State of the ART: Characteristics of HIV infected patients receiving care in Mississippi (MS), USA from the Medical Monitoring Project, 2009-2010

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Background:

Mississippi, the poorest state in the US also ranks the worst for health care overall. Less than 50 percent of people known to be HIV infected are in care. Also, African Americans, who suffer the worst health care disparities in the US, account for 78% of people with HIV in MS. The purpose of this study is to describe the patients in care and determine the factors associated with anti-retroviral treatment (ART).

Methods:

The CDC's Medical Monitoring Project collects surveillance data from 23 project areas in the US, including Mississippi, using annual probability sampling of persons in care for HIV. Data were collected from in-person interviews and HIV-related medical record abstraction. The surveillance period was the 12 months prior to the interview date. Data were collected from 212 randomly selected individuals, representing a locally representative weighted sample of 3190.4. Rao-Scott Chi-square test was used to look for relationship between variables and ART.

Patient Demographic Information			
Race/Ethnicity at the Time of Interview by Sex*			
	Male n=128	Female n=82	Total n=213
White, non-Hispanic	9.4%	5.6%	15.5%
Black, non-Hispanic	48.4%	32.9%	82.2%
Hispanic	1.9%	0%	1.9%
Age at the Time of Interview by Sex			
	Male n=129	Female n=82	Total n=214
18-34	14.5%	9.3%	23.8%
35-44	16.8%	12.6%	30.3%
45-54	22.4%	11.2%	34.1%
55+	6.7%	5.4%	11.7%

Table 1 * Participants who refused to report race are excluded from the Patient Demographic Information table

Table 2. Participant Demographics, Sexual Behaviors, CD4 count in relation to ART Prescription Rates

Variables	Total		On ART		Not on ART		p value
	N(%)	95% CI	n(%)	95% CI	n(%)	95% CI	
AGE*	41.65(±0.87)	[39.93,43.36]	42.19(±0.77)	[40.66,43.71]	38.8(±2.4)	[34.04,43.56]	0.08
Gender	210(100%)		173(81.56%)	[76.41,86.71]	37(18.44%)	[13.29,23.59]	
Male	128(61.93%)	[56.71,67.16]	108(51.96%)	[45.48,58.44]	20(9.97%)	[6.57,13.37]	
Female	82(38.07%)	[32.84,43.29]	65(29.6%)	[25.38,33.82]	17(8.47%)	[5.44,11.49]	
Race^	210(100%)		173(81.56%)	[76.41,86.71]	37(18.44%)	[13.29,23.59]	0.51
White, non-Hispanic	33(16%)	[11.37,20.63]	27(12.99%)	[8.8,17.18]	6(3.01%)	[1.05,4.97]	
Black, non-Hispanic	171(80.81%)	[75.51,86.1]	140(65.38%)	[59.61,71.14]	31(15.43%)	[10.65,20.21]	
Hispanic	4(2.07%)	[0,4.24]	4(2.07%)	[0,4.24]	0		
Other	2(1.13%)	[0,3.09]	2(1.13%)	[0,3.09]	0		
Sexual Partner	210(100%)		173(81.56%)	[76.41,86.71]	37(18.44%)	[13.29,23.59]	0.13
(1)Any MSM (MSM only+MSMW)	59(28.24%)	[21.8,34.69]	52(24.67%)	[18.02,31.32]	7(3.57%)	[1.53,5.61]	
(2)MSW only	65(31.99%)	[25.04,38.94]	54(26.53%)	[19.28,33.79]	11(5.46%)	[3.24,7.67]	
(3)WSM (WSM only+WSMW)	81(37.69%)	[32.33,43.04]	64(29.22%)	[24.96,33.48]	17(8.47%)	[5.44,11.49]	
(4)Other	5(2.08%)	[0.51,3.64]	3(1.14%)	[0,2.64]	2(0.94%)	[0.02,1.86]	
CD4Count*	438.91(±18.5)	[402.25,475.57]	432.5(±22.36)	[388.19,476.81]	472.1(±22.19)	[428.12,516.08]	0.27
CD4Categories							0.17
0-199	25(12.06%)	[5.83,18.3]	23(10.88%)	[3.94,17.82]	2(1.18%)	[0.19,2.18]	
200-349	52(27.05%)	[21.89,32.21]	47(24.09%)	[18.7,29.49]	5(2.95%)	[0,6.86]	
350-499	59(28.48%)	[24.11,32.86]	50(24.13%)	[19.97,28.29]	9(4.35%)	[2.15,6.55]	
=>500	65(32.41%)	[27.07,37.75]	50(24.71%)	[20.57,28.84]	15(7.7%)	[4.92,10.48]	
Total	201(100%)		170(83.81%)	[77.79,89.84]	31(16.19%)	[10.16,22.21]	

Footnote:

* Estimated mean and STD

^ P value reported for Race is for Black vs. Non Black

All percentages are estimated based on survey design variables and weights

MSM = Men who have sex with men MSMW= Men who have sex with men and women

MSW= Men who have sex with women WSMW= Women who have sex with men and women

WSM= Wmen who have sex with men

Figure 1

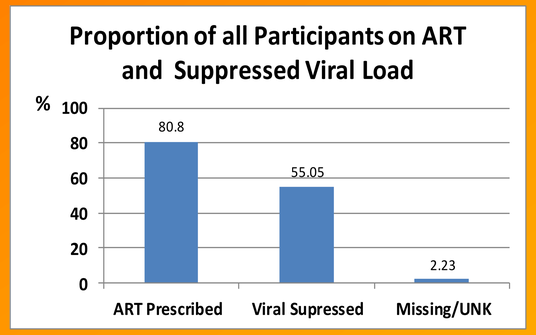
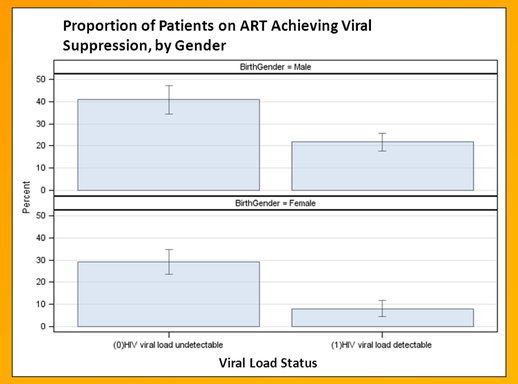


Figure 2



Results:

Demographic data in Table 1. Patients had a mean of 3.71 visits to the provider during the surveillance period. Mean of Geometric mean for CD4 count = 438.91 (95% CI 402.25-475.56). Overall 80.80% (95% CI 75.30%-86.29%) were on ART, of which 68.12% (95% CI 62.69%-73-56%) had undetectable recent viral load status (55.05% of total). Males (65.15%) are less likely to achieve undetectable viral load compared to females (78.30%) after controlling for individuals who are on ART (p=0.01). Viral suppression was not associated with age, race or sexual risk factors. No statistically significant difference was found in age, gender race, sexual risk factors or CD4 count groups with regard to ART prescription.

Conclusions:

In MS, majority of the patients in care are on ART and most of them have suppressed viral loads highlighting the importance of linkage and retention in care. Nevertheless, males are less likely to achieve viral load suppression on ART than females .