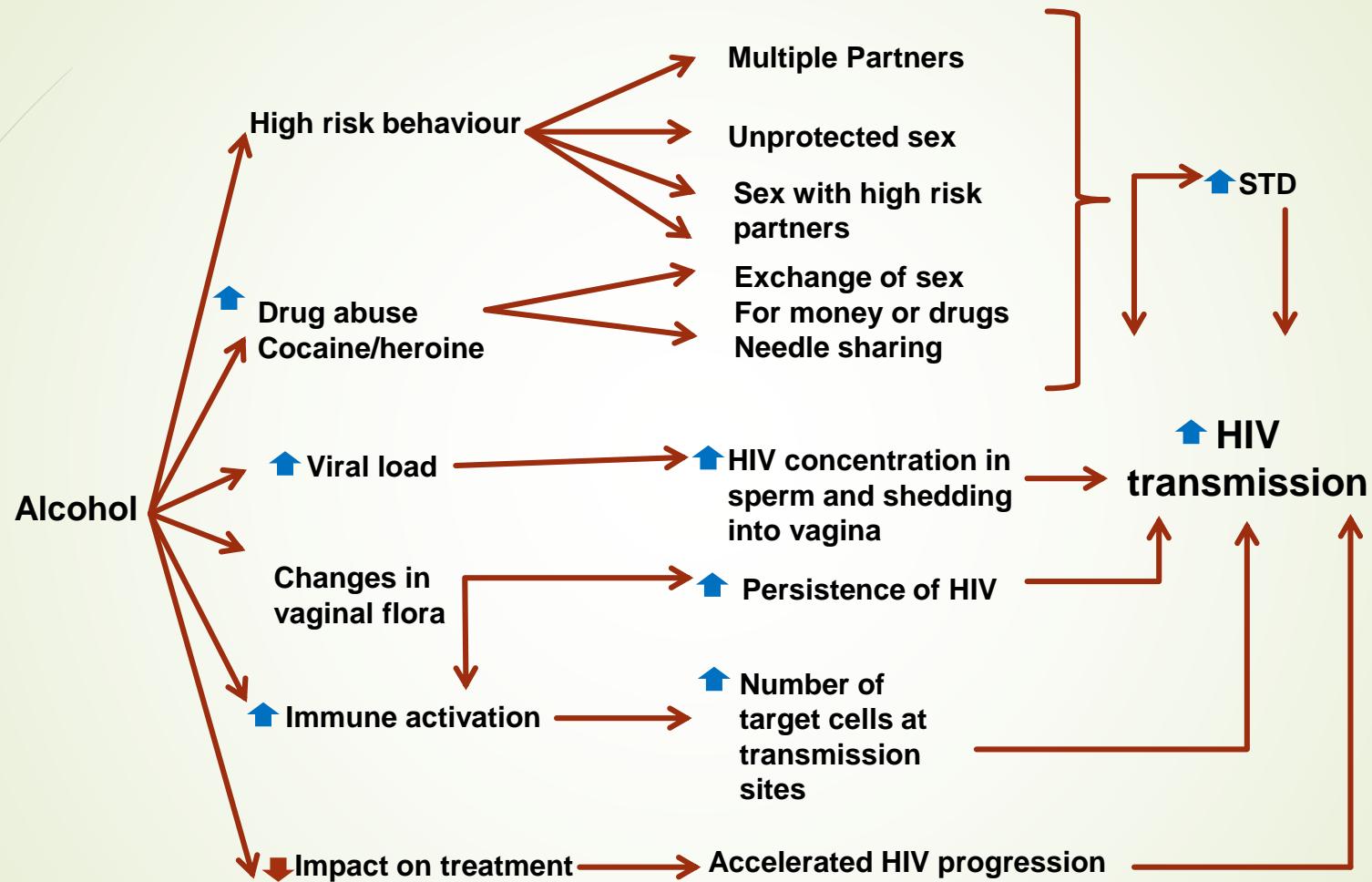
All levels of alcohol use are associated with poor adherence

Non-suppression of HIV leads to less alcohol requirement to get the "buzzed"

There is a temporal relationship between alcohol consumption and non-adherence

PLWH who use alcohol have poor HIV treatment outcomes

# Alcohol and HIV transmission

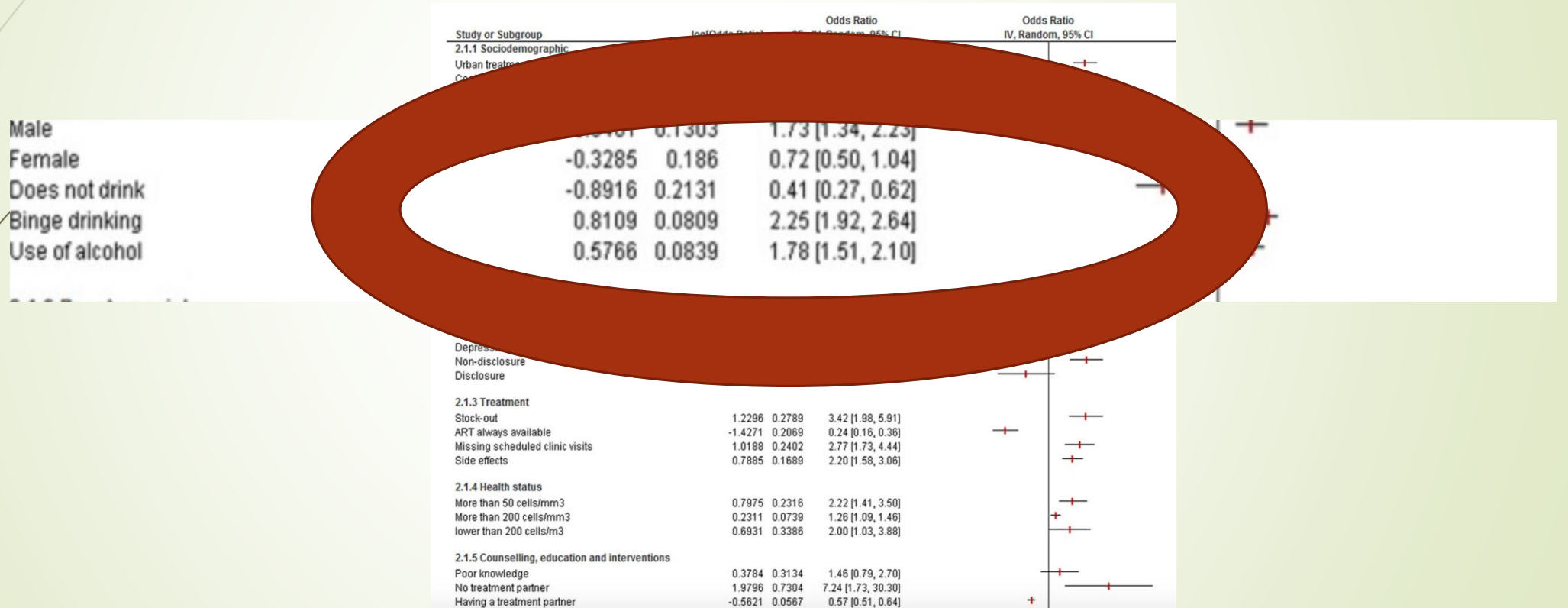


**Figure 2.** Alcohol consumption may facilitate human immunodeficiency virus (HIV) transmission through risky sexual behaviour, increased HIV shedding, and increased inflammation at mucosal sites.

Note: STD, sexually transmitted disease.

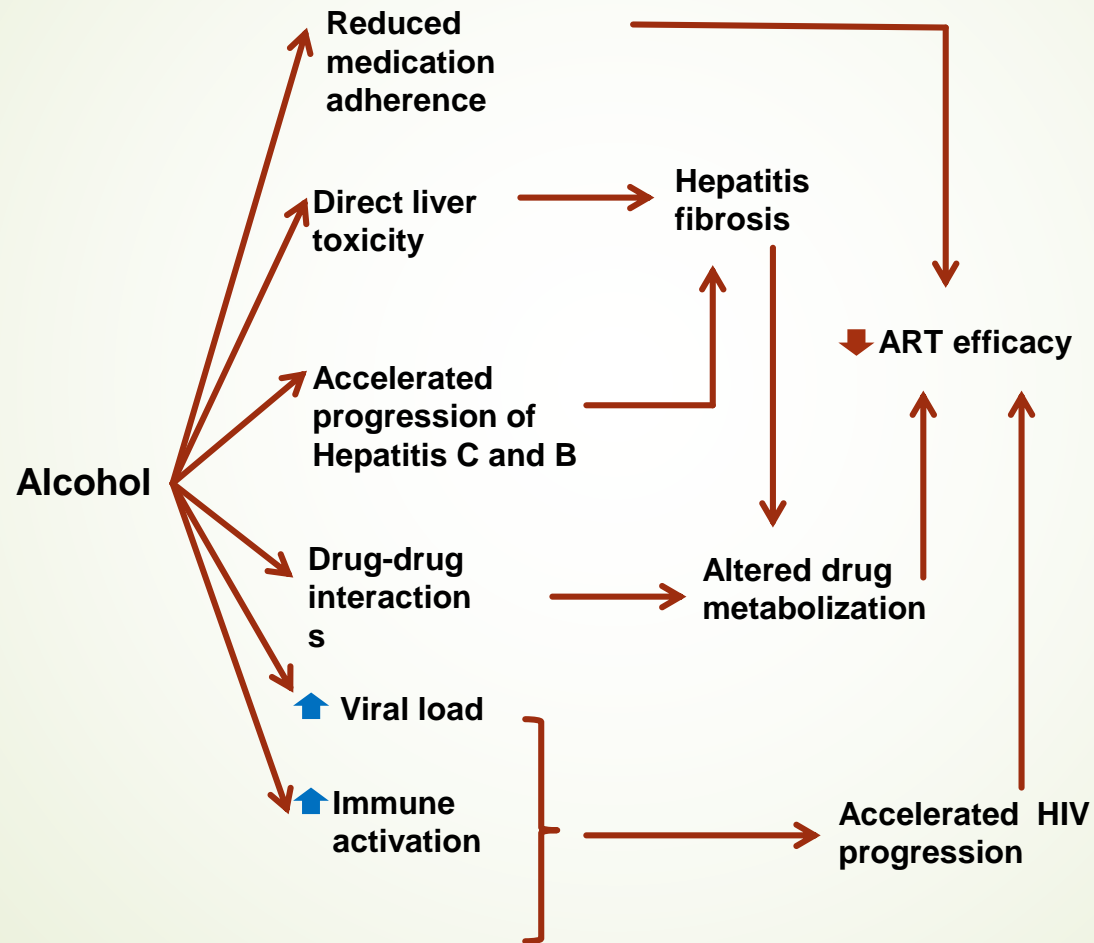
3 courtesy of NIAAA

# Drinking and adherence



Courtesy of NIAAA

# Mechanisms of alcohol-induced impairment of the efficacy of antiretroviral therapy



Mechanisms of the alcohol induced impairment of the efficacy of antiretroviral therapy (ART)  
Courtesy of NIAAA



# AUDs assessments

## **AUDIT-10 item questionnaire**

- designed by WHO to assess AUDs in primary care settings
- it has been validated in HIV populations

## **AUDIT C- first 3 questions on the AUDIT**

- assesses consumption
- easy and being used more widely

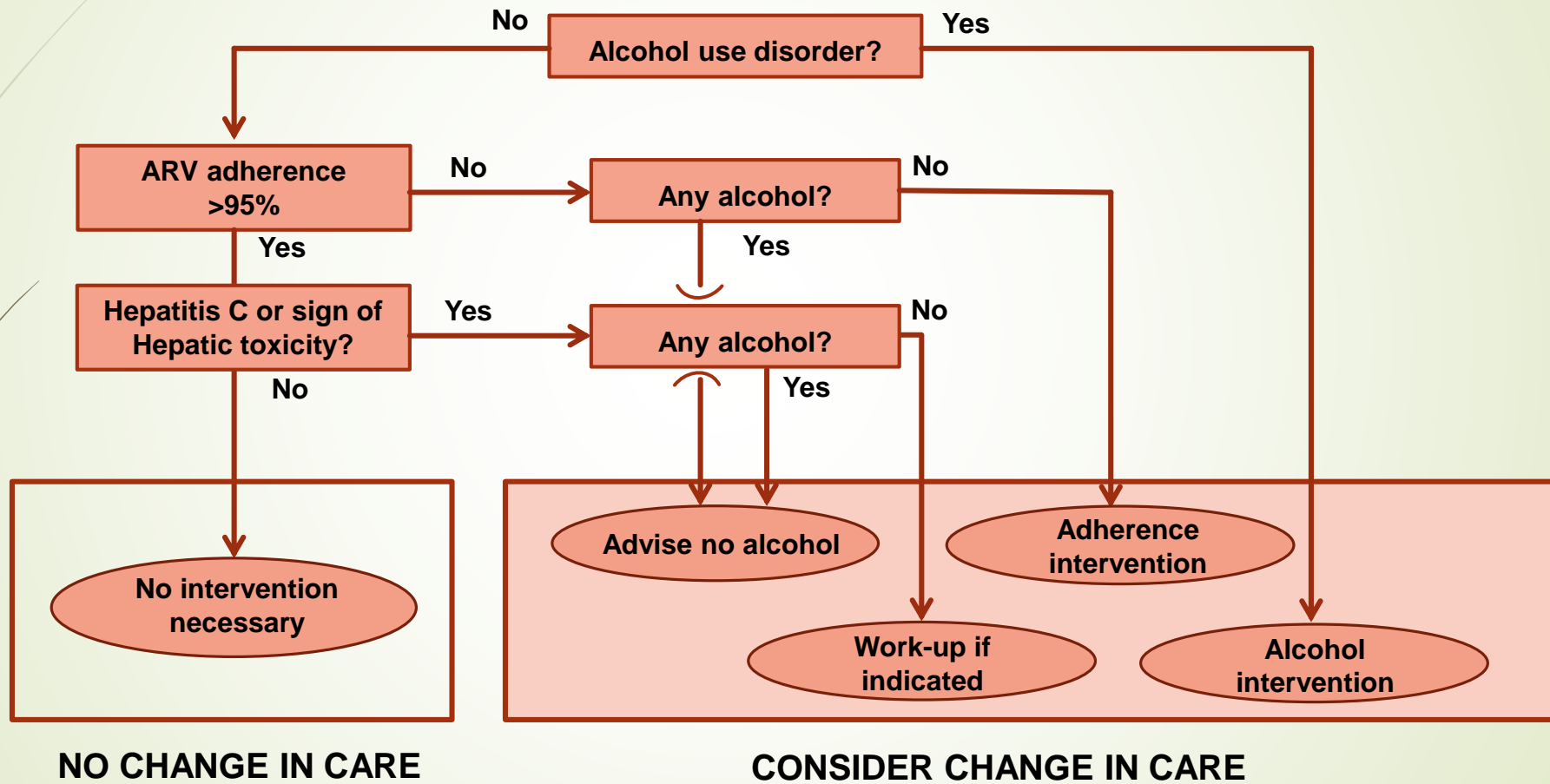
## **CAGE- 4 questions that assess dependence**

- not useful in at risk and hazardous use

## **Biomarkers-GGT, MCV, PEt**

## **VACS Index- helps to assess all cause morbidity and mortality**

# Algorithm for alcohol and adherence interventions





# Way forward

Country HIV/AIDS policies, programs and strategies to include alcohol and substance use behavioural changes strategies

Include alcohol and substance use screening and brief interventions in HIV Care programs

Validation of alcohol and substance use screening tools

Task sharing and upskilling strategies important

Mental health and HIV care integration key .....



# References

Kahler CW, Liu T, Cioe PA, et al. Direct and Indirect Effects of Heavy Alcohol Use on HIV Treatment Outcomes in a Longitudinal Study of HIV Patients on ART. *AIDS Behav.* 2017;21(7):1825-1835.

Galvan FH, Bing EG, Fleishman JA, et al. The prevalence of alcohol consumption among people with HIV in the United States: results from the HIV Cost and Services Utilization Study. *Alcohol.* 2002;63(2):179-186.

Azar MM, Springer SA, Meyer JP, Altice FL. A systematic review of the impact of alcohol use on HIV treatment outcomes, adherence to antiretroviral therapy and health care utilization. *Drug Depend.* 2010;112(3):178-193.

Hahn JA, Samet JH. Alcohol and HIV disease progression: weighing the evidence. *Alcohol.* 2010;7(4):226-233.

Braithwaite RS, Bryant KJ. Influence of alcohol consumption on adherence to antiretroviral therapy and survival. *Alcohol Res Health.* 2010;33(3):280-287.

McGinnis KA, Fiellin DA, Tate JP, et al. Number of Drinks to "Feel a Buzz" by HIV-Infected Men. *AIDS Behav.* 2016;20(3):504-511.

Morojele NK, Kachieng'a MA, Mokoko E, et al. Alcohol use and sexual behavior among bar and shebeen patrons in Gauteng province, South Africa. *Soc Sci Med.* 2010;70(11):1705-1712.

Theall KP, Amedee A, Clark RA, Dumestre J, Kissinger P. Alcohol consumption and HIV risk reduction among injection drug users in the United States. *JAMA.* 2009;301(11):1155-1162.



Thank YOU

