

Epidemiología y Prevención  
de precisión

DEL 3 AL 6 DE SEPTIEMBRE DE 2019  
FACULTAD DE MEDICINA Y CIENCIAS DE LA SALUD  
OVIEDO 2019



XXXVII REUNIÓN ANUAL DE LA SEE  
XIV CONGRESSO DA APE  
XVIII CONGRESSO SESPAS

# Effect of alcohol on sexual risk behaviors: Data from OKAPI prospective cohort study



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Funding: Spanish Government. Fondo de Investigación en Salud (PI16/01908); Navarra Government (045-2015); Institute for Culture and Society (ICS) of the University of Navarra.

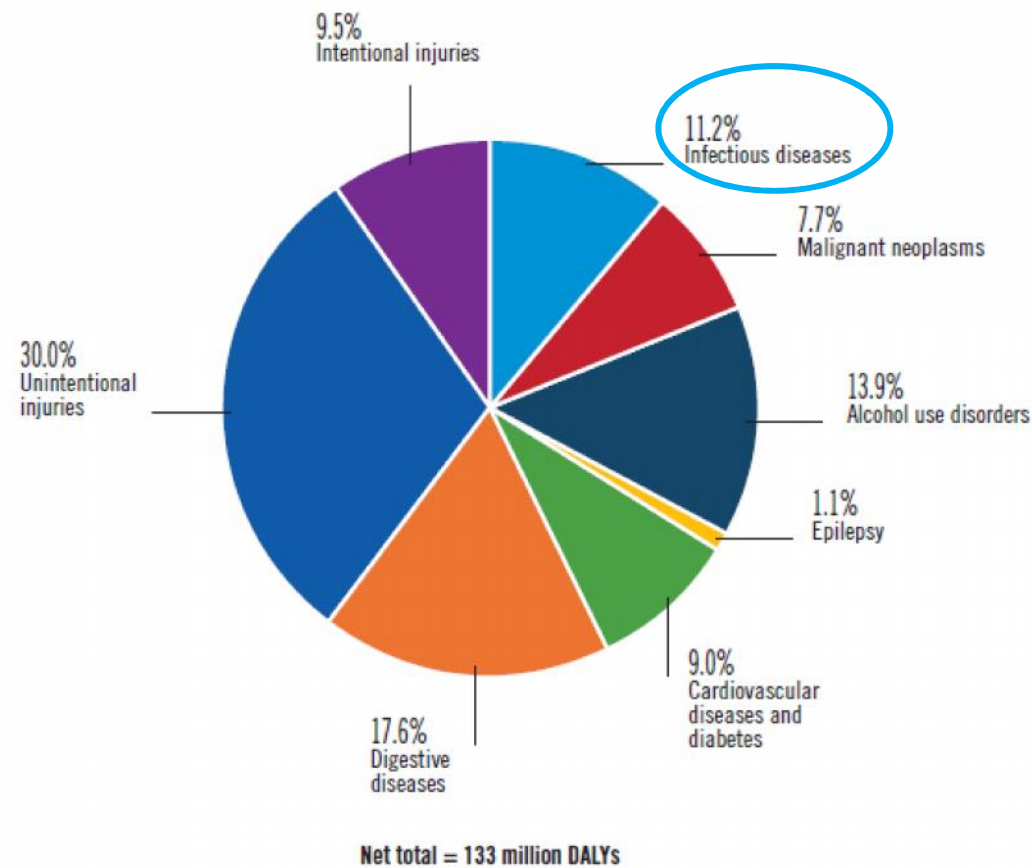
\*No conflict of interests



# 1. Background. Alcohol consumption – Health



- One of the leading risk factors worldwide
- >200 health conditions affected

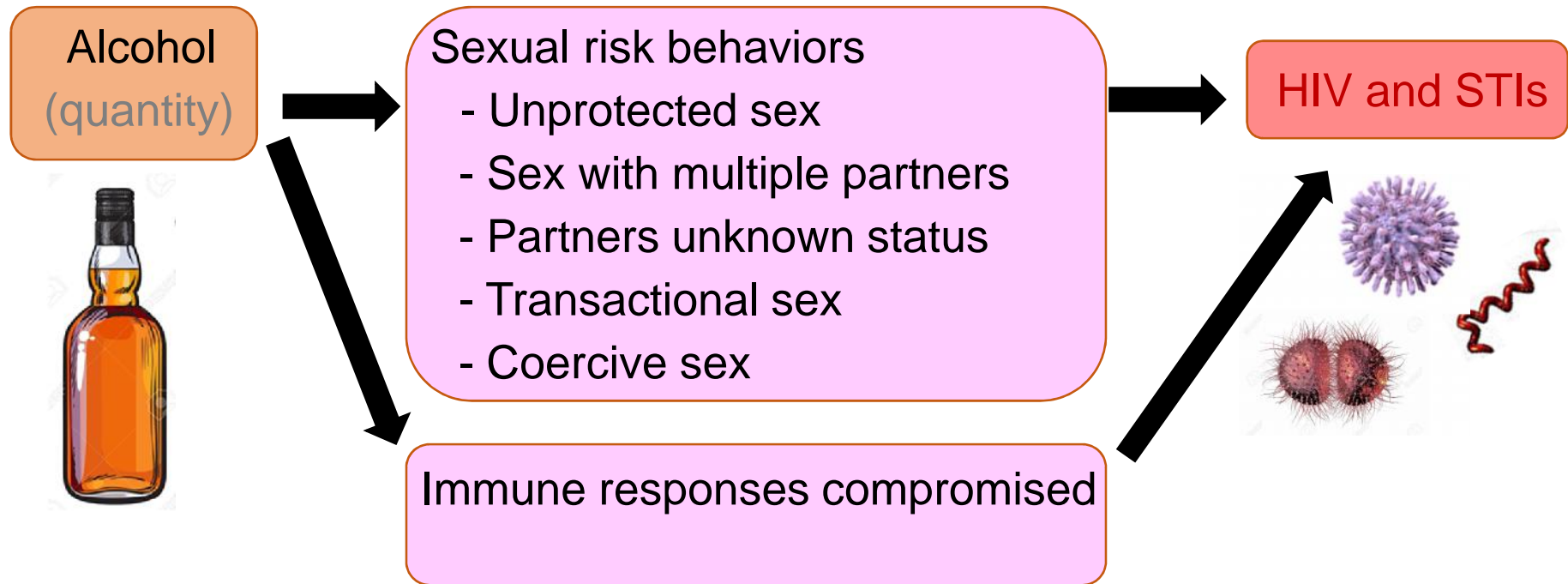


Distribution of the alcohol-attributable burden of disease, as a percentage (in %) of all alcohol-attributable disability-adjusted life years (DALYs), by broad disease category, 2016

# 1. Background



# 1. Background. Alcohol – HIV/STIs



1. Rehm J et al. Popul Health Metr. 2017 Feb 10;15(1):4.
2. Shuper PA et al. Alcohol Alcohol. 2010 Mar-Apr;45(2):159-66.
3. Bagby GJ et al. Alcohol Res. 2015;37(2):287-97.
4. Culbreth R et al. AIDS Behav. 2019 Mar 1. [Epub ahead of print]
5. Miguez et al. Addiction Biology (2003) 8, 33 – 37
6. [http://www.croiwebcasts.org/console/player/41153?mediaType=audio&&crd\\_fl=0&ssmsrq=1562053185187&ctms=5000&csmsrq=5456](http://www.croiwebcasts.org/console/player/41153?mediaType=audio&&crd_fl=0&ssmsrq=1562053185187&ctms=5000&csmsrq=5456)



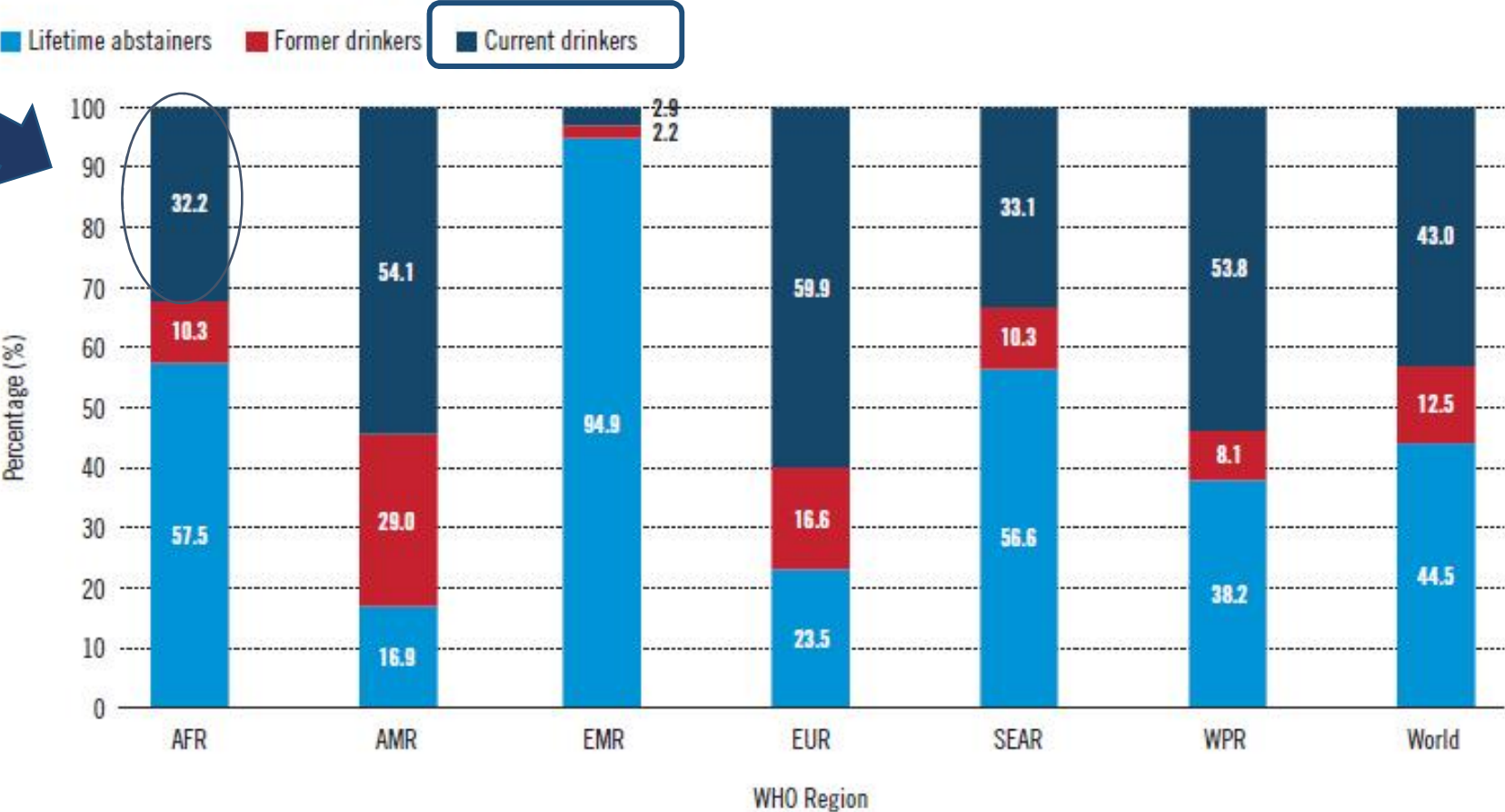
# Risk Factors Associated with HIV, Sexually Transmitted Infections (STI), and HIV/STI Co-infection Among Youth Living in the Slums of Kampala, Uganda

	Unadjusted OR			Adjusted OR		
	STI only	HIV only	HIV/STI co-infection	STI only	HIV only	HIV/STI co-infection
Problem drinking						
Yes	<b>2.40 (1.53, 3.77)</b>	1.98 (0.70, 5.66)	<b>3.25 (1.56, 6.78)</b>	<b>1.80 (1.08, 2.98)</b>	1.96 (0.62, 6.14)	<b>2.55 (1.08, 6.02)</b>
No, but drinker	<b>2.26 (1.47, 3.49)</b>	1.75 (0.61, 4.96)	<b>3.71 (1.86, 7.40)</b>	<b>1.97 (1.23, 3.15)</b>	1.46 (0.48, 4.39)	<b>3.43 (1.60, 7.36)</b>
Non-drinker	1.00	1.00	1.00	1.00	1.00	1.00



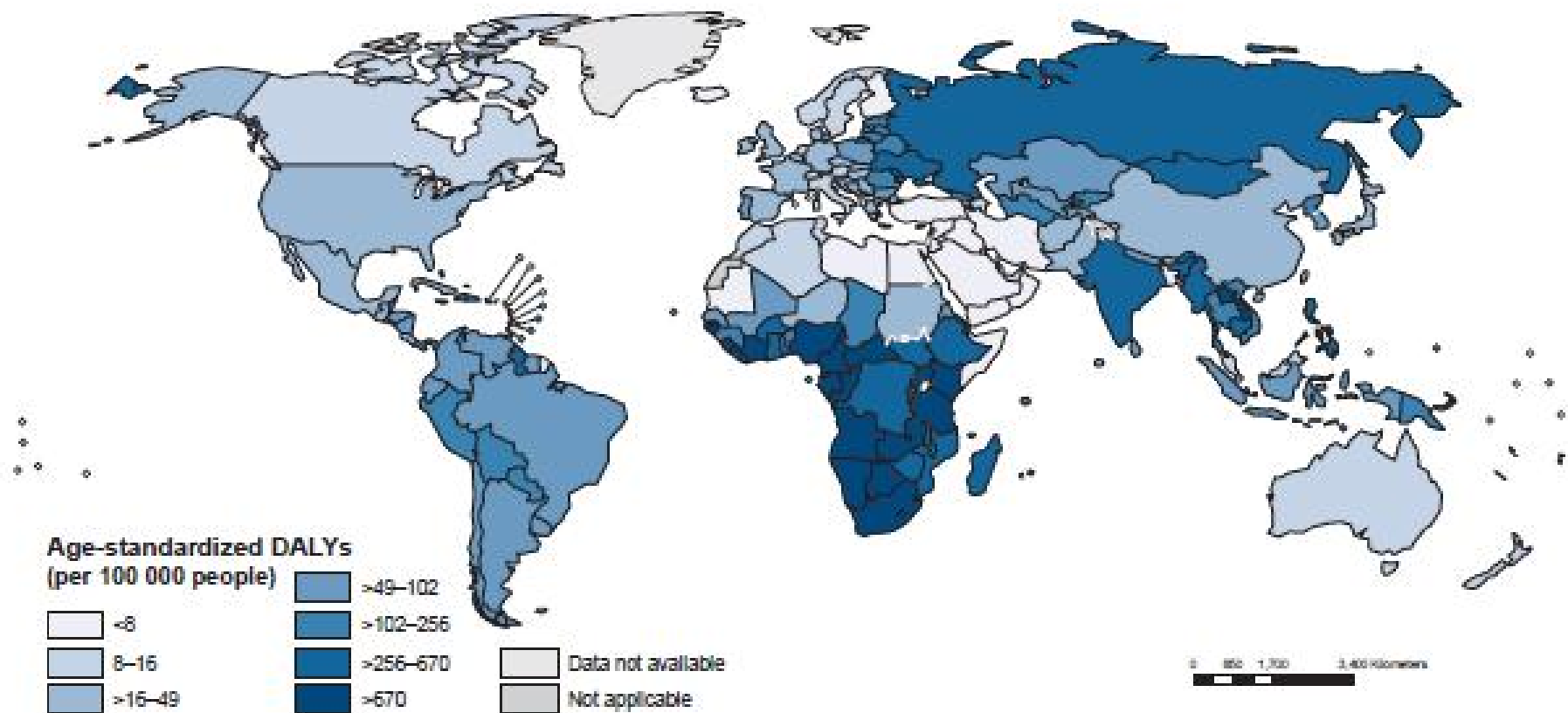
# 1. Background. Alcohol consumption

Percentage of current drinkers, former drinkers and lifetime abstainers (in %) among the total population (15+ years) by WHO region and the world, 2016



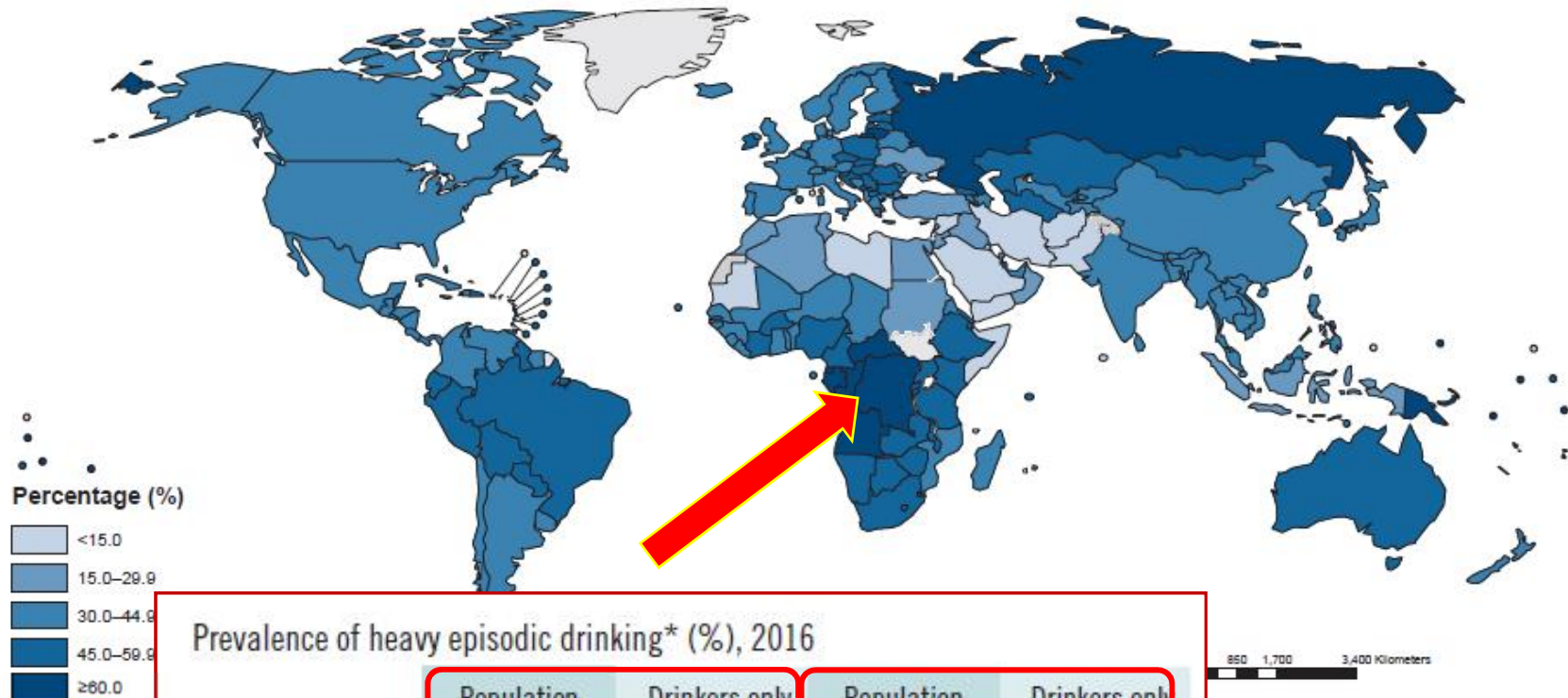
# 1. Background. Alcohol - Infections

Global age-standardized alcohol-attributable infectious disease disability-adjusted life years (DALYs), 2016

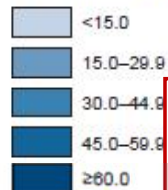


# 1. Background. D.R.Congo

**Figure 3.8** Prevalence (in %) of heavy episodic drinking (HED) among current drinkers (15+ years), 2016



Percentage (%)



Prevalence of heavy episodic drinking\* (%), 2016

	Population (15+ years)	Drinkers only (15+ years)	Population (15–19 years)	Drinkers only (15–19 years)
Males	42.5	86.3	29.7	88.5
Females	14.0	58.6	8.5	62.3
Both sexes	28.0	77.1	19.1	81.0

\* Consumed at least 60 grams or more of pure alcohol on at least one occasion in the past 30 days.

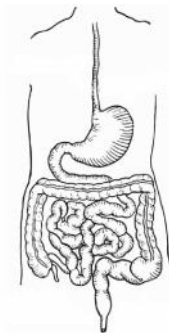
# 1. Background. D.R.Congo

## HEALTH CONSEQUENCES: MORTALITY AND MORBIDITY

Prevalence of alcohol use disorders and alcohol dependence (%), 2016\*

	Alcohol use disorders**	Alcohol dependence
Males	9.1	3.1
Females	1.0	0.4
Both sexes	5.0	1.7
WHO African Region	3.7	1.3

\* 12-month prevalence estimates (15+); \*\*including alcohol dependence and harmful use of alcohol.



# The Role of Alcohol Expectancies in Sexual Risk Behaviors Among Adolescents and Young Adults in the Democratic Republic of the Congo



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1,396 adolescents (15-19yr) and young adults (20-24yr)  
Kinshasa



Sexual risk behaviors and associations with drinking status, by gender

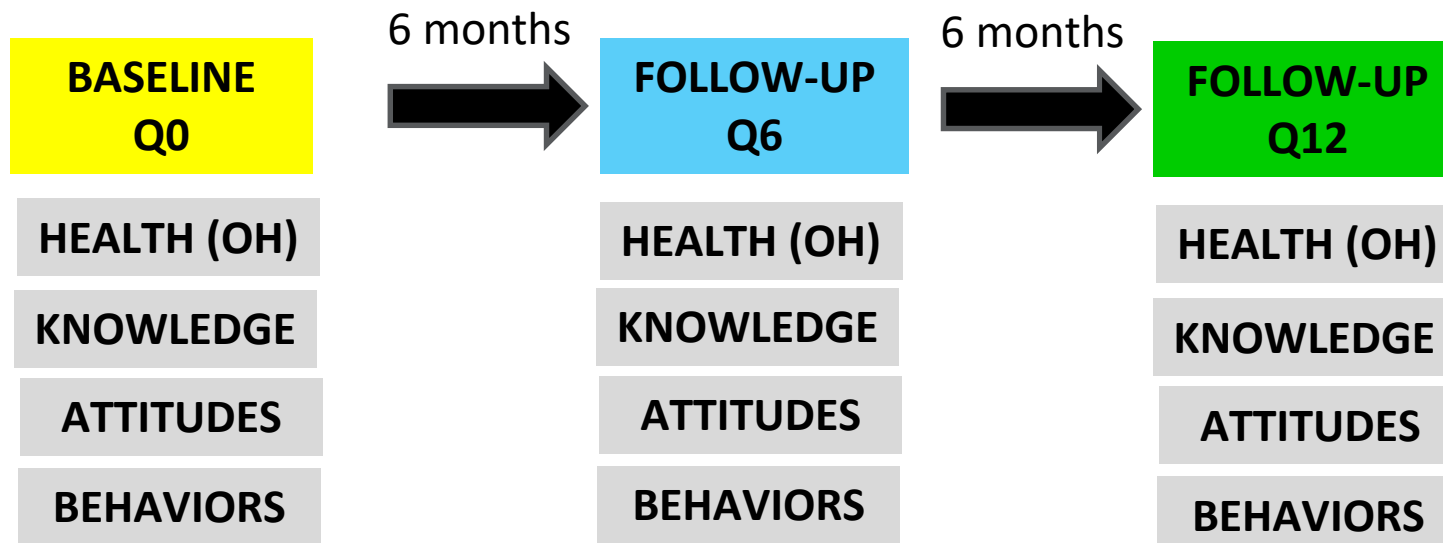
	Males n = 596			Females n = 800		
	Drinker n = 268 (%)	Nondrinker n = 328 (%)	Age-adjusted odds ratio (95% CI) <sup>a</sup> (ref = nondrinker)	Drinker n = 246 (%)	Nondrinker n = 554 (%)	Age-adjusted odds ratio (95% CI) <sup>a</sup> (ref = nondrinker)
Ever had sex	233 (86.9)	169 (51.5)	5.92 (3.78–9.23) <sup>***</sup>	183 (74.4)	63 (25.6)	2.81 (1.93-4.08) <sup>***</sup>
Sexual debut under age 15	78 (29.1)	41 (12.5)	2.95 (1.92–4.53) <sup>***</sup>	28 (11.4)	28 (5.1)	3.06 (1.73-5.41) <sup>***</sup>
Multiple sex partners in last 12 months	27 (8.23)	95 (35.5)	5.47 (3.40–8.82) <sup>***</sup>	35 (14.2)	36 (6.5)	2.20 (1.34-3.62) <sup>*</sup>
Unprotected sex in the last 12 months	182 (67.9)	117 (35.7)	3.41 (2.39–4.89) <sup>***</sup>	153 (62.2)	231 (41.7)	2.05 (1.47-2.88) <sup>***</sup>

## 2. Objectives

1. Analyze the prevalence of **alcohol-related sexual risk behaviors**.
2. Evaluate the association between **sociodemographic and behavioral factors** and alcohol-related sexual risk behaviors.

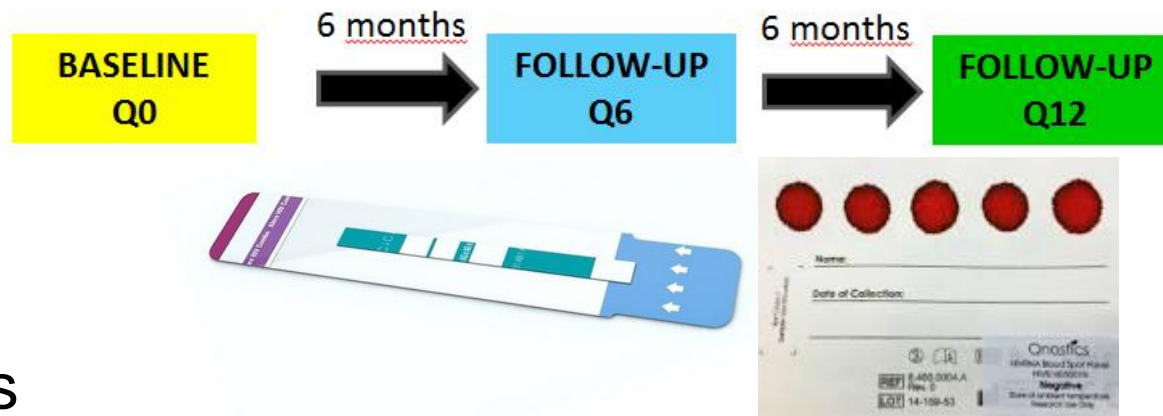
### 3. Methods. Study design and population

- OKAPI (**O**bservational **K**inshasa **A**IDS **P**revention **I**nitiative) project
- Prospective cohort study
- Monkole Hospital, Kinshasa (D.R.Congo)
- Participants aged 15-59 yr.
- HIV Voluntary Counseling and Testing (VCT)



### 3. Methods. Data collection

- HIV test



- Interviews

- Avec quelle fréquence avez-vous consommé une boisson contenant l'alcool (bière, vin, whisky) en 1 semaine normale?  
 Jamais  Rarement  1 fois la semaine  1 fois par jour  2 fois par jour  Plus de 2 fois par jour
- Avec quelle fréquence vous est-il arrivé de consommer 5 bouteilles d'alcool ou plus endéans approximativement 2 heures?  
 Jamais  Rarement  Parfois  Souvent
- Sous l'effet d'une boisson alcoolisée, vous est-il déjà arrivé(e) d'avoir



	<u>Jamais</u>	<u>Rarement</u>	<u>Souvent</u>
Une relation sexuelle que vous auriez <u>regrettée</u> ensuite?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Une relation sexuelle avec quelqu'un que vous ne <u>connaissiez</u> pas auparavant?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Une relation sexuelle non-protégée ( <u>sans condom</u> )?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Statistical analyses:**

**Baseline data (Q0):** Descriptive and multivariate analyses (Stata 12.0).

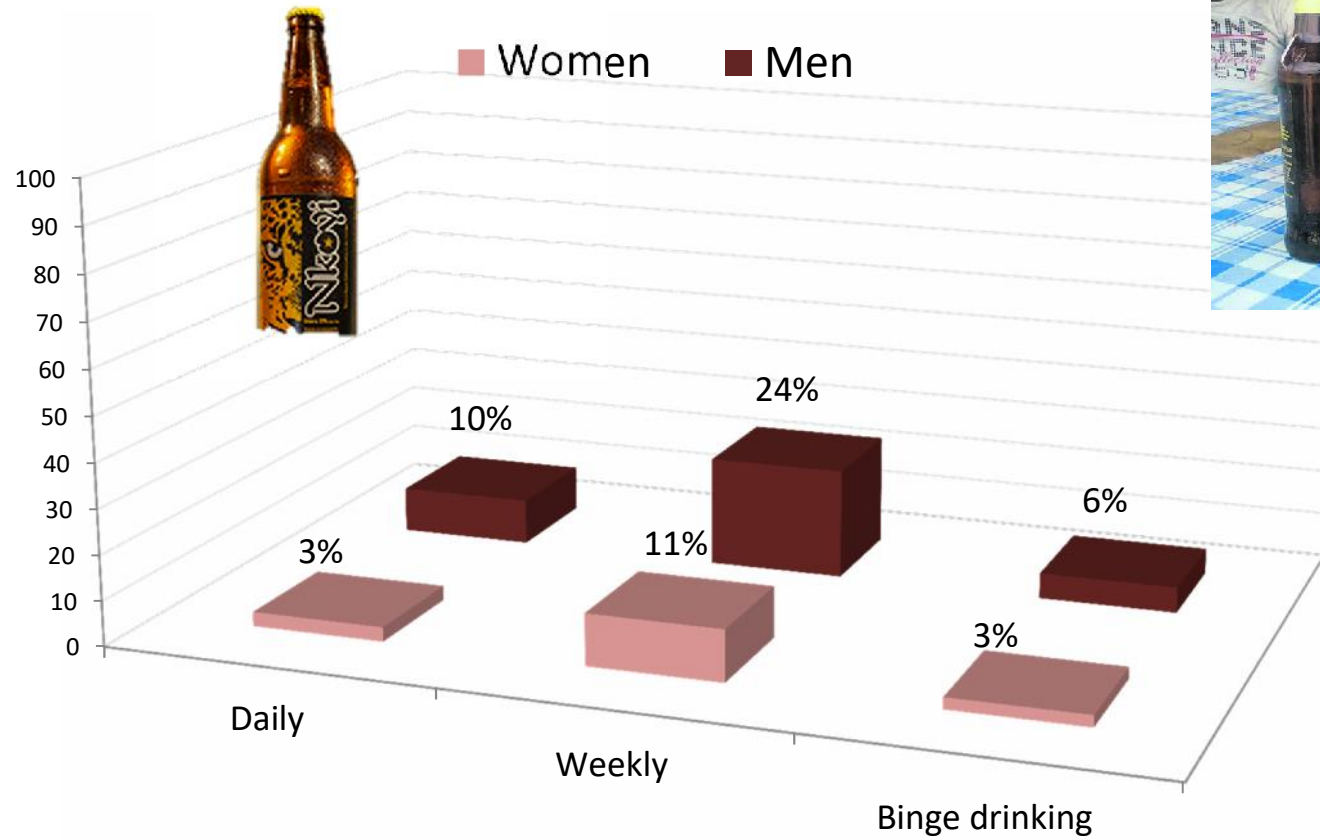
## 4. Results. OKAPI participants: baseline characteristics

- April 2016-April 2018:



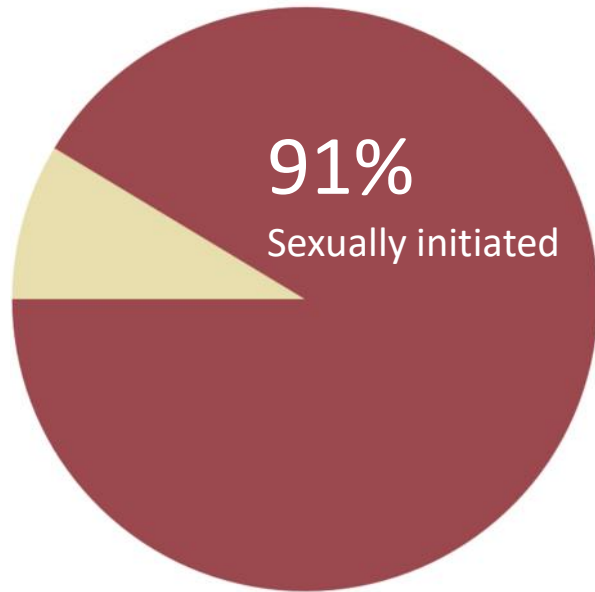
	Baseline (N=797)
<b>Sociodemographics (%)</b>	
Sex (female)	58
Age (years) (mean, SD)	30.2 ± 9.4
University studies	67
Perceive medium economic level	76
Religion	
Église de réveil	51
Catholic	27
Married	18
Media access (weekly/daily)	
Mobile phone	99
The Internet	78
<b>Health (%)</b>	
Perceived good health status	66
No/low HIV risk perception	77
HIV+ test	3

# 4. Results. Alcohol consumption



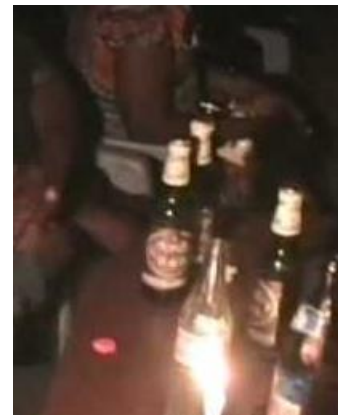
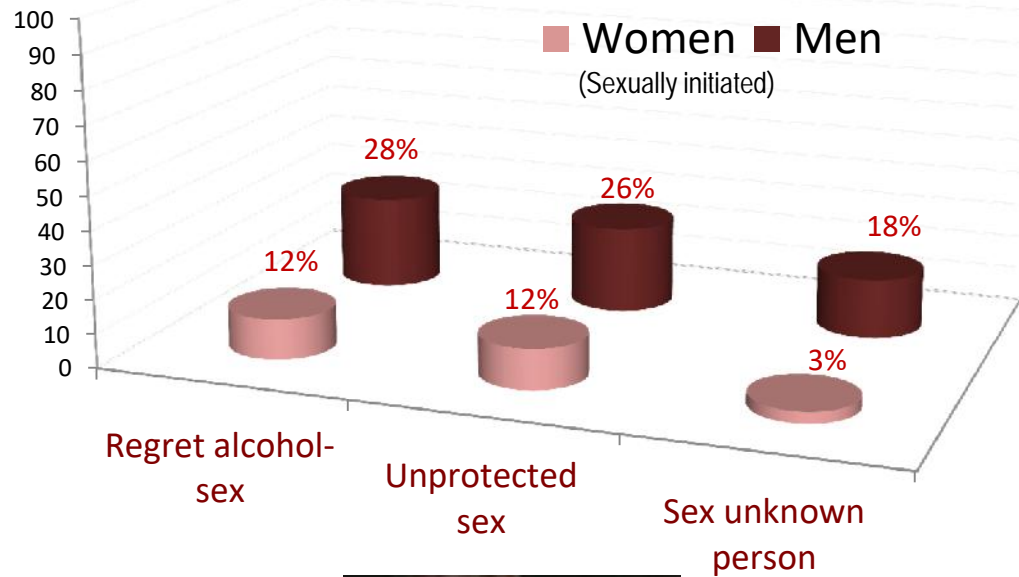
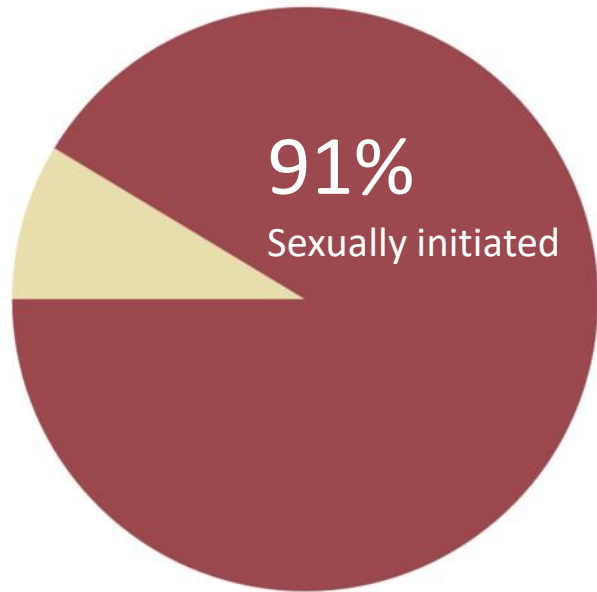
\* p<0,05

## 4. Results. Sexually initiated

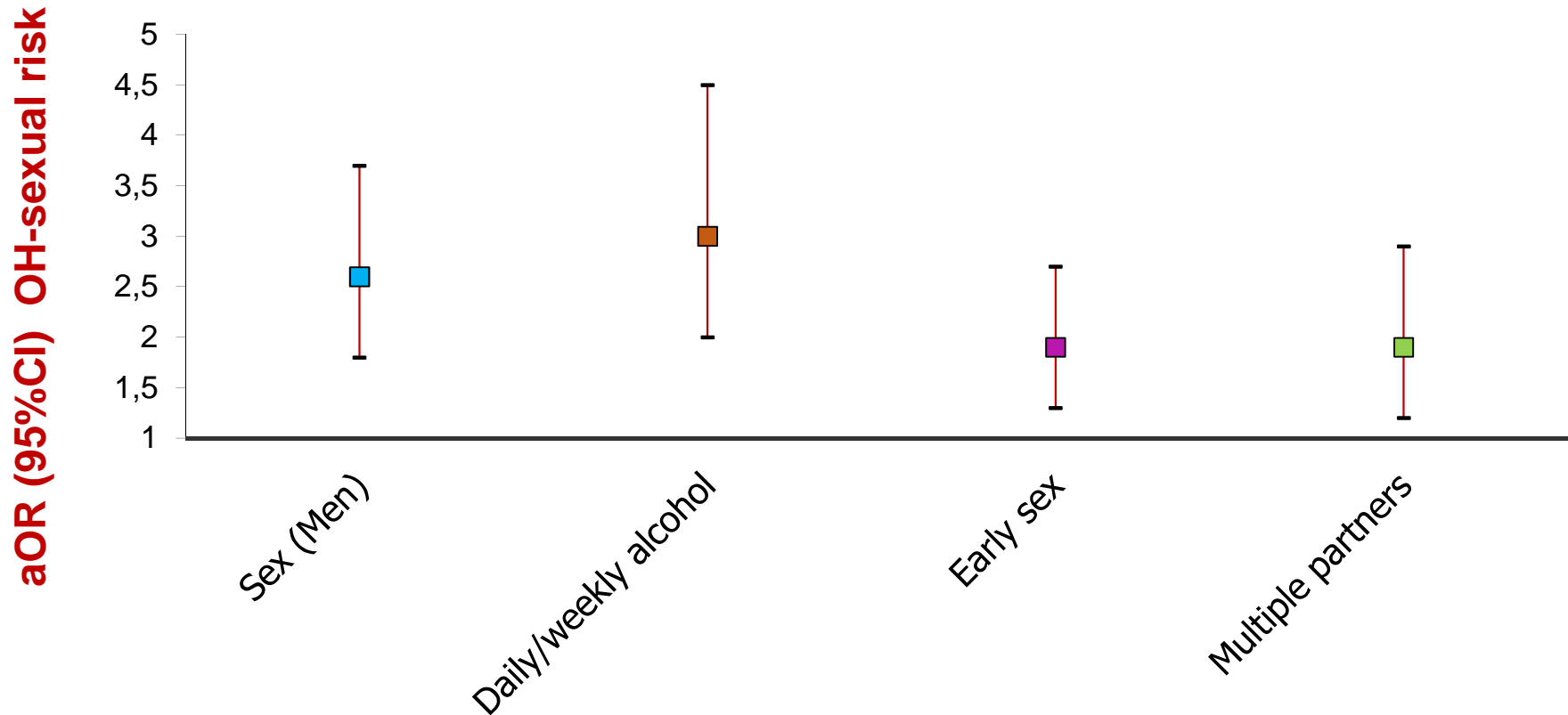


- Sex <15yr: 11%
- Multiple sexual partners: 24% men vs. 13% women  
20% adults vs. 12% youth
- Condom use: 2% consistent use.

# 4. Results. Alcohol consumption-related risk behaviors

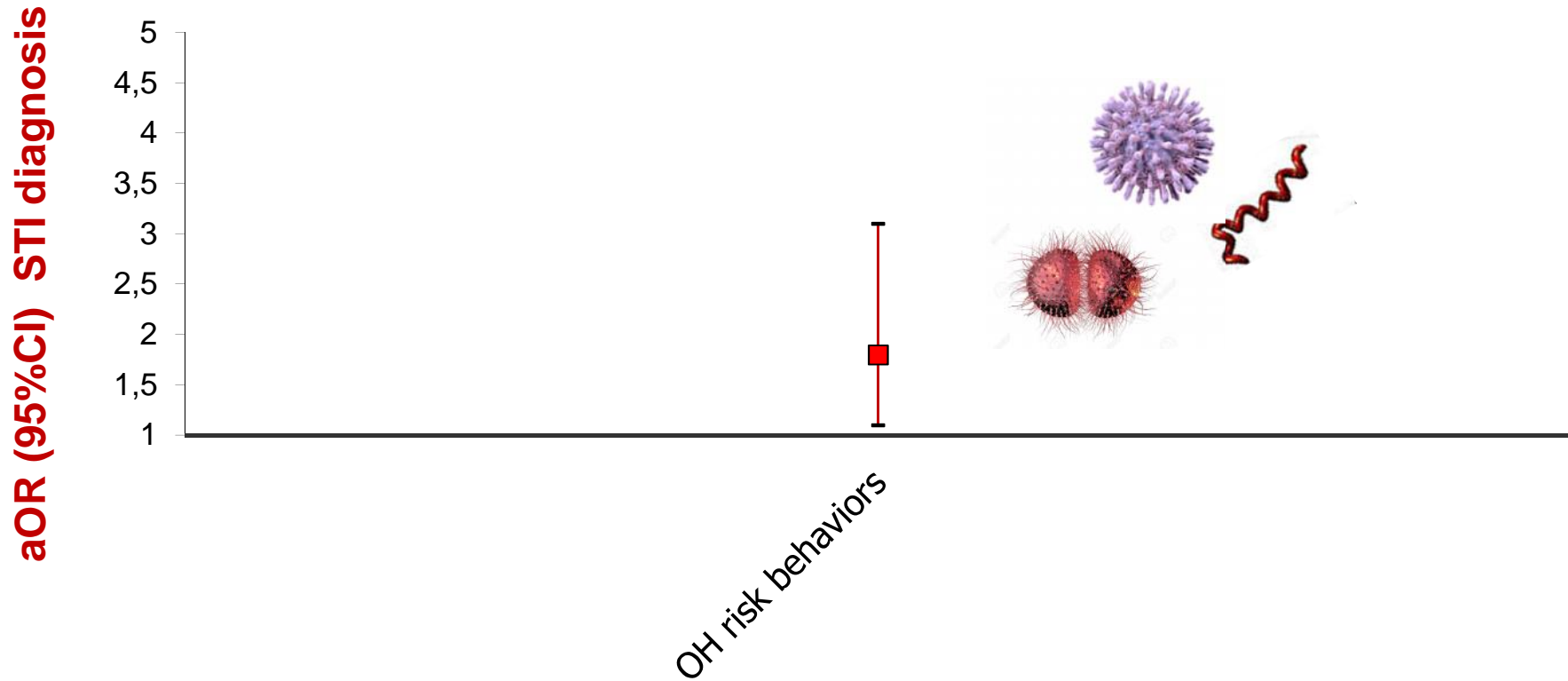


## 4. Results. Factors ---> Alcohol-related behaviours



\* Multivariate logistic regression including all variables in the model.

## 4. Results. Alcohol risk behaviors---> STI diagnosis



\* Multivariate logistic regression model, adjusted for sex, age, early sex, multiple partners, condom use, forced sex

## 5. Conclusions

Given the sexual risks associated with alcohol consumption, HIV VCT sessions as well as in the design of sexual preventive strategies in Kinshasa are needed.

