

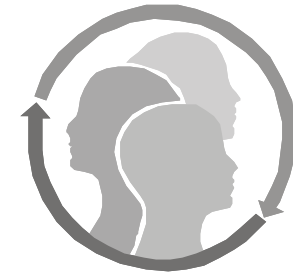
“Prevalence of HIV, syphilis, hepatitis B and C among adults with chronic mental illness: a national multicenter study in Brazil”

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**PROJETO
PESSOAS**

➤ **BRIEF BACKGROUND**

➤ **OVERVIEW OF *PESSOAS* PROJECT**

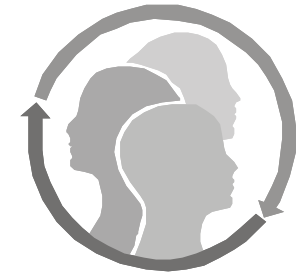
**(Pesquisa em Soroprevalência de Aids na Saúde Mental)
(AIDS Seroprevalence study in Mental Health)**

➤ **DESCRIPTIVE**

➤ **SEROPREVALENCE**

➤ **CONCLUSIONS**

“Prevalence of HIV, syphilis, hepatitis B and C among adults with chronic mental illness: a national multicenter study in Brazil”



**PROJETO
PESSOAS**

➤ **BRIEF BACKGROUND**

Sexually Transmitted Infections

Psychiatric Patients

➤ Vulnerability

Clinical Conditions
Social Conditions
Risky behavior



Increased exposure to STI



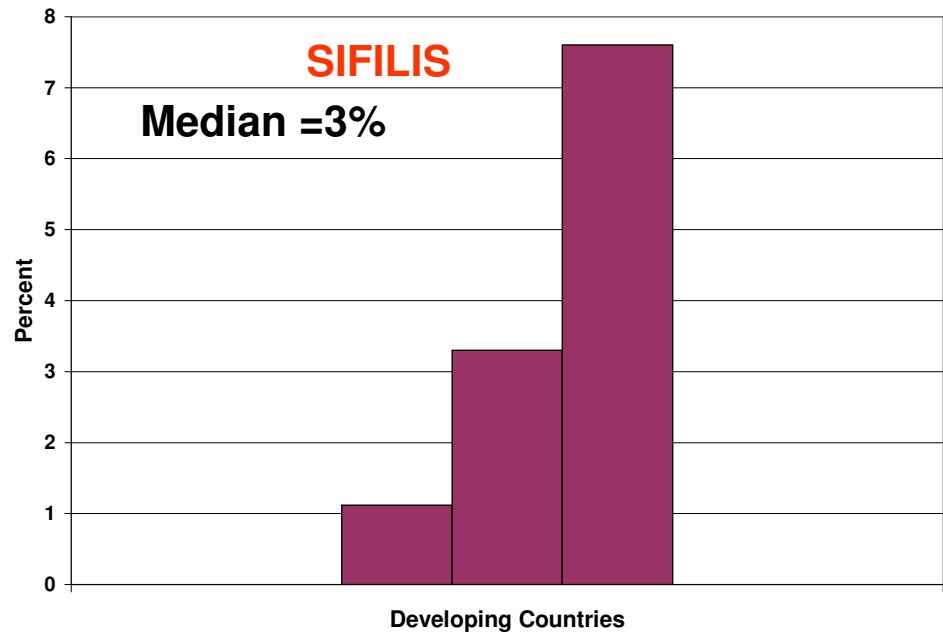
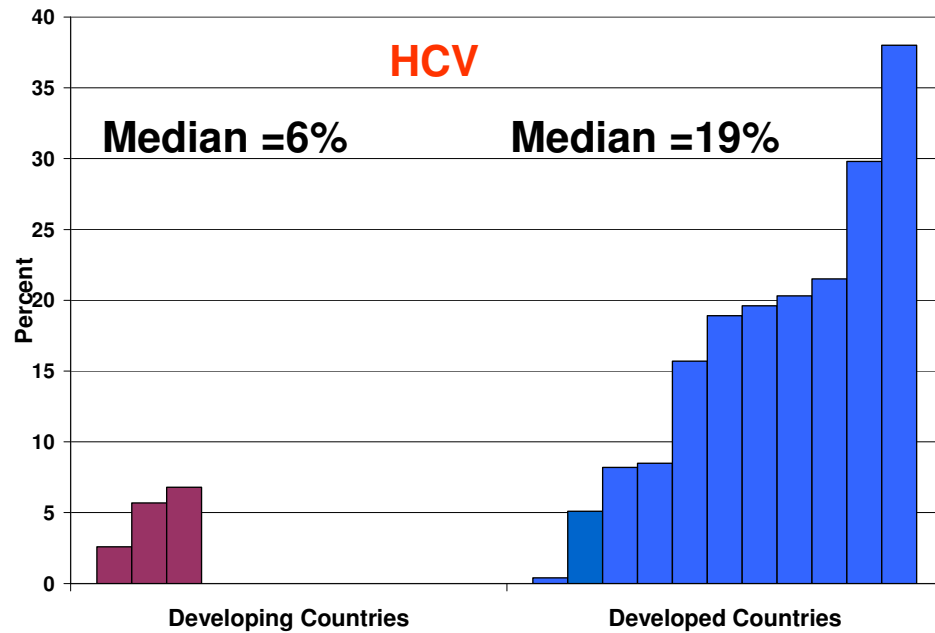
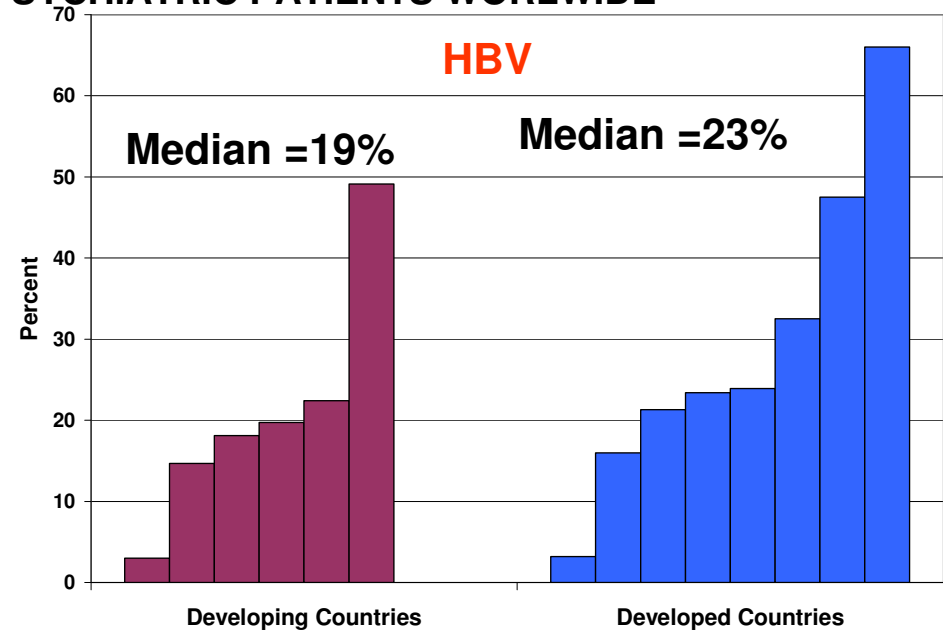
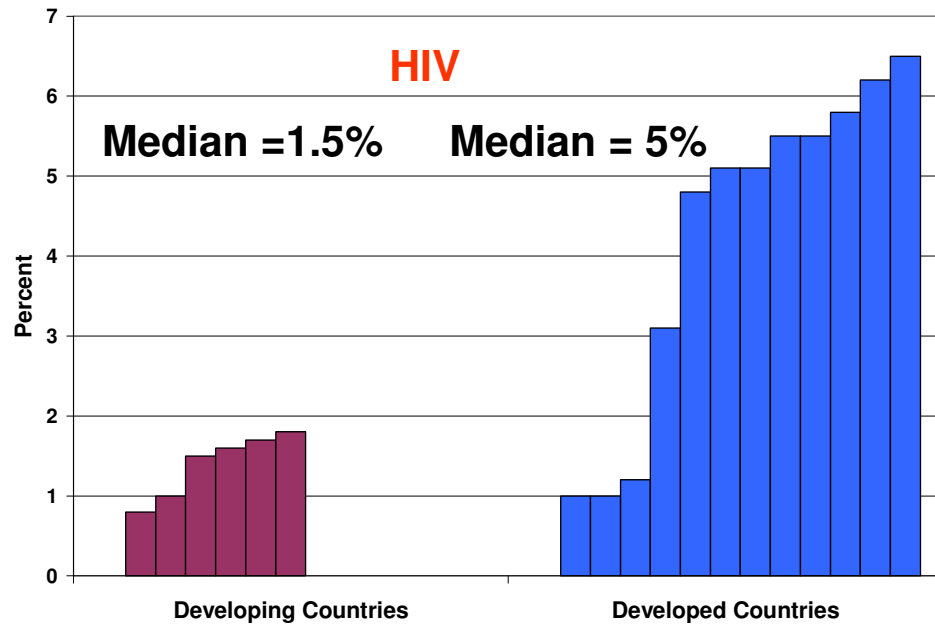
➤ Knowledge and Prevention

Lower risk perception
Poor knowledge
Isolation
Segregation



Low response to interventions

SEROPREVALENCE RATES AMONG PSYCHIATRIC PATIENTS WORLDWIDE



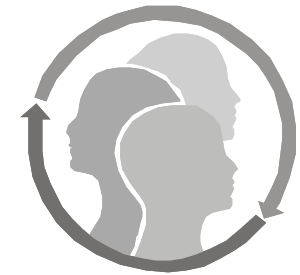
Selected behavior data among psychiatric patients worldwide

Sexually active 12 months	51%- 74%
Anal sex ever	13%- 84%
Inconsistent condom use 12 months	12%- 68%
Two or more partners 12 months	7%- 69%
Sex with high risk partner 12 months	2%- 58%
Exchange sex for money 12 months	2%- 48%
Drug or alcohol use during sex	5%- 45%

RATIONALE

- **Increased vulnerability and higher STI prevalence among mentally ill patients**
- **Need to establish **prevention** and **health care** strategies for both, AIDS and Mental Health Programs in Brazil**
- **Absence of representative risk behavior or STI seroprevalence data in Brazil or elsewhere**

“HIV seroprevalence and risk behavior among psychiatric patients: A national health service study in Brazil”



**PROJETO
PESSOAS**

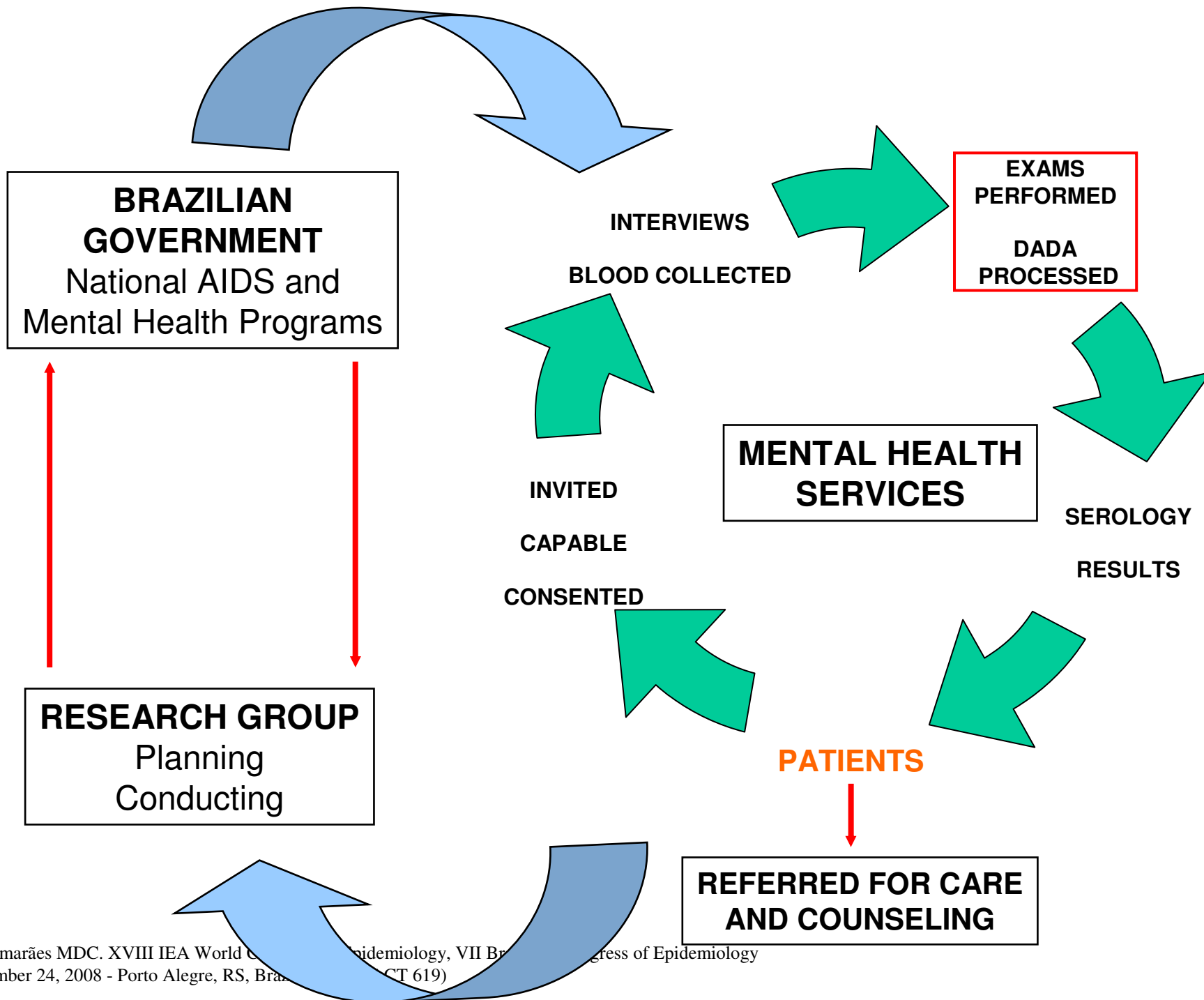
➤ **OVERVIEW OF *PESSOAS* PROJECT**

OBJECTIVES - *PESSOAS* Project **(*AIDS Seroprevalence in Mental Health*)**



-
- **To determine the prevalence of HIV, syphilis, and hepatitis B and C in a national representative sample of psychiatric patients under care in Brazil**

 - **To describe socio-demographic, behavioral, clinical aspects and **to explore potential factors associated with prevalent infection****



METHODS – *PESSOAS* PROJECT

➤ ***DESIGN:***

Cross-sectional national sample

➤ ***POPULATION:***

Psychiatric patients hospitalized in public hospitals or under care in outpatient units (CAPS) randomly selected

Eligibility criteria:

- ✓ **Adults (≥ 18 years old)**
- ✓ **Hospitalized for at least seven days (Inpatients) OR**
- ✓ **Under care in CAPS units [Except CAPS Ad]**
- ✓ **Capable of answering the questionnaire**
- ✓ **Written consent to participate**



3400 patients

PROCEDURES

SEMI-STRUCTURED INTERVIEW

MEDICAL CHARTS

SEROLOGY

Hepatitis B Surface Antigen (HBsAg) (ELISA, BioMérieux®)

Hepatitis B Total Antibody (Anti-HBc) (ELISA, BioMérieux®)

Hepatitis C antibody (Anti-HCV) (ELISA, Adaltis®)

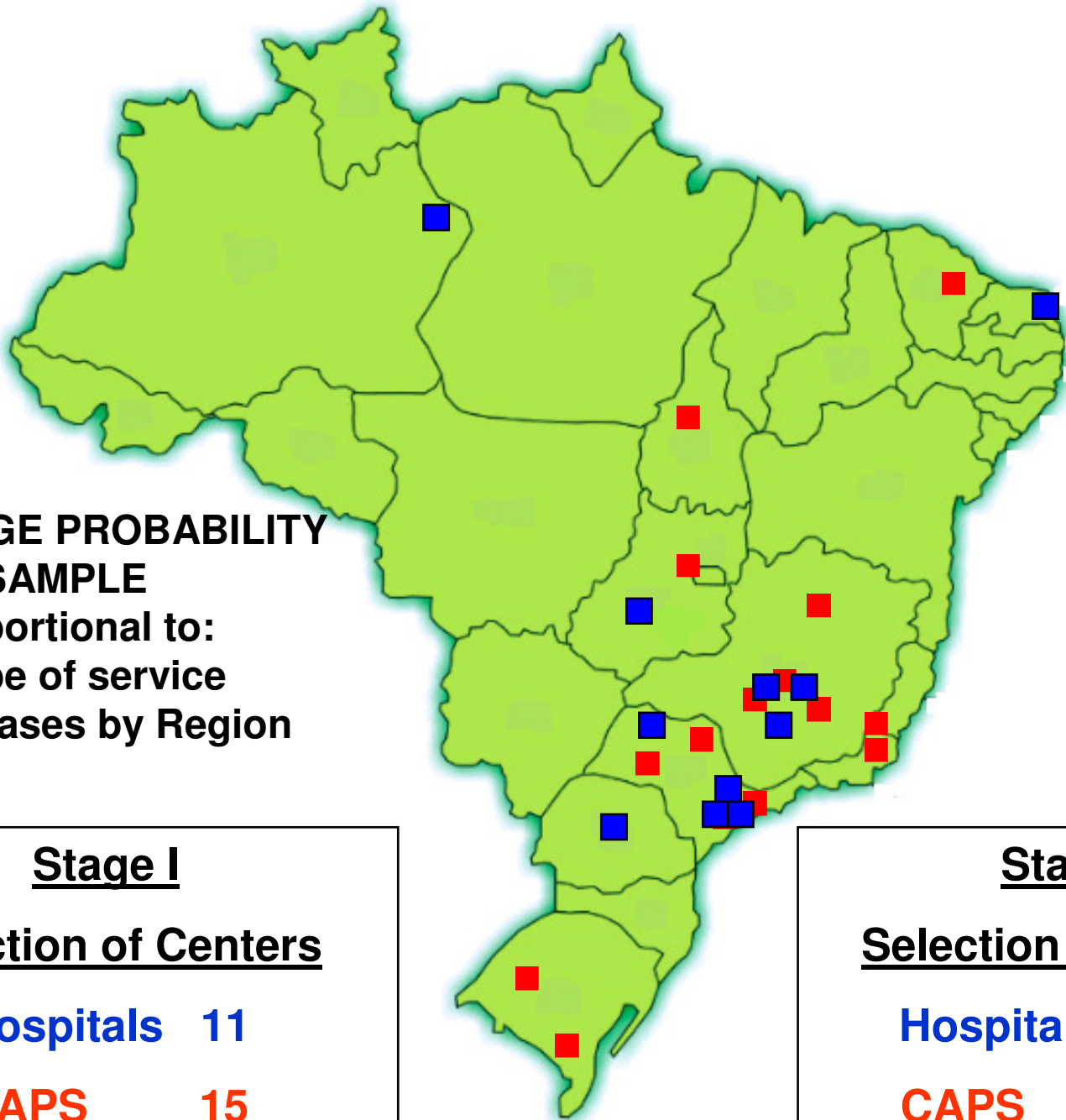
HIV (Anti-HIV 1 e 2) (ELISA, Dade Bhering®) & WB (Genelabs Abbott®)

Syphilis (VDRL, Wiener Lab®) & Hemagglutinin – HAI, BioMérieux®).

HEALTH SERVICE EVALUATION

QUALITATIVE INTERVIEW

Guimarães MDC et al, Reliability and validity of a questionnaire on vulnerability to sexually transmitted infections among adults with chronic mental illness - PESSOAS Project. *Rev Bras. Psiquiat.* 2008; 30(1):55-59.



TWO STAGE PROBABILITY SAMPLE

Proportional to:

- ✓ Type of service
- ✓ AIDS cases by Region

<u>Stage I</u>	
<u>Selection of Centers</u>	
Hospitals	11
CAPS	15

<u>Stage II</u>	
<u>Selection of patients</u>	
Hospitals	1281
CAPS	2119

ANALYSIS

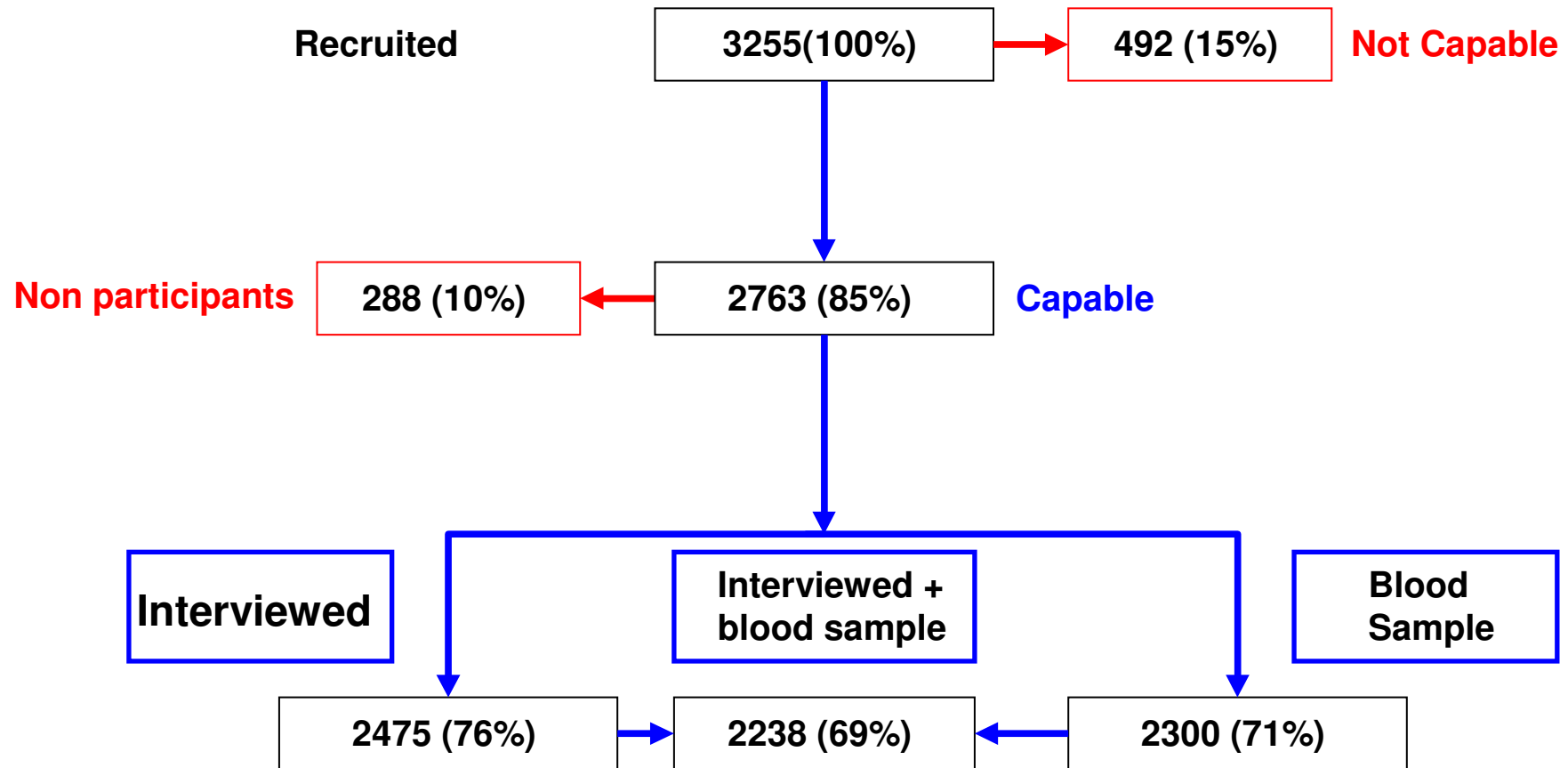
- **DESCRIPTIVE**
- **SEROPREVALENCE**
 - Corrected for clustering by Huber/White Sandwich (Rogers, 1993)
 - Weighted by sample size relative to the total population
- **Associations with PREVALENT infection:**
 - Multivariate Poisson regression
 - Prevalence ratio with 95% confidence interval
 - Corrected for clustering by Huber/White Sandwich (Rogers, 1993)
 - Weighted by sample size relative to the total population
- **Database: Paradox / Analysis: SAS, STATA**



**PROJETO
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➤ **RESULTS**

RECRUITMENT – PESSOAS PROJECT, 2007



Selected health service characteristics (n=26), PESSOAS PROJECT

	%
Insuficient psychiatric medication	19
Insuficient clinical care medication	42
Structured reference and counter-reference system	19
Unsatisfactory reference system	69
Unsatisfactory counter-reference system	82
Any sexual education program	27
STI prevention programs	31
Condom distribution	31
Existing HIV positive patients	62
Specific group therapy for HIV positive patients	12

Melo APS, Acurcio FA, Cherchiglia ML, Veloso CCG, Guimarães MDC. Evaluation of mental health services: care and prevention of sexually transmitted diseases within PESSOAS(*) Project context. Rev Med Minas Gerais 2007; 17(1/2 Supl 4): S240-S248

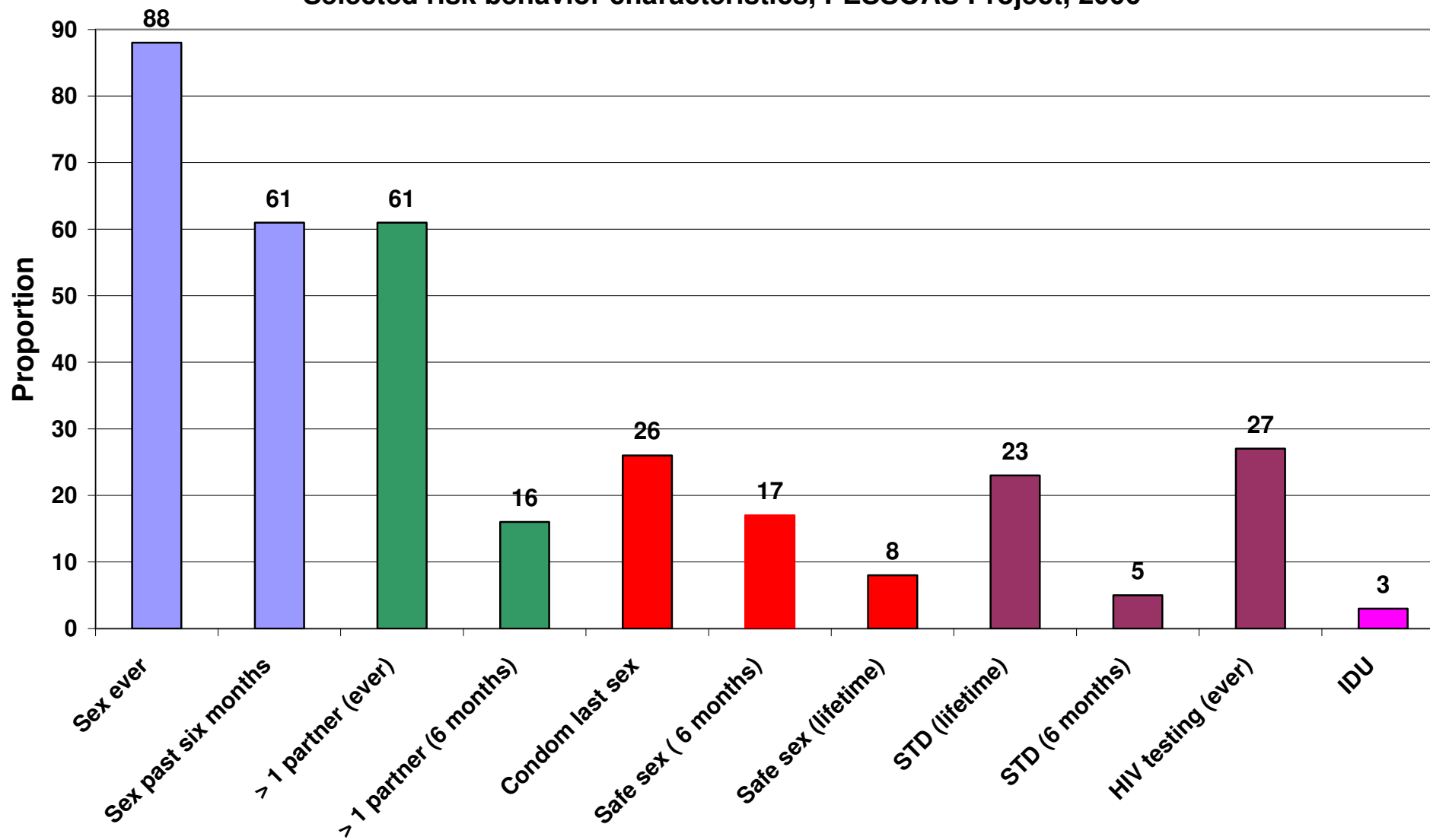
DESCRIPTIVE RESULTS (n=2475), PESSOAS PROJECT

<i>Sociodemographics</i>	(%)
CAPS	(64)
Women	(52)
White or mulato	(84)
Singles/Separated	(67)
Age > 39 years old	(56)
Didn't know how to read or write	(18)
Schooling < 4 years	(34)
Monthly family income (< US\$ 150)	(35)
No health insurance	(90)
History of homelessness	(18)
Currently living in institutional setting	(10)

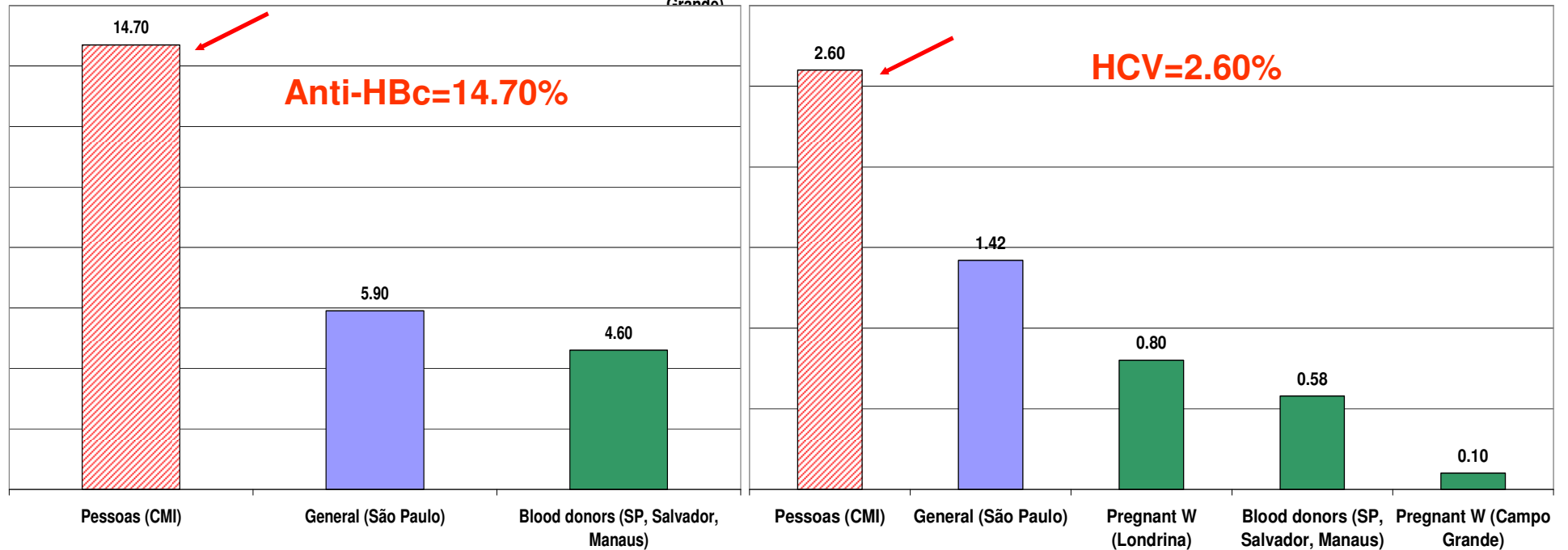
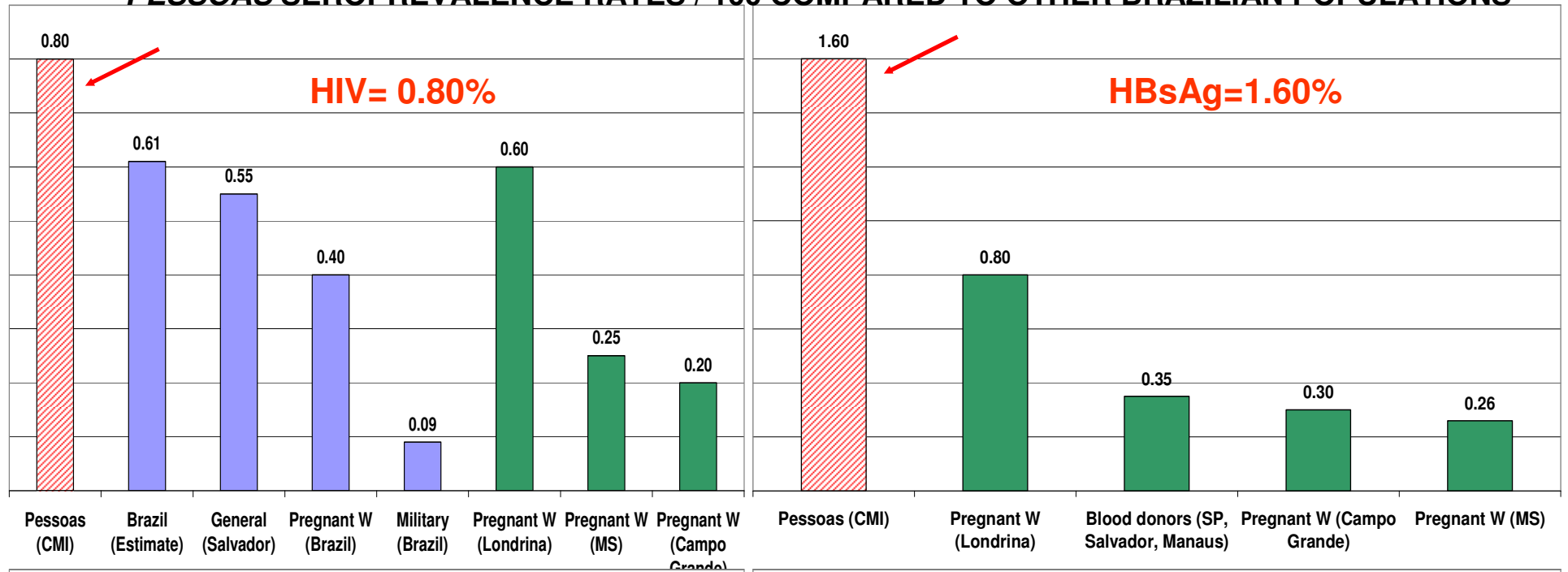
DESCRIPTIVE RESULTS (n=2475), PESSOAS PROJECT

<i>Clinical Characteristics</i>	(%)
Previous hospitalizations (1+)	(58)
Psychiatric diagnoses (ICD-10):	
<i>Schizophrenia</i>	(47)
<i>Depression</i>	(13)
<i>Bipolar disorders</i>	(9)
Hepatitis B immunization	(26)
Non-psychiatric medical Dx	(22)
Self-reported medical co-morbidity	(45)
History of STD	(24)
History of HIV testing	(27)

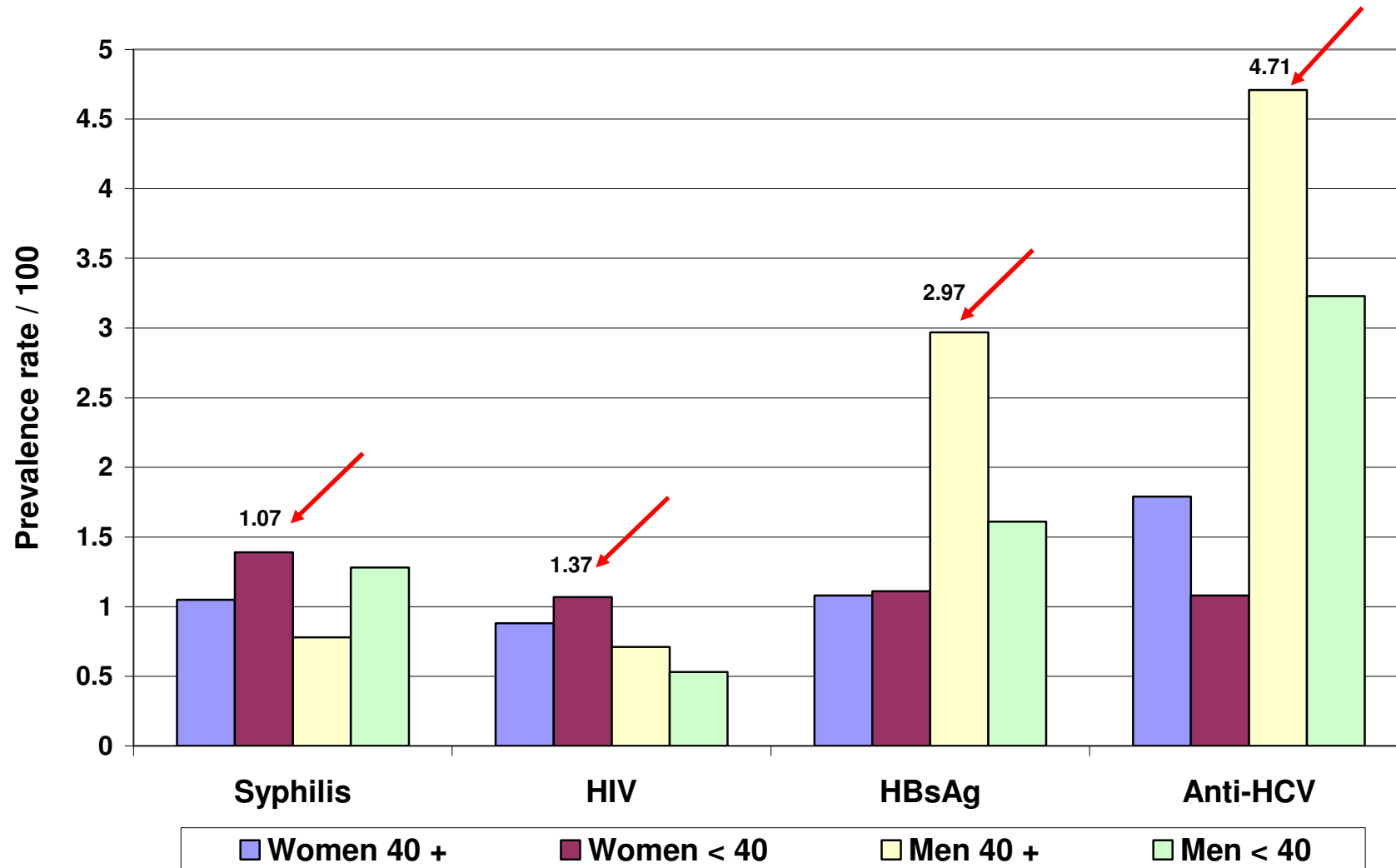
Selected risk behavior characteristics, PESSOAS Project, 2006



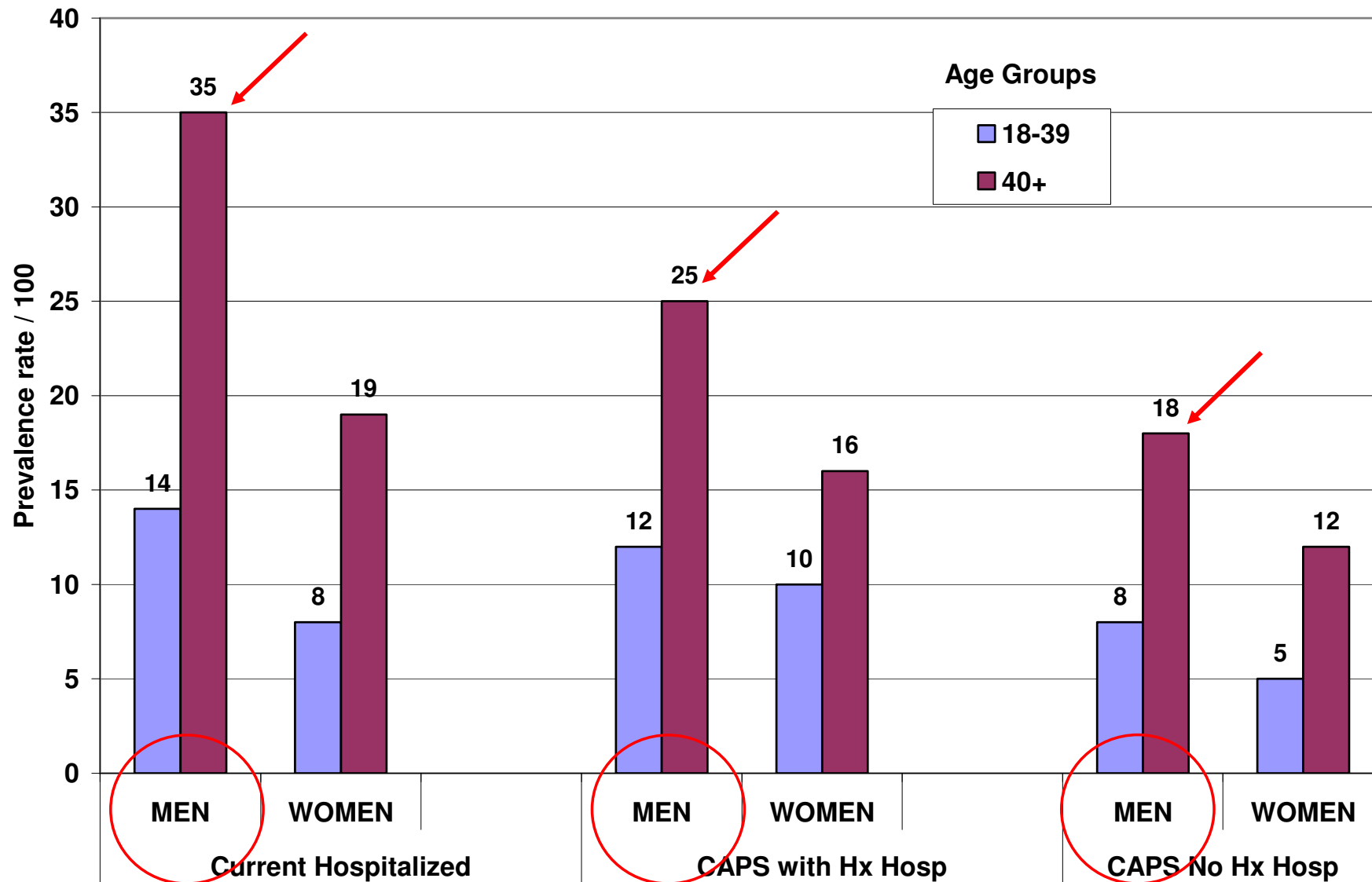
PESSOAS SEROPREVALENCE RATES / 100 COMPARED TO OTHER BRAZILIAN POPULATIONS



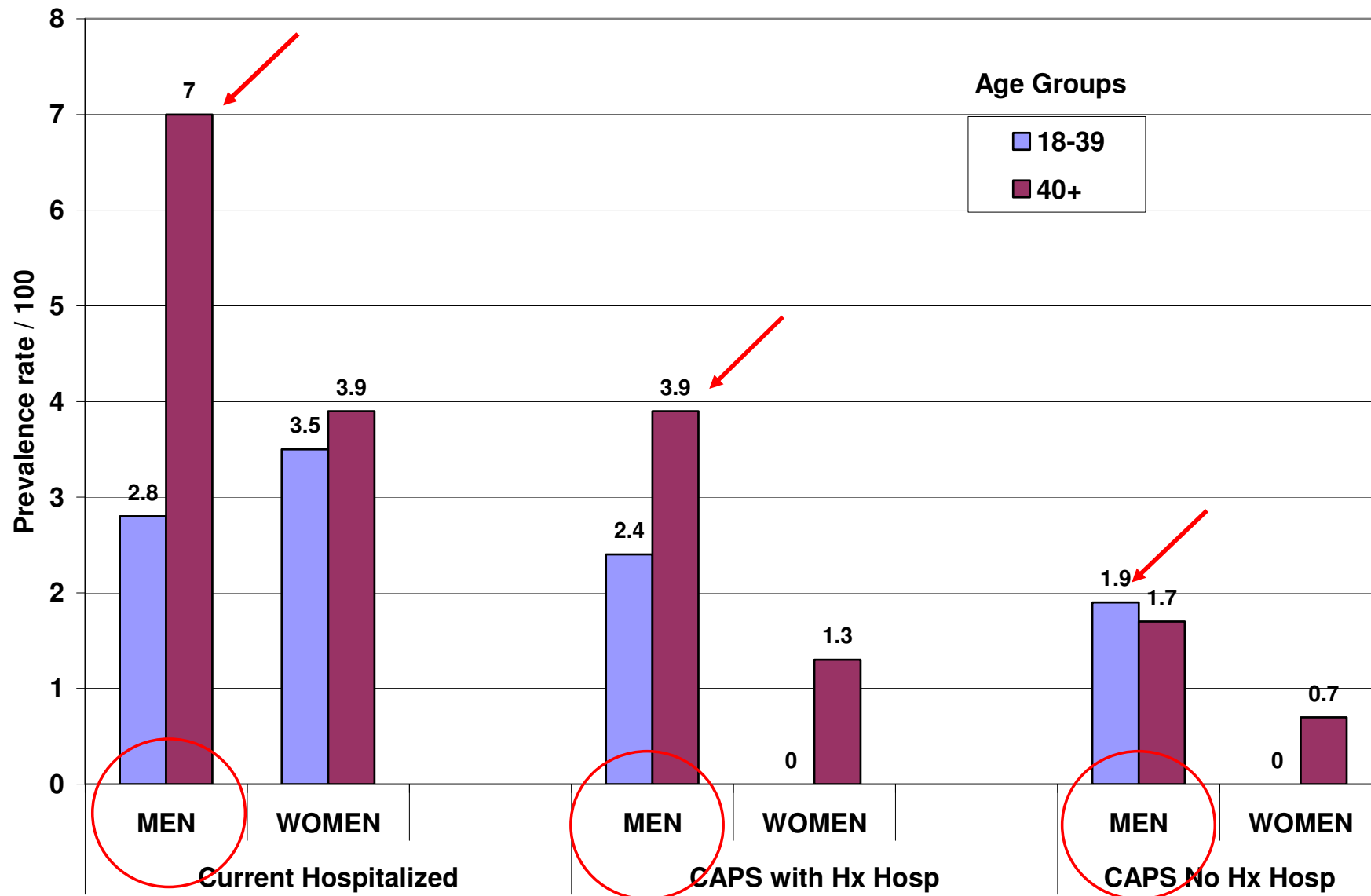
Selected seroprevalence rates / 100 by gender and age, Pessoas Project, 2007



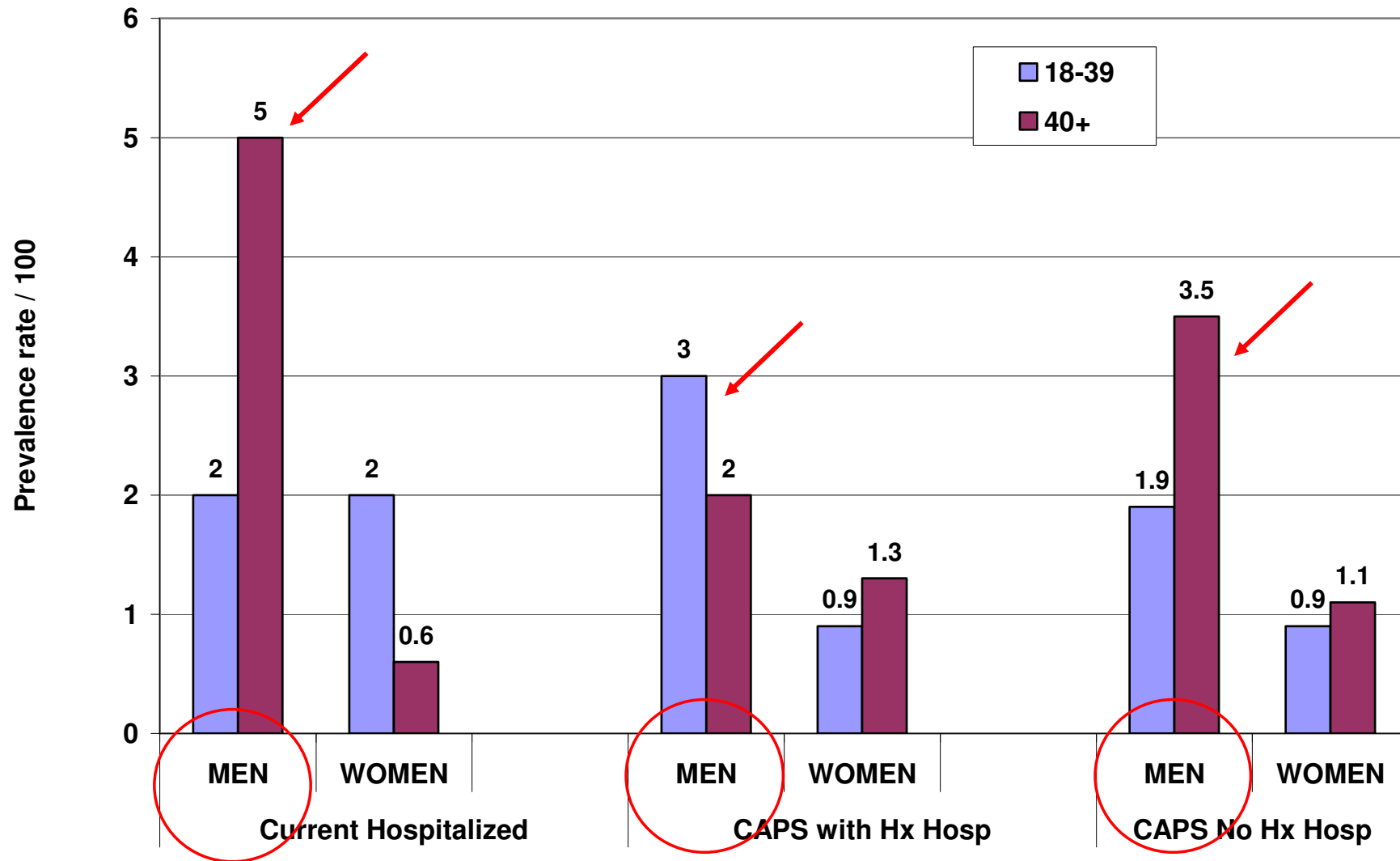
**Seroprevalence rate of anti-HBc, by age, gender and hospitalization.
Pessoas Project, 2007**



**Seroprevalence rate / 100 of HCV, by age, sex and hospitalization.
Pessoas Project, 2007**



Seroprevalence rate of HBsAg, by age, gender and hospitalization. Pessoas Project, 2007

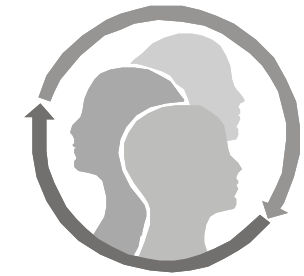


Prevalence ratios of HBV and HCV, adjusted for age, gender and center, Projeto PESSOAS, 2007

		PR	(95% CI)		P value
<i>HBsAg (N=2206)</i>					
Age	< 40	0.70	(0.30	1.66)	0.420
Gender	Male	2.21	(0.97	5.05)	0.060*
Center	Hospital	0.80	(0.30	2.13)	0.660
<i>Anti-HBc (N=2206)</i>					
Age	< 40	0.43	(0.35	0.53)	0.000*
Gender	Male	1.51	(1.02	2.23)	0.038*
Center	Hospital	1.28	(0.82	2.01)	0.280
<i>Anti-HCV (N=2235)</i>					
Age	< 40	0.56	(0.26	1.21)	0.139
Gender	Male	2.34	(1.56	3.52)	0.000*
Center	Hospital	3.25	(1.84	5.77)	0.000*

SELECTED GENDER DIFFERENCES (n=2475), PESSOAS Project

Characteristics (%)	Men n=1198	Women n=1277
Hospitalized	(45)	(28)
History of homelessness	(21)	(15)
Living in the hospital	(11)	(6)
Previous hospitalizations (1+)	(66)	(51)
Schizophrenia/Bipolar Disorders	(61)	(53)
Substance use	(12)	(2)
History of STD	(26)	(20)
Alcohol use (ever)	(77)	(52)
Smoking (ever)	(81)	(62)
Any illicit drug use	(37)	(14)
Any injection drug use	(5)	(2)
Hx of incarceration	(41)	(11)
More than one partner (lifetime)	(70)	(54)
Unprotected Sex (lifetime)	(77)	(84)



**PROJETO
PESSOAS**

➤ **CONCLUSIONS**

CONSIDERATIONS

- ✓ **Exclusion of CAPs Ad**
- ✓ **Exclusion of patients not capable of participating**
 - ➔ **sample of chronic mentally ill patients under care**
 - ➔ **may have underestimated seroprevalence and risk behaviors**
- ✓ **Sample representative of patients, mas not necessarily of services**
 - ➔ ***Cluster* effect potentially present**
- ✓ **Comparability should be with other representative data**

CONCLUSIONS

- ✓ **Higher IST seroprevalence, corrected for *clustering*, as compared to other representative populations in Brazil**
- ✓ **Extremely high rate of unprotected sex**
- ✓ **Younger women have higher HIV and syphilis prevalence**
- ✓ **Older men have higher HBV and HCV prevalence**
 - ✓ **Long term hospitalization**
 - ✓ **Clinical severity**
 - ✓ **Behavior**
 - ✓ **Intrainstitutional transmission ??**
- ✓ **Services are not prepared to deal with this reality**
- ✓ **Public policies are urgently needed**

Estudo de soroprevalência da infecção pelo HIV, Sífilis, Hepatite B e C em instituições públicas de atenção em saúde mental: Um estudo multicêntrico nacional



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